

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

April 22, 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).

WORKSHOPS

Resolution No. 2019-10

3. **FISCAL YEARS 2019-20 AND 2020-21 OPERATING BUDGETS,
PROPOSED BUDGETS AND RECOMMENDED RATES AND CHARGES**

Recommendation: That the Board adopt a resolution approving the Operating Budgets for Fiscal Years 2019-20 and 2020-21 (with rates and charges for FY 2019-20 to be adopted on June 24, 2019) and approve the Proposition 218 Notices subject to non-substantive modifications.

Reso. No. 2019-

WORKSHOPS - Continued

4. TWO-YEAR CAPITAL BUDGET FOR FISCAL YEARS 2019-20 AND 2020-21

Recommendation: That the Board adopt a resolution approving the District's Capital Budget for Fiscal Years 2019-20 and 2020-21.

Reso. No. 2019-

CONSENT CALENDAR

Items 5-11

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

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

6. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the April 8, 2019 Regular Board meeting be approved as presented.

7. 2019 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt a "support" position on AB 1672 (Bloom).

8. MARCH 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 March 2019 Summary of Payroll ACH payments in the total amount of \$3,310,358 and approve the March 2019 accounts payable Disbursement Summary of warrants 396572 through 397437, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$15,169,316.

9. IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

Recommendation: Receive and file.

CONSENT CALENDAR (Continued)

Resolution No. 2019-10

Items 5-11

10. ENTERPRISE ASSET MANAGEMENT LINEAR ASSET INTEGRATION SERVICES

Recommendation: That the Board authorize the General Manager to execute a sole source Professional Services Agreement with Spatial Wave Inc. for Maximo Integration with GIS Assets/Mapplet, in the amount of \$229,000.

11. SERRANO CREEK OUTFALL STRUCTURE JOINT DEVELOPMENT AND REIMBURSEMENT AGREEMENT

Recommendation: That the Board authorize the General Manager to execute the Joint Development and Reimbursement Agreement between IRWD and Lennar Homes of California, subject to non-substantive changes.

ACTION CALENDAR

12. PELICAN HILLS GOLF CLUB SEWER PIPELINE REHABILITATION BUDGET ADDITION

Recommendation: That the Board authorize the addition of Project 11121 in the amount of \$531,300 to the FY 2018-19 Capital Budget for the Pelican Hills Golf Club Sewer Pipeline Rehabilitation.

13. MICHELSON WATER RECYCLING PLANT BIOSOLIDS LANDSCAPING CONSTRUCTION AWARD

Recommendation: That the Board authorize the General Manager to execute a construction contract with Marina Landscaping, Inc. in the amount of \$596,474 for the Michelson Recycling Plant Biosolids Landscaping, Project 04286.

14. SANTIAGO CANYON PUMP STATION IMPROVEMENTS CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Lee & Ro, Inc. in the amount of \$485,400 for engineering design services for the Santiago Canyon Pump Station Improvements, Project 01398.

ACTION CALENDAR - Continued

15. ONE-YEAR EXTENSION OF JACKSON RANCH AGRICULTURAL LEASE

Recommendation: That the Board authorize the General Manager to execute Amendment No. 1 to the Agricultural Lease with Adee Honey Farms to extend the term of the lease for an additional one-year period to May 15, 2020.

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.

16. General Manager's Report
17. Directors' Comments
18. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.
19. **CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION** - Pursuant to Government Code Section 54956.9(d)(1): *Irvine Ranch Water District v. Orange County Water District*, Case No. BS168278 [Lead Case] & Case No. BS175192 [Consolidated Case]
20. Open Session
 - a. Report of any action in Closed Session.
21. 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.

April 22, 2019
Prepared by: D. Pardee / C. Smithson
Submitted by: C. Clary
Approved by: Paul A. Cook 

BOARD WORKSHOP

FISCAL YEARS 2019-20 AND 2020-21 OPERATING BUDGETS PROPOSED BUDGETS AND RECOMMENDED RATES AND CHARGES

SUMMARY:

The proposed Fiscal Year (FY) 2019-20 Operating Budget for Irvine Ranch Water District is \$167.0 million, representing an increase of \$9.8 million, or 6.3%, when compared to the Operating Budget for FY 2018-19. The proposed FY 2020-21 Operating Budget for Irvine Ranch Water District is \$173.6 million, representing an increase of \$6.6 million, or 4.0%, when compared to the proposed Operating Budget for FY 2019-20.

Rate increases are necessary to provide for cost of service equity. The commodity rate-setting methodology continues to utilize four tiers beginning with a low volume tier, a base rate, and two over-allocation tiers.

For the average residential customer, in FY 2019-20 the proposed adjustment to rates include a low volume increase of \$0.07 per hundred cubic feet (ccf), a base commodity rate increase of \$0.11 per ccf, no increase to the monthly service charge for water and an increase in the monthly service charge for sewer of \$0.30. Based on the recommendation, a typical residential customer within the District will experience an increase of \$1.42 or 2.6%, from \$53.78 to \$55.20 per month.

For the average residential customer, in FY 2020-21 the proposed adjustment to rates include a low volume increase of \$0.07 per ccf, a base commodity rate increase of \$0.12 per ccf, an increase to the monthly service charge for water of \$0.05 and an increase in the monthly service charge for sewer of \$0.20. Based on the recommendation, a typical residential customer within the District will experience an increase of \$1.44 or 2.6%, from \$55.20 to \$56.64 per month.

The proposed Operating Budgets are attached as Exhibit "A". The Proposition 218 notices are attached as Exhibit "B". The proposed resolution approving the Operating Budgets for FY 2019-20 and FY 2020-21 is attached as Exhibit "C".

Staff recommends that the Board approve the resolution and the Proposition 218 notices, subject to non-substantive changes, in order to affect the new rates that will become effective July 1, 2019 and July 1, 2020 for each of the fiscal years, respectively. The draft PowerPoint presentation that staff will provide at the workshop is included as Exhibit "D".

BACKGROUND:

The proposed Operating Budgets have been organized into eight major functional areas, plus separate sections for proposed general plant and labor changes. The proposed budget for FY 2019-20 represents an increase of \$9.8 million over the FY 2018-19 Operating Budget. The proposed budget for FY 2020-21 represents an increase of \$6.6 million over the FY 2019-20

Board Workshop: Fiscal Years 2019-20 and 2020-21 Operating Budgets, Proposed Budgets and Recommended Rates and Charges

April 22, 2019

Page 2

Operating Budget. Quarterly reporting in FY 2019-20 and FY 2020-21 will include a review of actual versus budget results for operating and non-operating revenue and expenses.

In addition, staff has budgeted non-operating net income, of which the primary drivers are property tax revenues, net income from real estate investments, connection fees paid by developers and interest expense on the District's debt. Non-operating net income is not included in the operating rates generation process because it provides funding for the capital programs and existing debt, which are not included in operating expenses. Total net income from non-operating sources are estimated to generate an additional net \$92.7 million in FY 2019-20 and \$95.7 million in FY 2020-21.

The proposed Operating Budgets (summaries tab) included in Exhibit "A", page 7, identify the effects of the proposed rate increases for a typical IRWD residential customer. The rate impact is an increase of 2.6% for the average residential customer in FY 2019-20 and 2.6% in FY 2020-21. The details of the tiered rate structure cost allocations based on cost of service were reviewed at the Board Workshop on April 8, 2019.

Attached as Exhibit "B" are the proposed Proposition 218 notices for the District. Staff recommends that the Board approve the proposed Proposition 218 notices, subject to non-substantive changes, which will be mailed to the District's customers and property owners. Staff also recommends approval of the proposed resolution approving the Operating Budgets for FY 2019-20 and FY 2020-21, attached as Exhibit "C".

Proposed Schedule for the Operating Budget and Rates Adoption:

- April 22, 2019 Second Board Workshop to adopt the Proposed Operating Budget and to approve the Proposition 218 Notices for ratepayers
- May 3, 2019 Mail Proposition 218 Notices to ratepayers / customers
- June 17, 2019 Tabulate responses
- June 24, 2019 Board Meeting – Public Hearing to review Proposition 218 responses and adopt IRWD's Rates and Charges for FY 2019-20 and FY 2020-21.

FISCAL IMPACTS:

Planned operating expenses for FY 2019-20 represent an increase of \$9.8 million over the FY 2018-19 Operating Budget. Planned operating expenses for FY 2020-21 represent an increase of \$6.6 million over the FY 2019-20 Operating Budget.

It is expected that the proposed rate increases will result in contributions to the enhancement and replacement funds in FY 2019-20 as follows: water \$8.7 million, sewer \$19.7 million, and recycled \$1.1 million for a total contribution of \$29.5 million. Expected contributions in FY 2020-21 are as follows: water \$8.8 million, sewer \$20.4 million, and recycled \$1.2 million for a total contribution of \$30.4 million. The conservation fund is expected to generate and use approximately \$13.3 million in FY 2019-20 and \$13.6 million in FY 2020-21.

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:

The Committee previously reviewed the Budget and assumptions at its Finance and Personnel Committee meetings on March 5, 2019, March 19, 2019 and April 2, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE APPROVING THE OPERATING BUDGETS FOR FISCAL YEARS 2019-20 AND 2020-21 (WITH RATES AND CHARGES TO BE ADOPTED ON JUNE 24, 2019) AND APPROVE THE PROPOSITION 218 NOTICES SUBJECT TO NON-SUBSTANTIVE MODIFICATIONS.

RESOLUTION NO. 2019 –

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT,
ORANGE COUNTY, CALIFORNIA
APPROVING THE DISTRICT'S OPERATING BUDGETS FOR
FISCAL YEAR 2019-20 AND FISCAL YEAR 2020-21 AND DETERMINING
COMPLIANCE WITH
ARTICLE XIII B OF THE CALIFORNIA CONSTITUTION

LIST OF EXHIBITS:

- Exhibit "A" – Proposed Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21 Draft
- Exhibit "B" – Proposed Proposition 218 Notices
- Exhibit "C" – Operating Budgets Resolution
- Exhibit "D" – PowerPoint Presentation Draft

Exhibit “A”

***IRVINE RANCH WATER DISTRICT
OPERATING BUDGET
FISCAL YEAR 2019-20 and 2020-21***



Irvine Ranch
WATER DISTRICT

“PROPOSED”

April 22, 2019



BUDGET

Key Assumptions Fiscal Years 2019-20 and 2020-21

The goal of the District’s budgeting process remains to fund the resources required to provide services to the District’s customers as cost-efficiently as possible. The District aggressively pursues reductions in expenses to offset uncontrollable expenses such as pass-through rate increases from outside agencies on which the District depends for the purchase of water, electricity and the treatment of sewage. One of the largest operational changes reflected in the Fiscal Years (FY) 2019-20 and 2020-21 operating budget is the start-up of the Michelson (MWRP) Biosolids and Energy Recovery Facility in 2019 with the majority of the facility on-line by December 2019. The FY 2019-20 and 2020-21 recommended rate increases are primarily associated with pass through rate increases from outside agencies.

This document is a summary of the major assumptions driving the development of the operating and non–operating budgets for FY 2019-20 and 2020-21.

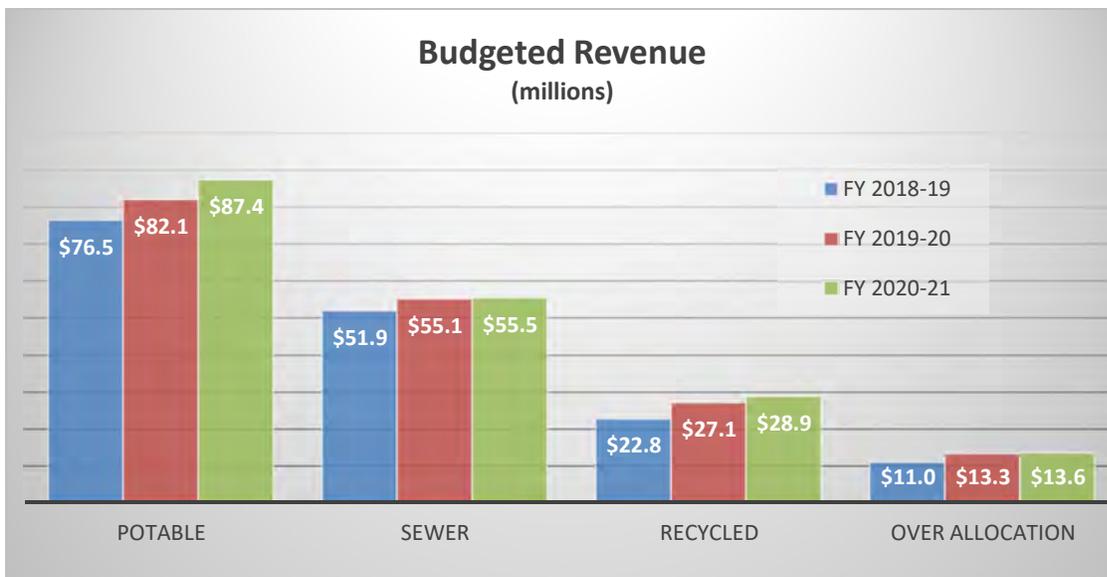
I. OPERATING REVENUES

Growth Estimates:

Residential development growth includes both apartments and single family homes for FY 2019-20 and 2020-21. The unit estimate is based on current projections received from major developers throughout the service area. Estimates identify approximately 3,200 mixed units coming online in each year for FY 2019-20 and 2020-21. As a result, the growth factor is estimated at 3.0% for FY 2019-20 and 2020-21.

Development projections for the commercial/industrial sector identify 40 acres of development occurring in FY 2019-20 and 2020-21. Revenue assumptions used to estimate sewer revenue are consistent with the assumptions included for potable water.

FY 2019-20 and 2020-21 Estimate for Operating Revenue Sources, by System (in millions):





BUDGET

Key Assumptions Fiscal Years 2019-20 and 2020-21

Total Residential, Landscape, Commercial, and Industrial revenue constitute over 85% of the total operating revenues for both water and sewer.

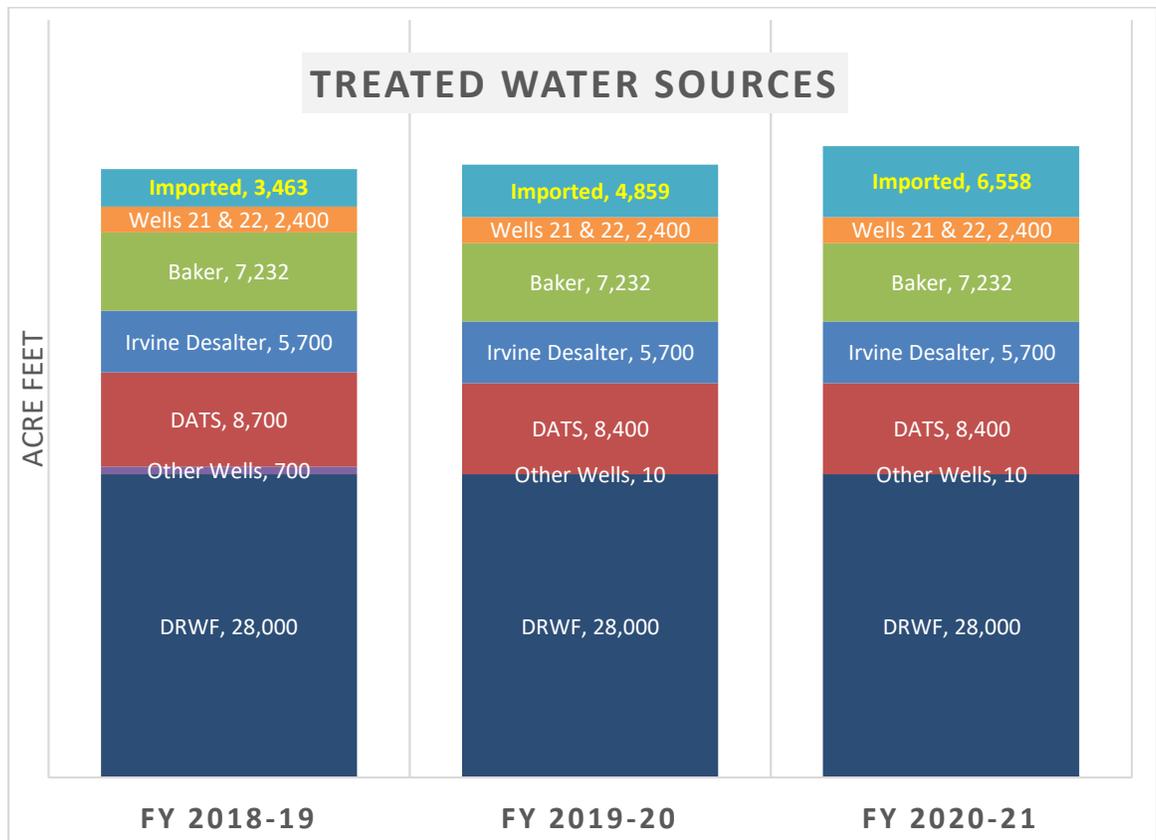
II. OPERATING EXPENSES

Notable expected changes in operating expenses are addressed below by system and function:

A. Water

The District continues to make efforts in encouraging its customers to conserve. The District intends to continue encouraging conservation through its rate structure, which provides an incentive for customers to limit water use to their base allocation and customers have responded well to this messaging.

The FY 2019-20 and 2020-21 budget anticipates no significant change in use from FY 2018-19. The assumption is normal rainfall, consistent with last year. The District is budgeting potable sales for FY 2019-20 and 2020-21 of 52,624 acre feet (AF) and 53,939, respectively, compared to a budget of 52,118 AF in FY 2018-19. The additional potable demand will be met with increased imported supply. The water sources, before process loss and shrinkage, used to meet potable sales are:





BUDGET

Key Assumptions *Fiscal Years 2019-20 and 2020-21*

The increase in cost for source of supply is one of the District's largest uncontrollable expenses. Groundwater provides over 49,000 acre feet and the District generates nearly 23,000 acre feet of recycled water with the remaining demand coming from imported supply or native water (rainfall and related runoff), as available. The table below identifies the various sources and associated costs.

Source Cost per Acre Foot (AF)	FY 2018-19	FY 2019-20	FY 2020-21
Orange County Water District (OCWD) Replenishment Assessment (RA)			
Groundwater	\$462	\$487	\$511
Metropolitan Water District (MWD)/MWDOC			
Imported Potable	\$1,050	\$1,078	\$1,110
Imported Nonpotable	\$734	\$758	\$781
Native Water	\$291	\$300	\$309

- The RA is expected to increase by 5.0% per AF each year. The District's basin production percentage (BPP) is set at a maximum of 70%, per the OCWD / IRWD Annexation Agreement executed in 2013.
- Actual energy usage will increase with the demands from the MWRP Biosolids and Energy Recovery Facility coming online and the rate is expected to increase 4.5% in FY 2020-21.
- MWD is expected to increase its treated and untreated rates by 3% on January 1, 2020 and again on January 1, 2021.
- Native water cost will increase annually by 3% based on the Irvine Lake Yield agreement.
- Staff assumes no substantial change to the costs associated with the IRWD Reservoir Management Systems.
- For FY 2019-20 and 2020-21, the budgets assume the untreated demand will shift to the recycled system. The Irvine Lake Pipeline project is expected to come online in 2019. The system will deliver recycled water to Orange and northern Irvine, primarily for landscape irrigation. This project is part of the IRWD strategic plan to increase recycled water use and reduce reliance on imported water.

B. Sewer and Biosolids

The MWRP Biosolids and Energy Recovery Facility is expected to be substantially online by December 2019. Costs associated with operating the facility are included in FY 2019-20 and 2020-21. Previously, biosolids produced at MWRP were sent to the Orange County Sanitation District (OCSD) for processing. The FY 2020-21 budget assumes no solids handling expense for OCSD.



BUDGET

Key Assumptions Fiscal Years 2019-20 and 2020-21

C. Salaries and Benefits

Each year, staff prepares a labor budget based upon the total positions in the organization chart, expected merit and cost of living increases, and promotional allowances.

- Salary assume an increase for merit and projected promotions.
- There are eight new positions budgeted in FY 2019-20 (including two hired mid-year) and five and a half in FY 2020-21.
- In July of each year, a COLA and promotional factor are applied to salaries - Assumed at 3.0% and 0.6%, respectively.
- Assumes a 7% vacancy factor.

The following table reflects salaries and wages included in each budget.

Regular Salaries and Wages	
FY 2018-19	\$34,981
FY 2019-20	\$36,681
FY 2020-21	\$38,641

The following table identifies the current and proposed contribution of the District toward employee benefits.

Additional Contributions Provided by the District			
	FY 2018-19	FY 2019-20	FY 2020-21
PERS Employer Contribution (ARC)	19.3%	21.2%	21.2%
PERS in Excess of ARC	<u>7.1%</u>	<u>3.8%</u>	<u>3.8%</u>
Combined Total	26.4%	25.0%	25.0%
District Direct 401A Match	3.0%	3.0%	3.0%
401A Matching Contribution of 3%	2.8%	2.8%	2.8%

The funding policy is to contribute 25% of regular salaries and wages to PERS. For FY 2018-19, there was an additional 1.4% contribution representing the excess RA due to a lower final rate from OCWD than budgeted. The PERS in Excess of ARC will be used to payback the Replacement Fund borrowing primarily associated with funding of the Pension Benefits Trust.

III. **RATES**

Rates are based on actual cost of service and are split into a commodity charge and a monthly fixed service charge for most customers.

A. Commodity Charge

Each tier is assigned a rate based on the cost of service, which varies according to the sources of water. Each source has a different cost of water. Local groundwater from the Dyer Road Well Field is IRWD's lowest-cost water while



BUDGET

Key Assumptions *Fiscal Years 2019-20 and 2020-21*

imported water is the highest-cost water. The tables below reflect the budgeted sales by tier allocated to the various sources of water. The sources are arranged in order of the lowest to highest cost. The budgeted sales by tier are based on a three year historical average. Sales are applied to the lowest cost source of water first until the source is fully utilized. The rates per hundred cubic feet (ccf) are developed based on the volume and cost of the blended sources.

FY 2019-20 Potable Water

Allocation of Acre Feet by Source of Supply
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Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Sales by Tier in AF	18,646	28,964	2,817	2,197
Sources of Water				
Dyer Road Wellfield	(18,646)	(7,954)		
Orange Park Acres Well 1		(10)		
Deep Aquifer Treatment System		(7,820)		
Irvine Desalter Domestic		(4,603)		
Wells 21 & 22 Desalter Treatment		(1,956)		
Baker Treatment Facilities		(6,621)	(249)	
Imported Water		-	(2,568)	(2,197)
Net Allocation	-	-	-	-

Rates per ccf Based on Cost of Service

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.47			
Melded Cost of Water		\$1.97		
Blended Cost of Baker and Potable Import			\$3.06	
Loaded Cost of Imported Water				\$3.17
District Wide Conservation		\$0.03	\$0.03	\$0.03
Water Banking				\$1.87
Targeted Conservation			\$1.37	\$5.75
Natural Treatment Systems (NTS)			\$0.40	\$2.81
Total Cost per Tier	\$1.47	\$2.00	\$4.86	\$13.63

All customers pay for District wide conservation programs as they benefit. Cost associated with water banking, NTS, and targeted conservation are paid for by customers in the inefficient and wasteful tiers. The District would not need these programs if all customers remained within budget.



BUDGET

Key Assumptions Fiscal Years 2019-20 and 2020-21

FY 2020-21 Potable Water

Allocation of Acre Feet by Source of Supply
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Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Sales by Tier in AF	19,112	29,688	2,887	2,252
Sources of Water				
Dyer Road Wellfield	(19,112)	(7,488)		
Orange Park Acres Well 1		(10)		
Deep Aquifer Treatment System		(7,820)		
Irvine Desalter Domestic		(4,603)		
Wells 21 & 22 Desalter Treatment		(1,956)		
Baker Treatment Facilities		(6,870)		
Imported Water		(941)	(2,887)	(2,252)
Net Allocation	-	-	-	-

Rates per ccf Based on Cost of Service

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.54			
Melded Cost of Water		\$2.09		
Loaded Cost of Imported Water			\$3.18	\$3.18
District Wide Conservation		\$0.03	\$0.03	\$0.03
Water Banking				\$1.79
Targeted Conservation			\$1.25	\$5.40
Natural Treatment Systems (NTS)			\$0.45	\$3.25
Total Cost per Tier	\$1.54	\$2.12	\$4.91	\$13.65

A similar approach is used for setting the recycled rates. Water banking is not included in rate generation for the recycled system because this source of water becomes necessary during an allocation as a result of an extended drought and the watering restrictions do not apply to recycled water. Cost associated with NTS and targeted conservation are paid for by customers in the inefficient and wasteful tiers because the District would not need these programs if all customers remained within budget.



BUDGET

Key Assumptions Fiscal Years 2019-20 and 2020-21

FY 2019-20 Recycled Water

Allocation of Acre Feet by Source of Supply

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Sales by Tier in AF	14,947	15,921	975	650
Sources of Water				
Produced	(14,947)	(7,257)		
Groundwater		(4,503)		
Imported Water		(4,161)	(975)	(650)
Net Allocation	-	-	-	-

Rates per ccf Based on Cost of Service

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.19			
Melded Cost of Water		\$1.54		
Loaded Cost of Imported Water			\$2.73	\$2.73
District Wide Conservation		\$0.03	\$0.03	\$0.03
Targeted Conservation			\$0.00	\$1.05
Natural Treatment Systems (NTS)			\$0.39	\$2.81
Total Cost per Tier	\$1.19	\$1.57	\$3.15	\$6.62

FY 2020-21 Recycled Water

Allocation of Acre Feet by Source of Supply

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Sales by Tier in AF	14,947	15,923	975	650
Sources of Water				
Produced	(14,947)	(7,257)		
Groundwater		(4,503)		
Imported Water		(4,163)	(975)	(650)
Net Allocation	-	-	-	-

Rates per ccf Based on Cost of Service

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.25			
Melded Cost of Water		\$1.69		
Loaded Cost of Imported Water			\$2.79	\$2.79
District Wide Conservation		\$0.03	\$0.03	\$0.03
Targeted Conservation			\$0.00	\$0.99
Natural Treatment Systems (NTS)			\$0.46	\$3.16
Total Cost per Tier	\$1.25	\$1.72	\$3.28	\$6.97



BUDGET

Key Assumptions *Fiscal Years 2019-20 and 2020-21*

B. Monthly Fixed Service Charge

The monthly fixed service charge for water and sewer is based on cost of service and there are separate charges for each. These charges are used to pay for operations and maintenance costs, including the inevitable infrastructure replacements.

The fixed water service charge is based on the meter size. The current monthly service charge for a typical residential customer is \$10.35 and will remain unchanged for FY 2019-20. The service charge will increase by \$0.05 to \$10.40 for FY 2020-21 to cover increased operating expenses.

The sewer service charge for a typical residential customer is based on the average water usage in the lowest three months of the prior calendar year. This eliminates increased usage in warmer months for landscape. There are three tiers based on average usage.

- 0.0 and 5.0 ccf's;
- 5.1 and 10.0 ccf's; and
- Over 10.0 ccf's.

The District's average usage for a typical residential customer is 12 ccf's and would fall within the second tier based on the average lowest three months.

The current monthly service charge for a typical residential customer in the second tier is \$23.20. Sewer expenses will increase and the result is an increase of \$0.30 and \$0.20, respectively, to the monthly service charge for FY 2019-20 and 2020-21.

IV. **USE OF OTHER FUNDS**

A. Over-Allocation Revenue

Over-allocation revenue is generated by customers in the inefficient and wasteful tiers. This revenue offsets the following expenses:

- The cost associated with additional imported water purchases;
- Customers who receive the \$2 low volume capacity rebate on the fixed service charge;
- Budgeted conservation expenses including operational expenses (customer service, fleet management, etc.);
- Urban runoff (NTS) and San Joaquin Marsh maintenance expenses; and
- Water banking expenses that exceed associated revenue.

Total conservation expense is expected to meet over allocation revenue in FY 2019-20 and 2020-21. The conservation fund is projected to be approximately \$8 million at the end of FY 2019-20 and 2020-21.



BUDGET

Key Assumptions *Fiscal Years 2019-20 and 2020-21*

B. Enhancement Fund User Rate Component

The current enhancement fund contribution for both the water and sewer system for FY 2018-19 was a combined \$1.52 per month (\$0.70 for water and \$0.82 for sewer) for the average residential customer. There was no increase built into these rates for FY 2019-20 and 2020-21. It is estimated that the fund balance will be approximately \$60 million at the end of FY 2020-21. The enhancement user component provides funding for new capital in developed improvement districts that no longer have connection fees.

C. Replacement Fund User Rate Component

The current replacement water service charge is \$2.10. The sewer service charge is \$9.31 per month for the average residential customer in both FY 2019-20 and 2020-21. It is estimated that the fund balance will be approximately \$410 million at the end of FY 2020-21. The fund is used to pay for the inevitable future replacement of the District's infrastructure.

V. **NON-OPERATING REVENUES AND EXPENSES**

The District's non-operating revenues are related to income generated from sources other than user rates, which include property taxes, investment income, connection fees, and real estate. A portion of the non-operating revenues pay the debt service for debt issued by the District. Property taxes and connection fees help pay for new infrastructure. Some of the non-operating revenues contribute to the replacement fund, which is used to pay for the inevitable replacement of existing infrastructure. The District sets the replacement fund monies aside in advance to avoid significant potential future rate impacts.

A. Revenues

Primary assumptions for FY 2019-20 and 2020-21 for each of the revenue categories are as follows:

- Property taxes – 6.0% and 4.0% growth respectively, in projected assessed values.
- Investment income – 2.25% and 2.40% average interest rate and an average cash balance of \$366.8 million and \$422.0 million, respectively.
- Connection fees – Based on current projections received from major developers.
- Real estate income – 2.0% growth for each fiscal year on commercial and residential income and ten (10) months of interest on the Serrano Summit promissory note at a weighted average interest of 4.26%. Note maturity in April 2020. FY 2020-21 includes income from the Sand Canyon Professional Center building.



BUDGET

Key Assumptions *Fiscal Years 2019-20 and 2020-21*

- Real estate fair value change – 2.0% growth for each fiscal year on commercial properties including the Sand Canyon Professional Center (half year for FY 2019-20) and 2.5% for each fiscal year on the Sycamore Canyon Apartment property. Fair value change for Wood Canyon Villa Apartment property is based on the partnership agreement; and
- Other income – includes lease revenue and grants.

B. Expenses

Primary assumptions for FY 2019-20 and 2020-21 are as follows:

- Interest expense – 3.70% average fixed debt rate for each fiscal year. 2.0% and 2.25% average variable debt rate, respectively; and
- Real estate expense – 2.0% growth for each fiscal year excluding depreciation as real estate is based on fair market value. The budget for each fiscal year reflects expenses for the Sand Canyon Professional Center building, including commission expense for leasing the building.



Irvine Ranch Water District Consolidated Operating Budget FY 2019-20

(in thousands)	Actual		Budget		Budget to Budget Variance Incr(Decr)	
Expense Name	Actual	FY 2018-19 (6 Months)	FY 2018-19	FY 2019-20	FY 2018-19 vs 2019-20	% Variance
Salaries & Benefits						
Regular Labor	\$ 33,410	\$ 16,103	\$ 34,981	\$ 36,681	\$ 1,699	4.9%
Overtime Labor	2,144	1,149	2,104	2,413	309	14.7%
Contract Labor	1,891	1,018	1,846	2,204	358	19.4%
Employee Benefits	17,396	9,138	19,124	20,224	1,101	5.8%
Salaries & Benefits Total	\$ 54,841	\$ 27,408	\$ 58,055	\$ 61,522	\$ 3,467	6.0%
Purchased Water & Utilities						
Water	39,933	21,168	37,454	39,242	1,788	4.8%
Electricity	13,405	8,299	14,537	17,064	2,527	17.4%
Fuel	626	370	559	946	387	69.3%
Telecommunication	634	305	627	767	140	22.3%
Other Utilities	182	95	182	194	12	6.6%
Purchased Water & Utilities Total	\$ 54,781	\$ 30,237	\$ 53,360	\$ 58,214	\$ 4,854	9.1%
Materials & Supplies						
Chemicals	3,345	1,565	3,146	3,930	785	24.9%
Operating Supplies	1,538	1,070	1,498	2,642	1,144	76.3%
Printing	229	78	401	303	(98)	(24.5%)
Postage	565	322	520	644	124	23.9%
Permits, Licenses and Fees	1,764	1,215	1,749	1,869	119	6.8%
Office Supplies	98	65	96	104	9	9.3%
Duplicating Equipment	188	90	174	188	14	8.0%
Equipment Rental	112	50	73	120	47	64.8%
Materials & Supplies Total	\$ 7,839	\$ 4,455	\$ 7,656	\$ 9,800	\$ 2,144	28.0%
Professional Services						
Rep & Maint OCS&D & Others	9,421	6,891	13,704	10,391	(3,313)	(24.2%)
Rep & Maint IRWD	9,497	4,175	10,254	11,268	1,014	9.9%
Insurance	501	541	1,085	1,317	231	21.3%
Legal Fees	2,016	605	1,865	2,690	825	44.2%
Engineering Fees	978	468	967	885	(82)	(8.4%)
Accounting Fees	106	50	102	100	(2)	(2.0%)
Data Processing	2,897	1,287	2,857	3,331	474	16.6%
Personnel Training	1,123	583	1,267	1,489	223	17.6%
Personnel Physicals	19	18	41	43	2	4.9%
Other Professional Fees	3,879	1,948	5,087	5,422	335	6.6%
Directors' Fees	153	79	168	177	9	5.4%
Professional Services Total	\$ 30,592	\$ 16,645	\$ 37,396	\$ 37,113	\$ (283)	(0.8%)
Other						
Mileage Reimbursement	148	73	148	150	2	1.4%
Collection Fees	2	1	7	13	7	100.0%
Election Expense	145	73	145	150	5	3.4%
Safety	175	118	122	142	20	16.1%
Alarm and Patrol Services	551	369	751	800	50	6.6%
Biosolids Disposals	16	9	20	670	650	3248.1%
Commuter Program	192	113	156	240	84	54.0%
Computer Backup Storage	16	9	6	12	6	100.0%
Contract Meter Reading	1,510	595	1,390	1,432	42	3.0%
Other	(110)	97	129	127	(2)	(1.9%)
Conservation	1,542	229	2,050	963	(1,087)	(53.0%)
Other Total	\$ 4,187	\$ 1,686	\$ 4,923	\$ 4,698	\$ (225)	(4.6%)
Total	\$ 152,240	\$ 80,431	\$ 161,390	\$ 171,347	\$ 9,957	6.2%
Less: Reimbursement from Baker Partners	(4,225)	(2,125)	(4,269)	(4,378)	(110)	2.6%
Grand Total	\$ 148,015	\$ 78,306	\$ 157,121	\$ 166,969	\$ 9,848	6.3%



Irvine Ranch Water District Consolidated Operating Budget FY 2020-21

(in thousands)	Actual		Budget		Budget to Budget Variance Incr(Decr)	
Expense Name	Actual	FY 2018-19 (6 Months)	FY 2019-20	FY 2020-21	FY 2019-20 vs 2020-21	% Variance
Salaries & Benefits						
Regular Labor	\$ 33,410	\$ 16,103	\$ 36,681	\$ 38,641	\$ 1,961	5.3%
Overtime Labor	2,144	1,149	2,413	2,426	13	0.6%
Contract Labor	1,891	1,018	2,204	1,851	(353)	(16.0%)
Employee Benefits	17,396	9,138	20,224	21,593	1,369	6.8%
Salaries & Benefits Total	\$ 54,841	\$ 27,408	\$ 61,522	\$ 64,512	\$ 2,990	4.9%
Purchased Water & Utilities						
Water	39,933	21,168	39,242	44,681	5,439	13.9%
Electricity	13,405	8,299	17,064	18,537	1,473	8.6%
Fuel	626	370	946	1,074	128	13.5%
Telecommunication	634	305	767	775	7	0.9%
Other Utilities	182	95	194	194	-	0.0%
Purchased Water & Utilities Total	\$ 54,781	\$ 30,237	\$ 58,214	\$ 65,261	\$ 7,047	12.1%
Materials & Supplies						
Chemicals	3,345	1,565	3,930	4,529	599	15.2%
Operating Supplies	1,538	1,070	2,642	2,707	65	2.4%
Printing	229	78	303	357	54	17.9%
Postage	565	322	644	669	25	3.9%
Permits, Licenses and Fees	1,764	1,215	1,869	1,872	4	0.2%
Office Supplies	98	65	104	113	8	7.9%
Duplicating Equipment	188	90	188	188	-	0.0%
Equipment Rental	112	50	120	123	3	2.7%
Materials & Supplies Total	\$ 7,839	\$ 4,455	\$ 9,800	\$ 10,557	\$ 757	7.7%
Professional Services						
Rep & Maint OCSD & Others	9,421	6,891	10,391	5,398	(4,993)	(48.1%)
Rep & Maint IRWD	9,497	4,175	11,268	11,742	474	4.2%
Insurance	501	541	1,317	1,552	236	17.9%
Legal Fees	2,016	605	2,690	2,440	(250)	(9.3%)
Engineering Fees	978	468	885	823	(62)	(7.0%)
Accounting Fees	106	50	100	111	11	11.0%
Data Processing	2,897	1,287	3,331	3,224	(107)	(3.2%)
Personnel Training	1,123	583	1,489	1,541	52	3.5%
Personnel Physicals	19	18	43	45	2	4.7%
Other Professional Fees	3,879	1,948	5,422	5,391	(31)	(0.6%)
Directors' Fees	153	79	177	186	9	5.0%
Professional Services Total	\$ 30,592	\$ 16,645	\$ 37,113	\$ 32,454	\$ (4,659)	(12.6%)
Other						
Mileage Reimbursement	148	73	150	150	-	0.0%
Collection Fees	2	1	13	13	0	3.1%
Election Expense	145	73	150	155	5	3.3%
Safety	175	118	142	143	1	0.9%
Alarm and Patrol Services	551	369	800	850	50	6.2%
Biosolids Disposals	16	9	670	1,044	374	55.9%
Commuter Program	192	113	240	260	20	8.3%
Computer Backup Storage	16	9	12	12	-	0.0%
Contract Meter Reading	1,510	595	1,432	1,550	118	8.2%
Other	(110)	97	127	129	2	1.9%
Conservation	1,542	229	963	1,003	40	4.2%
Other Total	\$ 4,187	\$ 1,686	\$ 4,698	\$ 5,309	\$ 611	13.0%
Total	\$ 152,240	\$ 80,431	\$ 171,347	\$ 178,094	\$ 6,746	3.9%
Less: Reimbursement from Baker Partners	(4,225)	(2,125)	(4,378)	(4,518)	(139)	3.2%
Grand Total	\$ 148,015	\$ 78,306	\$ 166,969	\$ 173,576	\$ 6,607	4.0%



REVENUES AND EXPENSES BY SYSTEM

FY 2019-20

(in thousands)

	Water	Sewer	Recycled	Conserve & NTS	Consolidated
Revenue:					
Commodity	\$ 45,467	\$ -	\$ 20,293	\$ -	\$ 65,760
Service	36,594	55,060	6,836	-	98,490
Over Allocation				13,310	13,310
Rate Stabilization	-	-	-	-	-
Total Revenues	\$ 82,061	\$ 55,060	\$ 27,129	\$ 13,310	\$ 177,560
Contribution to Enhancement and Replacement Funds	(8,691)	(19,695)	(1,120)	-	(29,506)
Net Revenues	\$ 73,370	\$ 35,365	\$ 26,009	\$ 13,310	\$ 148,054
Expenses:					
Cost of Water	\$ 46,743	\$ -	\$ 14,757	\$ -	\$ 61,500
Operations	12,613	14,843	6,587	7,462	41,505
Water Banking	-	-	-	1,614	1,614
OCSD - O&M	-	9,124	-	-	9,124
<i>Total Direct</i>	\$ 59,356	\$ 23,967	\$ 21,344	\$ 9,076	\$ 113,743
Customer Records and Collections	4,375	2,431	972	972	8,750
General & Admin Expense	9,009	8,215	3,375	3,163	23,762
<i>Total Indirect</i>	\$ 13,384	\$ 10,646	\$ 4,347	\$ 4,135	\$ 32,512
General Plant	630	752	318	99	1,799
Total Expenses	\$ 73,370	\$ 35,365	\$ 26,009	\$ 13,310	\$ 148,054
Net Operating Position	\$ -	\$ -	\$ -	\$ -	\$ -



REVENUES AND EXPENSES BY SYSTEM

FY 2020-21

(in thousands)

	Water	Sewer	Recycled	Conserve & NTS	Consolidated
Revenue:					
Commodity	\$ 49,719	\$ -	\$ 21,849	\$ -	\$ 71,568
Service	37,717	55,463	7,014	-	100,194
Over Allocation				13,637	13,637
Rate Stabilization	-	-	-	-	-
Total Revenues	\$ 87,436	\$ 55,463	\$ 28,863	\$ 13,637	\$ 185,399
Contribution to Enhancement and Replacement Funds	(8,776)	(20,432)	(1,154)	-	(30,362)
Net Revenues	\$ 78,660	\$ 35,031	\$ 27,709	\$ 13,637	\$ 155,037
Expenses:					
Cost of Water	\$ 50,400	\$ -	\$ 12,710	\$ -	\$ 63,110
Operations	13,185	17,784	9,534	7,531	48,034
Water Banking	-	-	-	1,539	1,539
OCSD - O&M	-	4,124	-	-	4,124
<i>Total Direct</i>	\$ 63,585	\$ 21,908	\$ 22,244	\$ 9,070	\$ 116,807
Customer Records and Collections	4,501	3,000	1,500	1,000	10,001
General & Admin Expense	9,558	9,765	3,660	3,432	26,415
<i>Total Indirect</i>	\$ 14,059	\$ 12,765	\$ 5,160	\$ 4,432	\$ 36,416
General Plant	1,016	358	305	135	1,814
Total Expenses	\$ 78,660	\$ 35,031	\$ 27,709	\$ 13,637	\$ 155,037
Net Operating Position	\$ -	\$ -	\$ -	\$ -	\$ -



NON-OPERATING

FY 2019-20

Net Income

(in thousands)

	<u>FY 2018-19</u>	<u>FY 2019-20</u>	<u>Change</u>
Non-operating Revenue:			
Property Taxes	\$ 59,300	\$ 66,000	\$ 6,700
Investment Income	4,768	8,200	3,432
Connection Fees	20,000	19,000	(1,000)
Real Estate Income	17,000	17,400	400
Real Estate Fair Value Change	6,300	6,600	300
Other Income	8,000	8,000	-
Total Revenue	<u>\$ 115,368</u>	<u>\$ 125,200</u>	<u>\$ 9,832</u>
Non-operating Expenses:			
Interest Expense	\$ 26,294	\$ 24,700	\$ (1,594)
Real Estate Expense	5,170	5,800	630
Other Expenses	2,000	2,000	-
Total Expense	<u>\$ 33,464</u>	<u>\$ 32,500</u>	<u>\$ (964)</u>
Net Income	<u><u>\$ 81,904</u></u>	<u><u>\$ 92,700</u></u>	<u><u>\$ 10,796</u></u>



NON-OPERATING

FY 2020-21

Net Income

(in thousands)

	<u>FY 2019-20</u>	<u>FY 2020-21</u>	<u>Change</u>
Non-operating Revenue:			
Property Taxes	\$ 66,000	\$ 68,700	\$ 2,700
Investment Income	8,200	10,000	1,800
Connection Fees	19,000	18,000	(1,000)
Real Estate Income	17,400	16,600	(800)
Real Estate Fair Value Change	6,600	7,000	400
Other Income	8,000	8,000	-
Total Revenue	<u>\$ 125,200</u>	<u>\$ 128,300</u>	<u>\$ 3,100</u>
Non-operating Expenses:			
Interest Expense	\$ 24,700	\$ 24,900	\$ 200
Real Estate Expense	5,800	5,700	(100)
Other Expenses	2,000	2,000	-
Total Expense	<u>\$ 32,500</u>	<u>\$ 32,600</u>	<u>\$ 100</u>
Net Income	<u><u>\$ 92,700</u></u>	<u><u>\$ 95,700</u></u>	<u><u>\$ 3,000</u></u>



Current and Proposed Residential Rates

Before Rate Adjustment:	FY 2019-20		FY 2020-21	
	Potable	Sewer	Potable	Sewer
Current Residential Rates:	Water (1)	Sewer (2)	Water (1)	Sewer (2)
Low Volume	\$1.40		\$1.47	
Commodity Rate	\$1.89		\$2.00	
Residential Service	\$10.35	\$23.20	\$10.35	\$23.50
Operations	\$7.55	\$13.07	\$7.55	\$13.37
Replacements	\$2.10	\$9.31	\$2.10	\$9.31
Enhancements	\$0.70	\$0.82	\$0.70	\$0.82
Total Service Charge	\$10.35	\$23.20	\$10.35	\$23.50
Commodity (12 ccf)	\$20.23		\$21.35	
Current Monthly	<u>\$53.78</u>		<u>\$55.20</u>	
Proposed Residential Rate Adjustment:				
Low Volume	\$1.47		\$1.54	
Base Commodity Rate	\$2.00		\$2.12	
Operations	\$7.55	\$13.37	\$7.60	\$13.57
Replacements	\$2.10	\$9.31	\$2.10	\$9.31
Enhancements	\$0.70	\$0.82	\$0.70	\$0.82
Total Service Charge	\$10.35	\$23.50	\$10.40	\$23.70
Commodity	\$21.35		\$22.54	
Proposed Monthly	<u>\$55.20</u>		<u>\$56.64</u>	
Current Monthly	<u>\$53.78</u>		<u>\$55.20</u>	
Difference	\$1.42		\$1.44	
Change %	2.6%		2.6%	

- (1) Water - District Average usage assumes 12 ccf's per month.
- (2) Sewer - District average usage assumes 6-10 ccf for lowest 3 months.
- (3) Water - OCWD Replenishment Assessment at \$487 / acre foot and \$511 / acre foot.



POTABLE REVENUE

FY 2019-20

<i>(in thousands)</i>		Usage			
	FY 2018-19	Change	Rate Inc.	FY 2019-20	
Water					
Service	\$ 24,050	\$ 1,817	\$ -	\$ 25,867	
Enhancement	2,170	43	-	2,213	
Replacement	6,350	127	-	6,477	
Pumping Surcharge	756	31	-	787	
Miscellaneous	996	254	-	1,250	
Commodity	42,159	499	2,809	45,467	
	<u>\$ 76,481</u>	<u>\$ 2,771</u>	<u>\$ 2,809</u>	<u>\$ 82,061</u>	
AF Sales	52,118			52,624	
User Type					
Residential	\$ 44,574	\$ 1,939	\$ 2,079	\$ 48,592	
Commercial	10,781	277	309	11,367	
Industrial	5,614	166	169	5,949	
Public Authority	4,197	55	56	4,308	
Construction/Temp.	1,258	28	28	1,314	
Fire Protection	4,190	139	-	4,329	
Landscape Irrigation	4,820	139	140	5,099	
Agriculture Irrigation	1,047	28	28	1,103	
	<u>\$ 76,481</u>	<u>\$ 2,771</u>	<u>\$ 2,809</u>	<u>\$ 82,061</u>	



POTABLE REVENUE

FY 2020-21

<i>(in thousands)</i>		Usage			
	FY 2019-20	Change	Rate Inc.	FY 2020-21	
Water					
Service	\$ 25,867	\$ 887	\$ 141	\$ 26,895	
Enhancement	2,213	22	-	2,235	
Replacement	6,477	64	-	6,541	
Pumping Surcharge	787	-	-	787	
Miscellaneous	1,250	9	-	1,259	
Commodity	45,467	1,214	3,045	49,726	
	<u>\$ 82,061</u>	<u>\$ 2,196</u>	<u>\$ 3,186</u>	<u>\$ 87,443</u>	
AF Sales	52,624			53,939	
User Type					
Residential	\$ 48,592	\$ 1,536	\$ 2,358	\$ 52,486	
Commercial	11,367	220	350	11,937	
Industrial	5,949	132	191	6,272	
Public Authority	4,308	44	64	4,416	
Construction/Temp.	1,314	22	32	1,368	
Fire Protection	4,329	110	0	4,439	
Landscape Irrigation	5,099	110	159	5,368	
Agriculture Irrigation	1,103	22	32	1,157	
	<u>\$ 82,061</u>	<u>\$ 2,196</u>	<u>\$ 3,186</u>	<u>\$ 87,443</u>	



SEWER REVENUE

FY 2019-20

<i>(in thousands)</i>	<u>FY 2018-19</u>	<u>Usage Change</u>	<u>Rate Inc.</u>	<u>FY 2019-20</u>
Sewer				
Service	\$ 32,093	\$ 2,349	\$ 623	\$ 35,065
Enhancement	1,500	15	-	1,515
Replacement	18,000	180	-	18,180
Miscellaneous	300	-	-	300
	<u>\$ 51,893</u>	<u>\$ 2,544</u>	<u>\$ 623</u>	<u>\$ 55,060</u>
User Type				
Residential	\$ 37,274	\$ 1,907	\$ 468	\$ 39,649
Commercial	8,766	382	93	9,241
Industrial	4,201	204	62	4,467
Public Authority	1,653	51	-	1,704
	<u>\$ 51,893</u>	<u>\$ 2,544</u>	<u>\$ 623</u>	<u>\$ 55,060</u>



SEWER REVENUE

FY 2020-21

<i>(in thousands)</i>	FY 2019-20	Usage Change	Rate Inc.	FY 2020-21
Sewer				
Service	\$ 35,065	\$ (319)	\$ 470	\$ 35,216
Enhancement	1,515	19	-	1,534
Replacement	18,180	233	-	18,413
Miscellaneous	300	-	-	300
	\$ 55,060	\$ (67)	\$ 470	\$ 55,463
 User Type				
Residential	\$ 39,649	\$ (51)	\$ 352	\$ 39,950
Commercial	9,241	(10)	80	9,311
Industrial	4,467	(5)	38	4,500
Public Authority	1,704	(1)		1,703
	\$ 55,060	\$ (67)	\$ 470	\$ 55,463



RECYCLED REVENUE

FY 2019-20

<i>(in thousands)</i>	<u>FY 2018-19</u>	<u>Usage Change</u>	<u>Rate Inc.</u>	<u>FY 2019-20</u>
Recycled				
Service	\$ 5,093	\$ 3	\$ -	\$ 5,096
Enhancement	300	3	-	303
Replacement	700	7	-	707
Pumping Surcharge	200	10	-	210
Commodity	15,972	1,479	2,842	20,293
Reimbursements*	520	-	-	520
	<u>\$ 22,785</u>	<u>\$ 1,502</u>	<u>\$ 2,842</u>	<u>\$ 27,129</u>
AF	28,261			30,270
User Type				
Residential	\$ 655	\$ 60	\$ 114	\$ 829
Commercial	674	90	171	935
Industrial	72	-	-	72
Public Authority	-	-	-	0
Landscape Irrigation	18,312	1,202	2,273	21,787
Recycled Loans	-	-	-	0
Agriculture Irrigation	1,754	150	284	2,188
Construction/Temp.	798	-	-	798
Reimbursements*	520	-	-	520
	<u>\$ 22,785</u>	<u>\$ 1,502</u>	<u>\$ 2,842</u>	<u>\$ 27,129</u>

* Reimbursement from the Navy for operating costs associated with recycled IDP was moved to the Recycled system.



RECYCLED REVENUE

FY 2020-21

<i>(in thousands)</i>	<u>FY 2019-20</u>	<u>Usage Change</u>	<u>Rate Inc.</u>	<u>FY 2020-21</u>
Recycled				
Service	\$ 5,096	\$ 66	\$ 29	\$ 5,191
Enhancement	303	27	-	330
Replacement	707	48	-	755
Pumping Surcharge	210	8	-	218
Commodity	20,293	766	790	21,849
Reimbursements*	520	-		520
	<u>\$ 27,129</u>	<u>\$ 915</u>	<u>\$ 819</u>	<u>\$ 28,863</u>
AF	30,270			32,004
User Type				
Residential	\$ 829	\$ 41	\$ 37	\$ 907
Commercial	935	50	45	1,030
Industrial	72	-	-	72
Public Authority	-	-	-	0
Landscape Irrigation	21,787	732	655	23,174
Recycled Loans	-	-	-	0
Agriculture Irrigation	2,188	92	82	2,362
Construction/Temp.	798	-	-	798
Reimbursements*	520	-	-	520
	<u>\$ 27,129</u>	<u>\$ 915</u>	<u>\$ 819</u>	<u>\$ 28,863</u>

* Reimbursement from the Navy for operating costs associated with recycled IDP was moved to the Recycled system.



OVER-ALLOCATION REVENUE

FY 2019-20

<i>(in thousands)</i>	FY 2018-19	Usage Change	Proposed Rate Inc.	FY 2019-20
Tier				
Universal Conservation	\$ 1,932	\$ (576)	\$ -	\$ 1,356
Inefficient	2,414	(191)	97	2,320
Wasteful	6,666	2,605	363	9,634
	<u>\$ 11,012</u>	<u>\$ 1,838</u>	<u>\$ 460</u>	<u>\$ 13,310</u>

Source or System

Residential	\$ 9,603	\$ 1,603	\$ 401	\$ 11,607
Commercial	241	40	10	291
Industrial	124	21	5	150
Public Authority	56	9	2	68
Landscape Irrigation	847	141	35	1,024
Agriculture Irrigation	115	19	5	139
Construction / Temp.	26	4	1	31
	<u>\$ 11,012</u>	<u>\$ 1,838</u>	<u>\$ 460</u>	<u>\$ 13,310</u>



OVER-ALLOCATION REVENUE

FY 2020-21

(in thousands)

	FY 2019-20	Usage Change	Proposed Rate Inc.	FY 2020-21
Tier				
Universal Conservation	\$ 1,356	\$ (41)	\$ -	\$ 1,315
Inefficient	2,320	86	83	2,489
Wasteful	9,634	175	24	9,833
	<u>\$ 13,310</u>	<u>\$ 220</u>	<u>\$ 107</u>	<u>\$ 13,637</u>

Source or System

Residential	\$ 11,607	\$ 192	\$ 93	\$ 11,892
Commercial	291	5	2	298
Industrial	150	2	1	154
Public Authority	68	1	1	69
Landscape Irrigation	1,024	17	8	1,049
Agriculture Irrigation	139	2	1	142
Construction / Temp.	31	1	0	32
	<u>\$ 13,310</u>	<u>\$ 220</u>	<u>\$ 107</u>	<u>\$ 13,637</u>



COST OF WATER

FY 2019-20

<i>(in thousands)</i>	FY 2018-19			FY 2019-20			Change	
	Acre Feet	Total	Cost / AF	Acre Feet	Total	Cost / AF	Acre Feet	Total
<u>TREATED</u>								
Purchased from MWDOC	3,463	\$ 4,965	\$1,434	4,859	\$ 6,470	\$1,331	1,396	\$ 1,505
Dyer Road Well Field	28,000	16,082	\$574	28,000	17,358	\$620	-	1,276
Other Wells	700	487	\$696	10	6	\$625	(690)	(481)
Deep Aquifer Treatment System	8,700	6,374	\$733	8,400	6,379	\$759	(300)	5
Lost to Production	(174)			(168)			6	
Wells 21 & 22 Desalter	2,400	2,281	\$950	2,400	2,497	\$1,040	-	216
Lost to Production	(432)			(360)			72	
Baker WTP	7,232	7,440	\$1,029	7,232	6,819	\$943	-	(621)
Lost to Production	-			(145)			(145)	
Well Water	-	-		0	-		-	-
Irvine Desalter Project	5,700	4,252	\$746	5,700	4,893	\$858	-	641
Lost to Production	(1,026)			(855)			171	
Total Shrinkage	(2,444)			(2,450)			(6)	
Total Irvine Ranch Potable	52,118	\$ 41,881		52,624	\$ 44,422		505	\$ 2,541
<u>RECYCLED *</u>								
Purchased from MWDOC	2,835	\$ 2,472	\$872	360	\$ 789		(2,475)	\$ (1,683)
Native Water	1,000	245	\$245	5,790	1,735	\$300	4,790	1,490
Santiago Aqueduct Commission	175	153	\$874	175	148	\$846	-	(5)
Groundwater	435	201	-	435	212	-	-	11
Irvine Desalter Project	4,165	3,032	\$738	4,165	3,233	\$776	0	201
Lost to Production	(625)			(625)			-	
SAC Water	0	0	\$0	0	0	\$0	-	-
MWRP / LAW RP Production	22,890	5,251	\$229	22,890	6,231	\$272	-	980
Total Shrinkage	(658)			(697)			(39)	
Total Recycled	30,217	\$ 11,354		32,493	\$ 12,349		2,276	\$ 994
Total Cost of Water for Billed Usage	82,335	\$ 53,235		85,117	\$ 56,770		2,781	\$ 3,535

* The Irvine Lake Pipeline Project anticipated completion is June 2019. The budget assumes untreated customers will move to the recycled system.



COST OF WATER

FY 2020-21

<i>(in thousands)</i>	FY 2019-20			FY 2020-21			Change	
	Acre Feet	Total	Cost / AF	Acre Feet	Total	Cost / AF	Acre Feet	Total
<u>TREATED</u>								
Purchased from MWDOC	4,859	\$6,470	\$1,331	6,558	\$ 8,787	\$1,340	1,698	\$ 2,317
Dyer Road Well Field	28,000	17,358	\$620	28,000	18,228	\$651	-	870
Other Wells	10	6	\$625	10	6	\$649	-	0
Deep Aquifer Treatment System	8,400	6,379	\$759	8,400	6,668	\$794	-	289
Lost to Production	(168)			(168)			-	
Wells 21 & 22 Desalter	2,400	2,497	\$1,040	2,400	2,600	\$1,083	-	104
Lost to Production	(360)			(360)			-	
Baker WTP	7,232	6,819	\$943	7,232	7,899	\$1,092	-	1,080
Lost to Production	(145)			(145)			-	
Well Water	-	-		-	-		-	-
Irvine Desalter Project	5,700	4,893	\$858	5,700	5,117	\$898	-	224
Lost to Production	(855)			(855)			-	
Total Shrinkage	(2,450)			(2,833)			(383)	
Total Irvine Ranch Potable	52,624	\$ 44,422		53,939	\$ 49,306		1,316	\$ 4,885
<u>RECYCLED</u>								
Purchased from MWDOC	360	\$789		4,652	\$ 3,995	\$859	4,292	\$ 3,206
Native Water	5,790	1,735	\$300	1,500	463	\$309	(4,290)	(1,272)
Santiago Aqueduct Commission	175	148	\$846	175	144	\$821	-	(4)
Groundwater	435	212	-	435	222	-	-	10
Irvine Desalter Project	4,165	3,233	\$738	4,165	3,433	\$824	-	200
Lost to Production	(625)			(625)			-	
MWRP / LAW RP Production	22,890	6,231	\$272	22,890	6,564	\$287	-	333
Total Shrinkage	(697)			(697)			-	
Total Recycled	32,493	\$ 12,349		32,495	\$ 14,822		2	\$ 2,474
Total Cost of Water for Billed Usage	85,117	\$ 56,770		86,434	\$ 64,128		1,318	\$ 7,358



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

Program Description

The General Manager's Office implements the policies established and direction provided by the Board of Directors and, in so doing, provides overall direction to staff to complete that effort. The office also includes Government Relations which develops and advocates for policies at the federal, state and local levels that promote a reliable high quality and cost effective water supply for Irvine Ranch Water District (IRWD) customers, and demonstrates the efficient use of resources. The Government Relations staff represents IRWD's policies and provides technical expertise to the legislative process, particularly on issues of water recycling, water use efficiency, water rates, water supply reliability and governance, among others.

The General Manager's Office also:

- Provides direct services to and communications with the Board of Directors;
- Produces and distributes Board and Board Committee meeting packets;
- Schedules all Board and Board Committee, and annual/special independent corporation meetings;
- Produces the minutes of all Board meetings;
- Maintains all Board resolutions;
- Schedules other meetings and functions on behalf of the Board members and makes travel arrangements, as needed;
- Maintains records of all inter-agency agreements, deeds and easements;
- Maintains records for the various independent corporations;
- Shapes, guides and engages on local, state and federal policies, legislation and regulations;
- Manages and coordinates the legal resources utilized by the District;
- Responds to, or directs response to, all media inquiries; and,
- Responds to, or directs response to, all public information requests and subpoenas.

The General Manager's Office works with the Board of Directors and staff to establish the District's strategic vision for all departments. On December 17, 2018, staff reviewed the 2019 Goals and Target Activities with the Board. The Goals and Target Activities described below reflect the *Strategic Objectives*, as well as the *Mission, Vision and Values* of Irvine Ranch Water District as adopted by the Board. The Goals (numbered) and the Target Activities (lettered) approved for calendar year 2019 are summarized as follows:



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

Major Goals

1. Optimize and protect local groundwater utilization:
 - a. Conduct well treatment and conveyance study for Wells 51, 52, and two Tustin Legacy well sites
 - b. Include IRWD's recycled water demands in OCWD's total water demand calculations
 - c. Collaborate with OCWD on South Basin Clean-up Project
 - d. Work with OCWD on Green Acres Project water supply opportunities

2. Evaluate and invest in projects and programs that will enhance future long-term water supply reliability:
 - a. Implement agreements with MWD and MWDOC that will provide water supply reliability from high priority water rights during periods of drought and supply interruptions
 - b. Advocate methods for filling the Orange County Groundwater Basin, including development of concepts to promote exchanges
 - c. Advocate for regional potable reuse projects including Metropolitan's Carson Regional Potable Reuse Project
 - d. Secure Title XVI funding for the Syphon Reservoir Improvement Project

3. Optimize use of Irvine Lake as a water resource facility for IRWD and its partners
 - a. Resolve property issues between the County, the Irvine Company, Serrano Water District, and IRWD
 - b. Develop agreement with Serrano Water District and with the Baker Plant Partners for providing water system reliability utilizing Irvine Lake
 - c. Complete final design of sloped outlet pipe to replace the Irvine Lake Outlet Tower

4. Develop water banking recharge, storage, and extraction capacity for IRWD and water banking partners, and store water as it becomes available:
 - a. Execute long-term unbalanced exchange agreements for Stockdale West
 - b. Execute long-term exchange agreements to maximize benefits of non-State Water Project water
 - c. Identify and procure additional supplies of water for banking purposes
 - d. Integrate IRWD's Strand Ranch and Stockdale West properties into the Kern Fan Groundwater Sustainability Agency (GSA)

5. Develop and implement the Kern Fan Groundwater Storage Project
 - a. Finalize and execute Agreement and Bylaws with Rosedale to establish the Kern Fan Groundwater Storage Project JPA
 - b. Identify and secure land as needed for the Kern Fan Groundwater Storage Project



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

- c. Complete planning and environmental compliance work for the Kern Fan Groundwater Storage Project
 - d. Execute Agreements with State Agencies for the operation of the Kern Fan Groundwater Storage Project
 - e. Secure water storage investment funding for the Kern Fan Groundwater Storage Project and advocate to include the project on the Bureau of Reclamation 's Report to Congress
6. Develop water recycling facilities and applications for optimal benefit:
- a. Complete construction of Irvine Lake Pipeline North Conversion
 - b. Complete Sewage Treatment Master Plan, including consideration of Irvine Business Complex flows
 - c. Update the Salt Management Plan to assess impacts of seawater desalination on water recycling and other issues
 - d. Perform California Environmental Quality Act, alternatives analysis and preliminary design for the Syphon Reservoir Improvement Project
 - e. Determine costs and benefits associated with procuring approximately 700 AF of recycled water storage in Santa Margarita Water District's Upper Oso Reservoir
 - f. Complete IRWD Potable Reuse Feasibility Study to explore surface, ground, raw and treated water augmentation options
 - g. Work with other agencies on recycled water use opportunities
 - h. Design and construct recycled water filtration facilities for San Joaquin Reservoir
 - i. Develop customer guidelines for using recycled water
7. Maximize resource recovery from fully functional biosolids and other resource recovery facilities:
- a. Biosolids Class A Facilities operational and commissioned
 - b. Secure agreements with multiple outlets for biosolids pellets
 - c. Develop partnerships with others to utilize surplus capacity
 - d. Develop and implement plan to introduce fats, oils, and grease to the IRWD Biosolids Facilities
 - e. Develop plan to introduce food waste to the IRWD Biosolids Facilities
8. Improve energy service reliability, manage demands, and control costs:
- a. Coordinate the construction and commissioning of energy storage installations with Advanced Microgrid Solutions
 - b. Finalize contract to outsource operation and maintenance of biogas treatment and micro-turbine systems
 - c. Complete design and installation of compressed natural gas fueling station at the Operations Center
 - d. Complete new water/sewer agency electricity tariff research in partnership with Southern California Edison that will reduce IRWD energy costs



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

- e. Coordinate with SunPower to complete the installation of the photovoltaic (solar) energy system at the Baker Plant

9. Maximize watershed protection:

- a. Work with the County and others, permit and implement the Selenium Total Maximum Daily Load offset trading program
- b. Complete feasibility study of project to capture and treat urban runoff flows downstream from the San Joaquin Marsh utilizing funding from Measure M
- c. Implement in-house pre-treatment program elements: permitting, agreements, and monitoring reports
- d. Implement in-house fats, oil, and grease program, including billing
- e. Continue to work with Orange County Flood Control District to ensure appropriate capacity in San Diego Creek
- f. Complete construction of Michelson Water Recycling Program recycled water emergency diversion facilities to San Diego Creek.
- g. Obtain riparian rights to divert water from San Diego Creek to ensure continued protection of water quality in Newport Bay
- h. Work with the County, Orange County Water District, Orange County Sanitation District, and others to obtain a recycled water emergency diversion connection to the Santa Ana River
- i. Obtain approval for the Total Nitrogen Total Phosphorus Offset Plan from the Santa Ana Regional Quality Control Board
- j. Participate in the Fecal Coliform Task Force to assist in the development of a reasonable total maximum daily load

10. Ensure financial and rate stability:

- a. Evaluate development and/or sale opportunities at IRWD properties
- b. Complete development and leasing on remaining Sand Canyon campus and other facilities
- c. Document outstanding deed, access, and other contractual restrictions related to real property
- d. Update Cost of Service Study for the IRWD sewer system that includes the Biosolids Project operating expenses
- e. Develop approach for implementing a two-year budget and Proposition 218 process
- f. Develop an updated policy for funding the IRWD Infrastructure Replacement Program
- g. Develop updated facility and pipeline unit costs into IRWD's Replacement Planning Model



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

11. Identify, assess and implement new technologies, systems, and facilities to improve operating efficiency:
 - a. Complete addition of linear assets to the Enterprise Asset Management system; prepare scope for maintenance management mobility solution
 - b. Implement findings of IT-related existing/new technology opportunity assessment while maintaining District security
 - c. Assess the District's overall cybersecurity risk profile; establish overall plan for addressing cybersecurity awareness, education, response, and prevention at IRWD
 - d. Assess availability of data systems under certain service outage scenarios and implement program to strengthen systems
 - e. Convert IRWD email system from GroupWise to Outlook
 - f. Develop plan to assess IRWD's future warehousing needs
 - g. Evaluate office space needs to the Sand Canyon headquarters building and develop plan as needed
 - h. Develop plan for overall management of IRWD data (technical, financial other)

12. Enhance customer communications:
 - a. Enhance customer communication through an improved customer web access portal
 - b. Develop and implement Phase 3 of the Water Use Efficiency Outreach Program based on findings of the 2018 program
 - c. Implement redesigned customer bill to improve customers' understanding of IRWD rate structure; explain IRWD rate structure to customers through direct communications
 - d. Design and implement the Syphon Reservoir Improvement Project Outreach Program from environmental impact report through design phase

13. Maximize water use efficiency in the community:
 - a. Complete a study to assess the potential for additional water use efficiency in IRWD's service area
 - b. Implement automated methodology for quantifying irrigated areas and meter locations by linking aerial image data to meter and parcel data
 - c. Expand/enhance water use efficiency demonstration gardens within the IRWD service area

14. Recruit, develop, and retain a highly skilled, motivated, and educated work force:
 - a. Assess the experience and training of IRWD employees to ensure a continued supply of highly-skilled labor, and develop programs, for example an Apprenticeship Program, to close any labor skills gaps identified.
 - b. Complete triennial Benchmark Salary Survey to ensure District salaries remain competitive to market rates
 - c. Negotiate a new labor agreement with represented personnel
 - d. Complete implementation of District-wide corporate values initiative



GENERAL MANAGER'S OFFICE

OPERATING BUDGET SUMMARY

15. Guide and lead local, state, and federal policies and legislation:

- a. Advocate for legislation or regulations that protects local investments in water recycling and extraordinary supplies, and protects IRWD's ability to access those supplies, without penalty, during times of drought or shortage
- b. Advocate for an alternative funding source for safe and accessible drinking water in California, which is inconsistent with the Board's adopted policy on a statewide public goods charge; oppose a statewide tax on water
- c. Engage in discussions surrounding water and wastewater rates in order to protect the District's ability to design and use a water budget-based tiered rate structure, including discussions related to Low Income Rate Assistance programs and Proposition 218 reforms consistent with Board direction
- d. Seek reauthorization of the Bureau of Reclamation's Title XVI and the Water Storage Investment Programs

16. Engage and shape policies and regulations put forth by local, state, and federal agencies:

- a. Engage productively with stakeholders, industry associations, and state agencies to effectively implement the enacted long-term water use efficiency legislation
- b. Obtain revisions to the State Water Resources Control Board's proposed amendments to the Recycled Water Policy
- c. Engage in discussions and provide input to the State Water Resources Control Board on development of water loss standards

17. Collaborate with other agencies and entities through leadership and innovation:

- a. Advocate for IRWD's Desalination Policy Principles
- b. Evaluate and promote opportunities for shared services such as third party billing for UC Irvine and Tustin
- c. Support enhanced engagement and leadership roles within Association of California Water Agencies, WaterReuse, California Association of Sanitation Agencies, and other District associations
- d. Coordinate with interested entities to update South County Emergency Interconnect Agreement
- e. Work with other agencies to maximize Orange County benefits from IRWM processes, including capture of urban runoff by Orange County Sanitation District for use in Groundwater Replenishment System
- f. As part of the IRWD Sewage Treatment Master Plan, work with Orange County Sanitation District to identify mutually beneficial opportunities for use of IRWD sewer flows
- g. Complete the annexation process to bring sewer flows from Lake Forest into Orange County Sanitation District Revenue Area 14



GENERAL MANAGER'S OFFICE

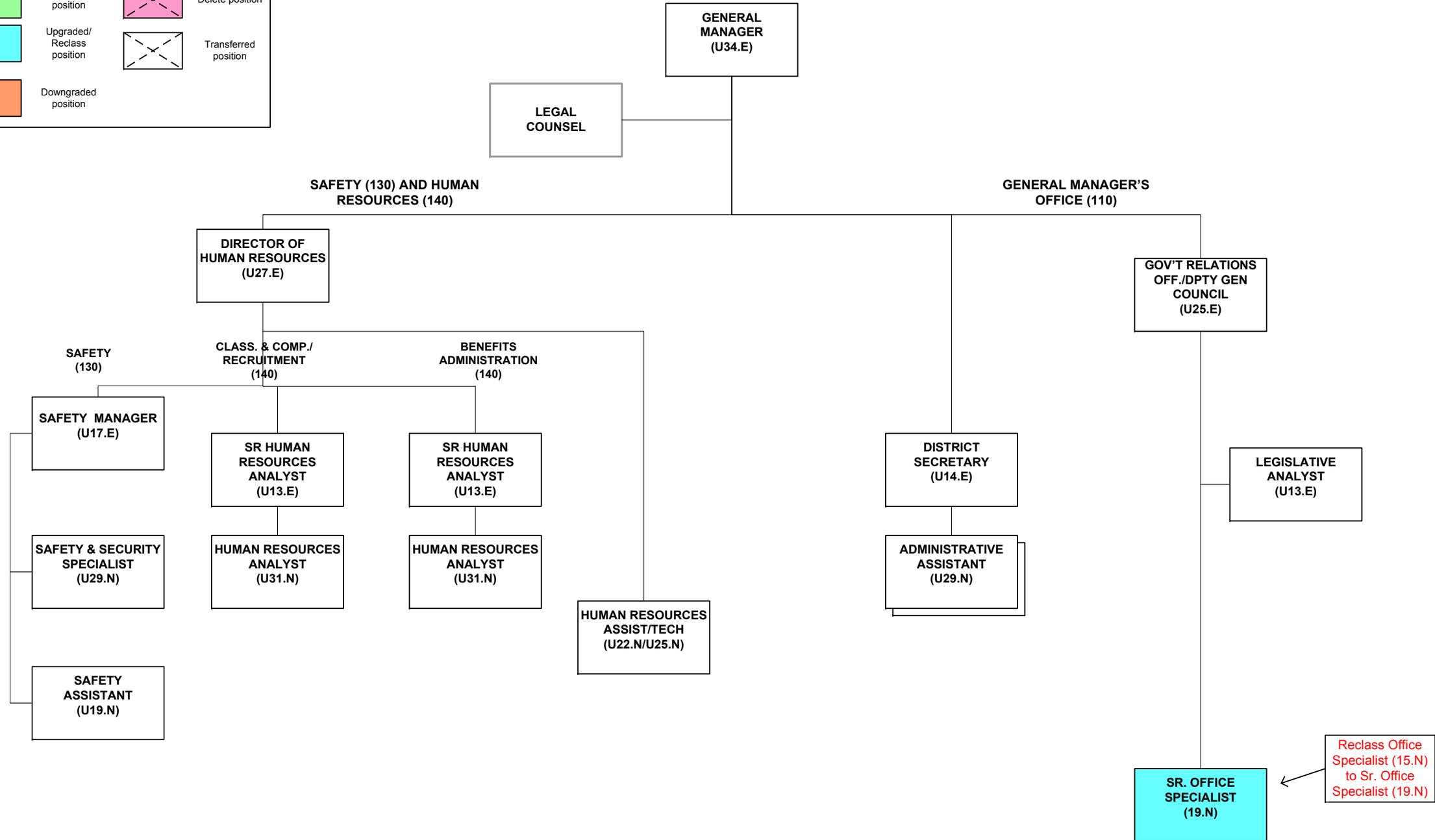
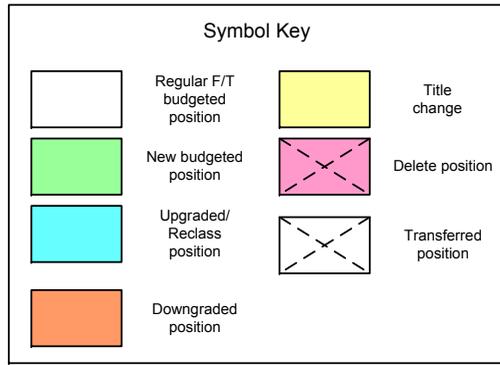
OPERATING BUDGET SUMMARY

- h. Finalize agreements for a pilot program through which Municipal Water District of Orange County can participate in IRWD's water banking program

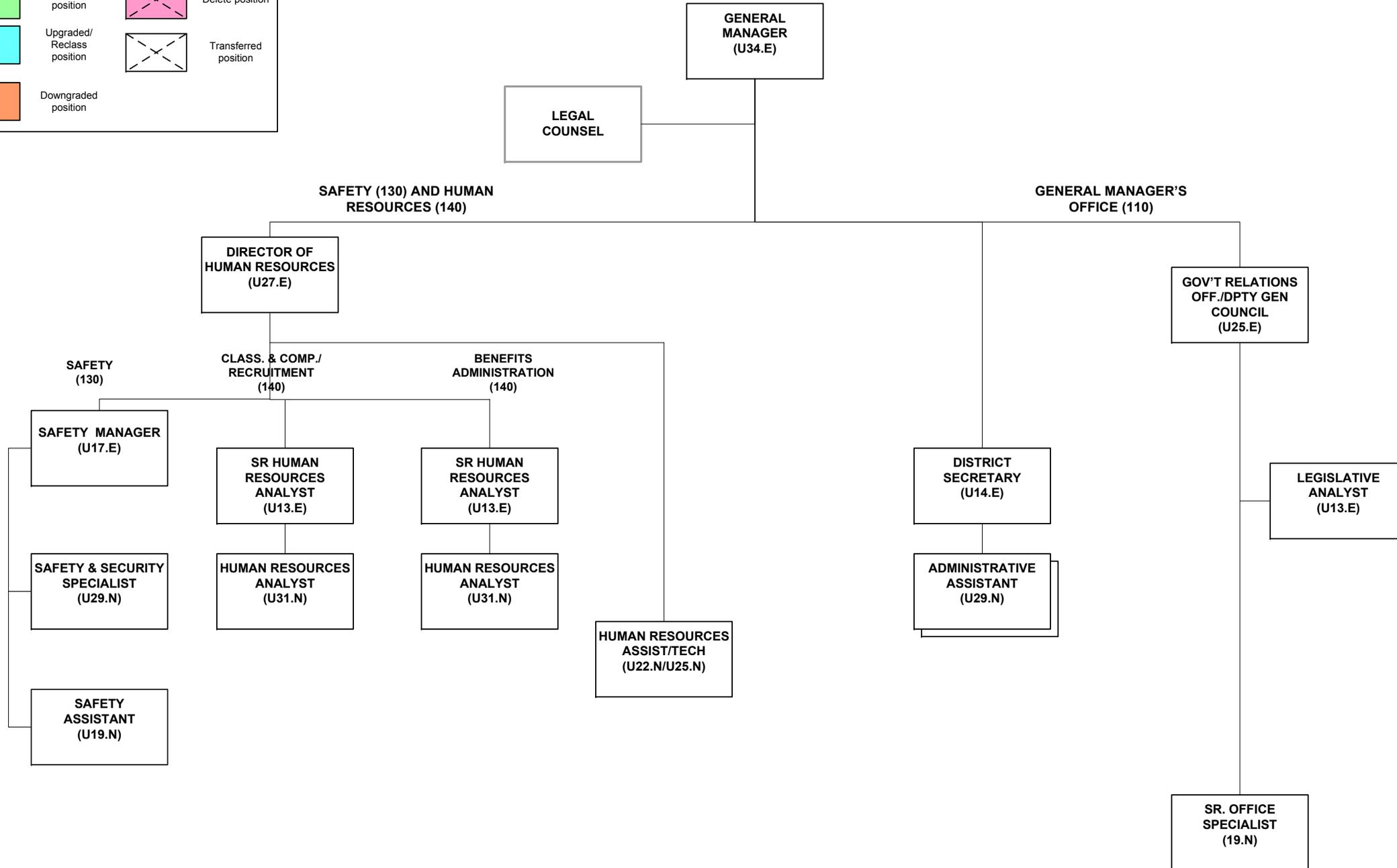
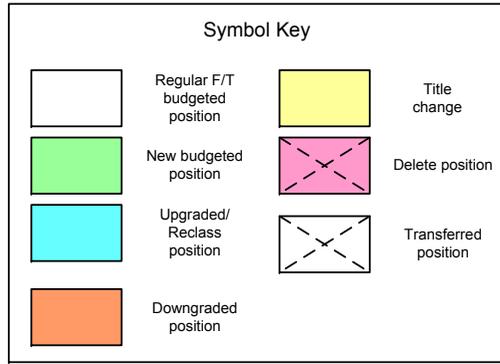
18. Implement opportunities that enhance safety, security, and emergency preparedness throughout the District:

- a. Install security improvements at the MWRP
- b. Evaluate security enhancements at other District facilities
- c. Design and construct improvements to eliminate the use of chlorine gas at preliminary disinfection facility
- d. Update District Emergency Operations Plan, including training for certain high-risk scenarios
- e. Develop Safety Training Management System
- f. Assess IRWD's ability to continue operation of key facilities during short- and long-term power outage scenarios
- g. Conduct assessment for dedicated IRWD Emergency Operations Center
- h. Revise all District energy control procedures and integrate with Maximo service work order system.

**IRVINE RANCH WATER DISTRICT
ADMINISTRATION
FISCAL YEAR 2019-20**



**IRVINE RANCH WATER DISTRICT
ADMINISTRATION
FISCAL YEAR 2020-21**



Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Administration		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
<u>General Managers Office</u>						
110	Regular Labor	1,032,188	485,576	896,898	917,830	20,932
110	Overtime Labor	4,206	3,667	0	7,500	7,500
110	Operating Supplies	9	0	0	0	0
110	Printing	70	80	8,000	15,000	7,000
110	Postage	174	84	400	200	(200)
110	Permits, Licenses and Fees	37,146	27,356	55,000	68,650	13,650
110	Office Supplies	3,219	605	4,000	4,000	0
110	Legal Fees	1,816,893	533,104	1,720,000	2,550,000	830,000
110	Personnel Training	393,246	282,082	412,000	446,250	34,250
110	Other Professional Fees	501,466	307,243	753,880	888,865	134,985
110	Directors' Fees	153,426	78,624	168,000	177,000	9,000
110	Election Expense	145,000	72,500	145,000	150,000	5,000
110	Other	(211,094)	0	0	0	0
Total General Managers Office		3,875,949	1,790,921	4,163,178	5,225,295	1,062,117

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Administration

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>General Managers Office</u>						
110	Regular Labor	1,032,188	485,576	917,830	957,642	39,812
110	Overtime Labor	4,206	3,667	7,500	7,800	300
110	Operating Supplies	9	0	0	0	0
110	Printing	70	80	15,000	15,000	0
110	Postage	174	84	200	250	50
110	Permits, Licenses and Fees	37,146	27,356	68,650	70,350	1,700
110	Office Supplies	3,219	605	4,000	4,200	200
110	Legal Fees	1,816,893	533,104	2,550,000	2,300,000	(250,000)
110	Personnel Training	393,246	282,082	446,250	465,349	19,099
110	Other Professional Fees	501,466	307,243	888,865	916,150	27,285
110	Directors' Fees	153,426	78,624	177,000	185,900	8,900
110	Election Expense	145,000	72,500	150,000	155,000	5,000
110	Other	(211,094)	0	0	0	0
<u>Total General Managers Office</u>		3,875,949	1,790,921	5,225,295	5,077,640	(147,654)



SAFETY

OPERATING BUDGET SUMMARY

Program Description

The Safety program provides necessary resources to promote a safe work environment for employees through mandated and pro-active training and ensures the District is prepared for response to emergency and disaster incidents.

With a commitment to provide on-going employee training to facilitate safe job performance, the Safety function continually monitors and stays abreast of current and pending changes and improvements for safe work practices in the water industry. Appropriate policies are regularly developed or revised to ensure the constant pursuit and maintenance of a safe operational environment, in compliance with all applicable laws and regulations.

Through the use of safety awareness programs, the Safety function works to increase employee involvement at all organizational levels via All Hands Meetings, Tailgate Safety Meetings, classroom and on-site training sessions, workplace evaluations, industrial hygiene evaluations and employee Safety Committee meetings.

The Safety program coordinates emergency preparedness and disaster response operations, oversees the maintenance and administration of the Emergency Operations Center and administers the Commuter Trip Reduction (Ridesharing) program.

Major Goals

- Evaluate opportunities that enhance safety and emergency preparedness throughout the District;
- Complete the development of the Specific Hazard Response Plans as a part of the District's overall Emergency Operations Plan;
- Administer the Safety Training Management System to ensure timely safety training of all District staff; and,
- Provide continual disaster response training drills for District staff, including high-risk scenarios.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Administration		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Safety						
130	Regular Labor	243,723	118,204	272,136	270,285	(1,851)
130	Overtime Labor	15,188	8,091	4,000	14,000	10,000
130	Contract Labor	0	0	0	51,400	51,400
130	Fuel	21	0	0	0	0
130	Operating Supplies	203,797	58,085	110,900	133,600	22,700
130	Printing	4,474	10,027	2,000	4,000	2,000
130	Postage	310	270	500	500	0
130	Permits, Licenses and Fees	46,473	19,232	55,600	52,000	(3,600)
130	Office Supplies	36,929	34,482	28,100	32,000	3,900
130	Personnel Training	220,936	98,767	153,500	244,000	90,500
130	Personnel Physicals	3,282	1,963	21,000	8,000	(13,000)
130	Other Professional Fees	219,987	184,789	187,000	330,000	143,000
130	Equipment Usage	0	0	0	0	0
130	Safety	123,100	105,848	45,000	69,000	24,000
130	Alarm and Patrol Services	550,711	54,738	750,560	0	(750,560)
130	Commuter Program	191,934	114,445	0	0	0
Total Safety		1,860,865	808,941	1,630,296	1,208,785	(421,511)

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Administration

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Safety</u>						
130	Regular Labor	243,723	118,204	270,285	282,601	12,316
130	Overtime Labor	15,188	8,091	14,000	14,000	0
130	Contract Labor	0	0	51,400	76,400	25,000
130	Fuel	21	0	0	0	0
130	Operating Supplies	203,797	58,085	133,600	124,700	(8,900)
130	Printing	4,474	10,027	4,000	4,000	0
130	Postage	310	270	500	500	0
130	Permits, Licenses and Fees	46,473	19,232	52,000	55,000	3,000
130	Office Supplies	36,929	34,482	32,000	39,000	7,000
130	Personnel Training	220,936	98,767	244,000	240,000	(4,000)
130	Personnel Physicals	3,282	1,963	8,000	8,000	0
130	Other Professional Fees	219,987	184,789	330,000	343,000	13,000
130	Equipment Usage	0	0	0	0	0
130	Safety	123,100	105,848	69,000	70,000	1,000
130	Alarm and Patrol Services	550,711	54,738	0	0	0
130	Commuter Program	191,934	114,445	0	0	0
<u>Total Safety</u>		1,860,865	808,941	1,208,785	1,257,201	48,416



HUMAN RESOURCES

OPERATING BUDGET SUMMARY

Program Description

The Human Resources function provides comprehensive organizational development and personnel management services to maximize the potential of the District's human resources and overall employee efficiency, effectiveness and satisfaction. The Human Resources program is responsible for attracting and recruiting a highly qualified work force and working in concert with the organization leadership to develop and sustain a motivated, productive organization.

Human Resources ensures the delivery of a competitive compensation and benefits package; continuous improvement through employee training; fair and consistent employee policies, procedures and guidelines; and an ongoing employee reward and recognition program tied to the achievement of stated goals and objectives. Human Resources is responsible for the employee relations and labor relations processes and facilitates communication and trust with staff through collaboration and the open exchange of ideas.

Major Goals

- Recruit, develop and retain a highly skilled and educated workforce;
- Assess the experience and training of IRWD employees to ensure a continued supply of highly skilled labor;
- Develop programs to close any identified labor skill gaps; and,
- Implement District-wide Organizational Values Development initiative.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Administration		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
Human Resources						
140	Regular Labor	580,331	279,704	631,862	640,943	9,081
140	Overtime Labor	12,766	10,765	2,000	5,000	3,000
140	Employee Benefits	17,396,129	9,138,031	19,123,550	20,224,261	1,100,711
140	Contract Labor	4,423	12,496	3,000	3,000	0
140	Postage	11	348	0	500	500
140	Office Supplies	5,436	827	2,500	2,500	0
140	Rep & Maint IRWD	0	0	1,000	0	(1,000)
140	Legal Fees	199,213	72,113	145,000	140,000	(5,000)
140	Personnel Training	343,161	102,490	399,600	423,100	23,500
140	Personnel Physicals	15,826	16,017	20,000	35,000	15,000
140	Other Professional Fees	154,379	105,517	174,200	220,500	46,300
140	Equipment Usage	0	0	0	0	0
140	Commuter Program	0	(161)	156,000	240,000	84,000
Total Human Resources		18,711,675	9,738,146	20,658,712	21,934,804	1,276,092
Total Administration		24,448,489	12,338,008	26,452,186	28,368,884	1,916,698

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Administration

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Human Resources</u>						
140	Regular Labor	580,331	279,704	640,943	670,675	29,732
140	Overtime Labor	12,766	10,765	5,000	5,000	0
140	Employee Benefits	17,396,129	9,138,031	20,224,261	21,593,016	1,368,755
140	Contract Labor	4,423	12,496	3,000	3,000	0
140	Postage	11	348	500	500	0
140	Office Supplies	5,436	827	2,500	2,500	0
140	Rep & Maint IRWD	0	0	0	0	0
140	Legal Fees	199,213	72,113	140,000	140,000	0
140	Personnel Training	343,161	102,490	423,100	428,100	5,000
140	Personnel Physicals	15,826	16,017	35,000	37,000	2,000
140	Other Professional Fees	154,379	105,517	220,500	225,500	5,000
140	Equipment Usage	0	0	0	0	0
140	Commuter Program	0	(161)	240,000	260,000	20,000
<u>Total Human Resources</u>		18,711,675	9,738,146	21,934,804	23,365,291	1,430,487
<u>Total Administration</u>		24,448,489	12,338,008	28,368,884	29,700,133	1,331,249



FINANCE, TREASURY AND PROCUREMENT

OPERATING BUDGET SUMMARY

Program Description

The Finance Department is responsible for ensuring the financial and rate stability of the District. This includes developing rates and fees that support the long-term sustainability of the District. Finance maintains the official accounting records of the Irvine Ranch Water District and provides financial management of the District's income and real estate investments, new and existing debt issues, and deferred compensation programs. The department provides a wide range of accounting and financial services including payroll, accounts payable, accounts receivable, project accounting, financial analysis, financial reporting, coordination of the District's annual operating budget and preparation of the Comprehensive Annual Financial Report (CAFR). The Finance Department also oversees risk management claims and insurance issues as well as District security.

The mission of the Finance Department is to safeguard assets and provide financial and accounting services in a timely, reliable, and cost-effective manner that meet the requirements of the District's internal and external customers.

Major Goals

ACCOUNTING AND BUDGETING

- Prepare and submit accurate financial reports and relevant tax returns to federal, state, county and district agencies within established legal deadlines and requirements;
- Prepare and submit accurate and timely financial reports to the Finance and Personnel Committee and the District's Board of Directors;
- Coordinate the District's annual financial statement audit;
- Prepare the annual CAFR;
- Prepare the Operating Budget for Board of Director approval including setting adequate rates to ensure long-term financial strength and stability;
- Ensure user rates are proportional with costs of service and support the current rate structure;
- Lead customer noticing effort for Proposition 218 compliance (operating budget, rates and charges);
- Ensure all payments and payroll checks are accurate and timely; and,
- Identify and implement enhanced financial reporting and business intelligence capabilities.

LONG-TERM FINANCIAL PLANNING

- Continue to refine and update the cash flow strategic model to ensure sufficient funding for future capital needs;
- Provide analytical support and analysis to Finance, other departments and outside constituents as requested; and,
- Explore financial modeling for acquisition, financing and construction of major projects.



FINANCE, TREASURY AND PROCUREMENT

OPERATING BUDGET SUMMARY

INVESTMENTS AND CASH MANAGEMENT

- Invest District funds in a prudent and professional manner that will provide maximum security of principal, sufficient liquidity to meet working capital requirements and an optimal rate of return;
- Prepare accurate investment reports and the annual investment policy for the Board of Directors and other interested parties within established time frames; and,
- Maintain and enhance short and long-term cash flow models and cash management practices.

REAL ESTATE

- Monitor and report on the performance of all real estate investment assets;
- Manage leasing and related property management activities for all District commercial and residential real estate investments;
- Evaluate development and disposition opportunities of other District properties;
- Complete construction and leasing of the Sand Canyon campus in Irvine;
- Assist with acquisition and agricultural leasing activities related to water reliability properties; and,
- Resolve outstanding deed, access and other contractual restrictions related to real property.

DEBT ISSUANCE AND ADMINISTRATION

- Issue long-term debt to fund capital projects as needed, and evaluate and recommend refunding opportunities for current District debt issues when appropriate;
- Manage District letters of credit supporting variable rate debt; evaluate new credit support opportunities when appropriate;
- Prepare and submit required continuing disclosure materials for District debt issues to appropriate parties;
- Manage variable rate debt portfolio including periodic remarketings, monitoring remarketing agents of District debt and making adjustments as appropriate; and,
- Execute, manage and report on interest rate swap positions and transactions as appropriate.

RISK MANAGEMENT/INSURANCE

- Ensure the District has adequate insurance to appropriately safeguard assets; and,
- Manage the claims process and coordinate legal matters in a timely manner.

SECURITY

- Assess and implement measures to ensure the security of District employees, facilities and customers;
- Manage third-party security contractor relationships including monitoring and response to field and incident reports;
- Monitor alarm and security access systems for all District facilities;
- Respond to reported incidents to provide security assistance as required; and,
- Act as District liaison with law enforcement and federal security agencies.



FINANCE, TREASURY AND PROCUREMENT

OPERATING BUDGET SUMMARY

PENSION/DEFERRED COMPENSATION

- Maintain and invest Pension Benefits Trust assets and report portfolio performance and recommendations to the Retirement Board;
- Evaluate and monitor Trust Advisor performance; recommend changes in advisory services as appropriate; review additional opportunities to optimize Pension Benefits Trust performance; and,
- Oversee investment performance, reporting and employee education activities related to the District's deferred compensation plans.

PURCHASING

- Purchase materials, supplies and services in a timely manner with appropriate consideration given to quality and best pricing;
- Process all material/service requests timely and efficiently;
- Optimize Maximo system; maintain appropriate warehouse inventory and review/adjust slow moving inventory;
- Streamline business procurement processes and documentation while ensuring appropriate controls on all warehouses;
- Explore opportunities for expanded warehouse capabilities;
- Lead the District record retention efforts;
- Provide ongoing customer support for procurement and inventory systems; and,
- Evaluate and expand participation in cooperative purchasing agreements as appropriate.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Finance & Administrative Services

Dept No	Expense Name	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Finance and Treasury						
210	Regular Labor	2,500,973	1,210,378	2,460,066	2,671,079	211,013
210	Overtime Labor	31,425	7,937	16,500	17,500	1,000
210	Contract Labor	63,309	23,041	39,600	12,000	(27,600)
210	Other Utilities	142	0	0	0	0
210	Operating Supplies	1,350	205	1,200	1,000	(200)
210	Printing	65,170	16,739	70,000	8,000	(62,000)
210	Postage	6,192	3,145	6,500	6,500	0
210	Permits, Licenses and Fees	37,364	4,123	15,500	7,200	(8,300)
210	Office Supplies	5,141	3,643	6,000	7,200	1,200
210	Insurance	500,840	541,173	1,085,400	1,316,502	231,102
210	Accounting Fees	106,370	49,905	102,000	100,000	(2,000)
210	Data Processing	50,940	25,860	52,400	80,800	28,400
210	Personnel Training	26,122	14,761	28,000	40,400	12,400
210	Other Professional Fees	218,013	80,691	272,000	318,100	46,100
210	Equipment Usage	0	0	0	0	0
210	Mileage Reimbursement	0	7	0	0	0
210	Collection Fees	137	0	5,500	11,000	5,500
210	Alarm and Patrol Services	0	314,651	0	800,080	800,080
210	Other	0	45,000	0	0	0
Total Finance and Treasury		3,613,488	2,341,259	4,160,666	5,397,361	1,236,695

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Finance & Administrative Services

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
Finance and Treasury						
210	Regular Labor	2,500,973	1,210,378	2,671,079	2,780,462	109,383
210	Overtime Labor	31,425	7,937	17,500	18,100	600
210	Contract Labor	63,309	23,041	12,000	12,000	0
210	Other Utilities	142	0	0	0	0
210	Operating Supplies	1,350	205	1,000	1,000	0
210	Printing	65,170	16,739	8,000	83,300	75,300
210	Postage	6,192	3,145	6,500	6,700	200
210	Permits, Licenses and Fees	37,364	4,123	7,200	7,300	100
210	Office Supplies	5,141	3,643	7,200	7,400	200
210	Insurance	500,840	541,173	1,316,502	1,552,403	235,901
210	Accounting Fees	106,370	49,905	100,000	111,000	11,000
210	Data Processing	50,940	25,860	80,800	82,400	1,600
210	Personnel Training	26,122	14,761	40,400	42,708	2,308
210	Other Professional Fees	218,013	80,691	318,100	251,450	(66,650)
210	Equipment Usage	0	0	0	0	0
210	Mileage Reimbursement	0	7	0	0	0
210	Collection Fees	137	0	11,000	11,400	400
210	Alarm and Patrol Services	0	314,651	800,080	850,000	49,920
210	Other	0	45,000	0	0	0
Total Finance and Treasury		3,613,488	2,341,259	5,397,361	5,817,623	420,262

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Finance & Administrative Services

Dept No	Expense Name	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Purchasing						
240	Regular Labor	709,921	375,898	845,870	997,007	151,137
240	Overtime Labor	19,240	36,614	28,000	44,000	16,000
240	Contract Labor	25,793	34,596	4,000	12,600	8,600
240	Operating Supplies	388,743	84,825	129,000	148,000	19,000
240	Printing	16,779	7,174	8,500	10,000	1,500
240	Postage	4,331	2,737	6,000	6,000	0
240	Office Supplies	14,351	5,701	12,000	12,000	0
240	Duplicating Equipment	187,284	88,316	174,000	185,000	11,000
240	Equipment Rental	2,312	6,919	18,000	18,000	0
240	Personnel Training	4,146	(79)	7,000	13,000	6,000
240	Other Professional Fees	96	4,235	42,000	2,000	(40,000)
240	Equipment Usage	0	0	0	0	0
240	Commuter Program	0	(161)	0	0	0
Total Purchasing		1,372,995	646,775	1,274,370	1,447,607	173,237

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Finance & Administrative Services

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
Purchasing						
240	Regular Labor	709,921	375,898	997,007	1,037,152	40,145
240	Overtime Labor	19,240	36,614	44,000	44,400	400
240	Contract Labor	25,793	34,596	12,600	0	(12,600)
240	Operating Supplies	388,743	84,825	148,000	159,900	11,900
240	Printing	16,779	7,174	10,000	10,400	400
240	Postage	4,331	2,737	6,000	6,000	0
240	Office Supplies	14,351	5,701	12,000	12,400	400
240	Duplicating Equipment	187,284	88,316	185,000	185,000	0
240	Equipment Rental	2,312	6,919	18,000	20,000	2,000
240	Personnel Training	4,146	(79)	13,000	13,000	0
240	Other Professional Fees	96	4,235	2,000	2,000	0
240	Equipment Usage	0	0	0	0	0
240	Commuter Program	0	(161)	0	0	0
Total Purchasing		1,372,995	646,775	1,447,607	1,490,252	42,645



ADMINISTRATIVE SERVICES

OPERATING BUDGET SUMMARY

Program Description

The Administrative Services group provides a wide range of support services that include Customer Service and Information Services.

The mission of the Customer Service Department is to provide exceptional customer satisfaction by providing reliable, courteous and efficient service. The Customer Service Department provides utility billing, account support and mail distribution services.

The mission of the Information Services Department is to research, develop, integrate and support reliable, cost effective information systems that improve and enhance current and future business requirements of customers and provide a high level of customer satisfaction. The Information Services Department provides implementation, management, security and support for the District's information systems, voice and data communications systems.

Major Goals

CUSTOMER SERVICE

- Deliver exceptional customer service both internally and externally;
- Review and resolve billing inquiries and adjustments in a timely manner including education of customers on water budgets;
- Receive and process all orders for new service and discontinuation of service;
- Process new meter applications;
- Process payments for temporary construction meters, fire flow tests, and customer water bills;
- Coordinate and process all meter reads to ensure accurate billing;
- Process variance requests for additional water budgets;
- Respond to field problems (leaks, no water complaints, high/low pressure, water quality, sewer problems, line breaks, etc.) with a sense of urgency;
- Manage delinquent customer accounts and perform shut-offs as required;
- Provide customers with an accurate bill that is easy to read;
- Distribute customer satisfaction surveys and maintain 90% customer satisfaction;
- Remain compliant with all State, Local and Federal laws pertaining to utility billing;
- Ensure that customers have an accurate understanding of the IRWD rate structure; and,
- Maintain accurate customer data to ensure timely billing and notification.



ADMINISTRATIVE SERVICES

OPERATING BUDGET SUMMARY

INFORMATION SERVICES

- Provide helpful, courteous and timely support to all District staff;
- Provide internal and external software training that meets the needs of District staff;
- Provide a reliable network of servers, personal computers, mobile devices, printers and software applications that meet the needs of District staff;
- Provide reliable voice, data and wireless communications services;
- Implement new and improve existing software applications to meet the requirements of District staff;
- Complete scheduled hardware and software upgrades to District servers, personal computers, mobile devices, printers, network equipment and software applications;
- Implement the billing function for the Fats, Oils, and Greases (FOG) permitting and inspection program;
- Continue technical upgrade of Oracle Customer Care and Billing software;
- Complete the migration from GroupWise messaging to Microsoft Office 365 in the cloud;
- Complete development of additional Business Intelligence reports and dashboards;
- Implement recommendations from the Cyber Security Risk Assessment and Response Plan;
- Support Part 2 implementation of the Enterprise Asset Management System (EAM);
- Conduct customer web access portal upgrade assessment; and,
- Monitor industry trends for best practices and opportunities for improved system related technologies.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Finance & Administrative Services		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
<u>Customer Service</u>						
220	Regular Labor	1,853,638	870,692	2,056,740	2,126,785	70,045
220	Overtime Labor	116,566	47,739	60,000	96,000	36,000
220	Contract Labor	279,773	114,902	215,800	366,400	150,600
220	Operating Supplies	8,167	7,213	15,000	15,000	0
220	Printing	64,352	25,435	170,800	170,000	(800)
220	Postage	544,276	312,195	500,000	620,000	120,000
220	Office Supplies	5,051	3,853	5,500	7,300	1,800
220	Equipment Rental	44,250	25,297	0	38,000	38,000
220	Rep & Maint IRWD	97	4,793	0	0	0
220	Personnel Training	2,359	0	8,000	12,500	4,500
220	Other Professional Fees	950	1,670	2,000	2,500	500
220	Collection Fees	2,218	679	1,000	2,000	1,000
220	Contract Meter Reading	1,509,984	595,179	1,390,000	1,432,000	42,000
Total Customer Service		4,431,681	2,009,647	4,424,840	4,888,485	463,645

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Finance & Administrative Services

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Customer Service</u>						
220	Regular Labor	1,853,638	870,692	2,126,785	2,328,311	201,526
220	Overtime Labor	116,566	47,739	96,000	60,000	(36,000)
220	Contract Labor	279,773	114,902	366,400	251,000	(115,400)
220	Operating Supplies	8,167	7,213	15,000	15,000	0
220	Printing	64,352	25,435	170,000	176,800	6,800
220	Postage	544,276	312,195	620,000	645,000	25,000
220	Office Supplies	5,051	3,853	7,300	7,700	400
220	Equipment Rental	44,250	25,297	38,000	38,000	0
220	Rep & Maint IRWD	97	4,793	0	0	0
220	Personnel Training	2,359	0	12,500	12,500	0
220	Other Professional Fees	950	1,670	2,500	2,800	300
220	Collection Fees	2,218	679	2,000	2,000	0
220	Contract Meter Reading	1,509,984	595,179	1,432,000	1,550,000	118,000
Total Customer Service		4,431,681	2,009,647	4,888,485	5,089,111	200,626

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Finance & Administrative Services		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
<u>Information Services</u>						
250	Regular Labor	1,756,794	814,292	1,870,116	1,949,273	79,157
250	Overtime Labor	20,333	12,582	30,000	30,000	0
250	Contract Labor	288,651	112,067	240,000	240,000	0
250	Telecommunication	531,871	259,364	516,100	641,100	125,000
250	Operating Supplies	25	49	0	0	0
250	Printing	2,449	154	1,000	0	(1,000)
250	Office Supplies	0	0	1,000	1,000	0
250	Rep & Maint IRWD	320,093	156,974	402,400	230,800	(171,600)
250	Data Processing	2,846,311	1,260,703	2,792,200	3,250,600	458,400
250	Personnel Training	1,372	494	35,800	46,500	10,700
250	Other Professional Fees	2,647	51,011	150,000	220,000	70,000
250	Equipment Usage	0	0	0	0	0
250	Mileage Reimbursement	138	0	0	0	0
250	Computer Backup Storage	16,400	9,472	6,000	12,000	6,000
<u>Total Information Services</u>		5,787,084	2,677,162	6,044,616	6,621,273	576,657
<u>Total Finance & Administrative Services</u>		15,205,249	7,674,843	15,904,492	18,354,726	2,450,234

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Finance & Administrative Services

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
Information Services						
250	Regular Labor	1,756,794	814,292	1,949,273	2,024,787	75,514
250	Overtime Labor	20,333	12,582	30,000	30,000	0
250	Contract Labor	288,651	112,067	240,000	245,000	5,000
250	Telecommunication	531,871	259,364	641,100	641,100	0
250	Operating Supplies	25	49	0	0	0
250	Printing	2,449	154	0	0	0
250	Office Supplies	0	0	1,000	1,000	0
250	Rep & Maint IRWD	320,093	156,974	230,800	307,300	76,500
250	Data Processing	2,846,311	1,260,703	3,250,600	3,141,800	(108,800)
250	Personnel Training	1,372	494	46,500	61,500	15,000
250	Other Professional Fees	2,647	51,011	220,000	220,000	0
250	Equipment Usage	0	0	0	0	0
250	Mileage Reimbursement	138	0	0	0	0
250	Computer Backup Storage	16,400	9,472	12,000	12,000	0
Total Information Services		5,787,084	2,677,162	6,621,273	6,684,487	63,214
Total Finance & Administrative Services		15,205,249	7,674,843	18,354,726	19,081,473	726,747



ENGINEERING

OPERATING BUDGET SUMMARY

Program Description

The Engineering Department provides planning, design and construction coordination to develop the water, sewage and recycled water facilities necessary to provide the highest level of service to the customers of the District. The Engineering Department also provides technical support to other District departments.

Planning: The Planning and Geographic Information Systems (GIS) group of the Department is responsible for all master planning, water, sewage and recycled water demand projections, water supply planning, preliminary facility planning studies for new facilities, and preparation of the District's annual and long-term Capital Programs. The Planning group provides GIS services to other District departments including the development and support of GIS based applications and facility and atlas maps, maintenance of the District's digital record drawings plan system, and spatial analysis. The Planning group is also responsible for managing the District's real property and rights of way.

Capital Projects: The Capital Projects group designs and manages construction of major water, sewage and recycled water treatment, distribution and transmission facilities necessary to provide the quality and reliability of service to existing and future customers of the District. The Capital Projects group is responsible for the expansion and improvement of water and sewage treatment facilities; the design and construction of wells, pipelines, storage facilities, pump stations, and sewage lift stations; and the design and construction of integration facilities for areas acquired through agency consolidations.

Development Services: The Development Services group facilitates the land development process within the District by designing the water, sewage and recycled water facilities necessary to support land development. The construction of these facilities is coordinated to ensure that the facilities are available to meet development schedule requirements. Temporary and interim facilities, when necessary, are also coordinated through this group. The Development Services group also reviews developer submittals for quality and conformance with District requirements and assesses and collects appropriate fees.

Inspection Services: The Inspection Services group provides construction inspection services to other groups of the Engineering Department to ensure the highest level of constructed quality. These services include constructability review, pre-construction administration, progress payment processing, field inspection, change order evaluation and processing, and final acceptance coordination. The Inspection Services group is also responsible for coordinating specialized construction support services including surveying and geotechnical testing and inspection.



ENGINEERING

OPERATING BUDGET SUMMARY

Operations Support: The Operations Support group is responsible for providing engineering support to other District departments. The Operations Support group generally focuses on the expansion and rehabilitation of existing District facilities and provides design and construction management of small to medium size water, sewage and recycled water facilities.

This group also includes the process control team that conducts research, develops projects and provides process control and technical support to enhance the performance of the District's domestic and recycled water supply, treatment, distribution, and storage facilities. The process control team also provides similar support to the District's sewage collection/treatment, recycled water and urban runoff treatment systems and supports District-wide regulatory compliance objectives.

Michelson Water Recycling Plant (MWRP) Construction: The MWRP Construction group is responsible for the construction of the MWRP Biosolids and Energy Recovery Facilities. The group ensures that sewage and biosolids treatment facilities are properly designed and constructed to meet District requirements.

Major Goals

PLANNING

- Provide Inter-agency technical support;
- Develop alternative water supplies;
- Implement Criticality Based Replacement Planning Model;
- Evaluate Alternatives for Developing Groundwater from Wells 51/52 and Tustin Legacy Sites;
- Complete the Lake Forest Area OCSD LAFCO Annexation; and
- Expand GIS based applications and cloud infrastructure.

CAPITAL PROJECTS

- MWRP Biosolids and Energy Recovery Facilities construction;
- Syphon Reservoir Improvements design;
- Santiago Creek Dam Outlet Tower Replacement design;
- Eastwood Recycled Water Pump Stations construction;
- Zone 1 Reservoir construction;
- Zone A to Rattlesnake Reservoir Pump Station design;
- Primary Disinfection Facility Sodium Hypochlorite Storage and Feed design and construction;
- Santiago Canyon Fleming Reservoir and Pump Station design; and,
- Sewage Treatment Plant Master Plan update.



ENGINEERING

OPERATING BUDGET SUMMARY

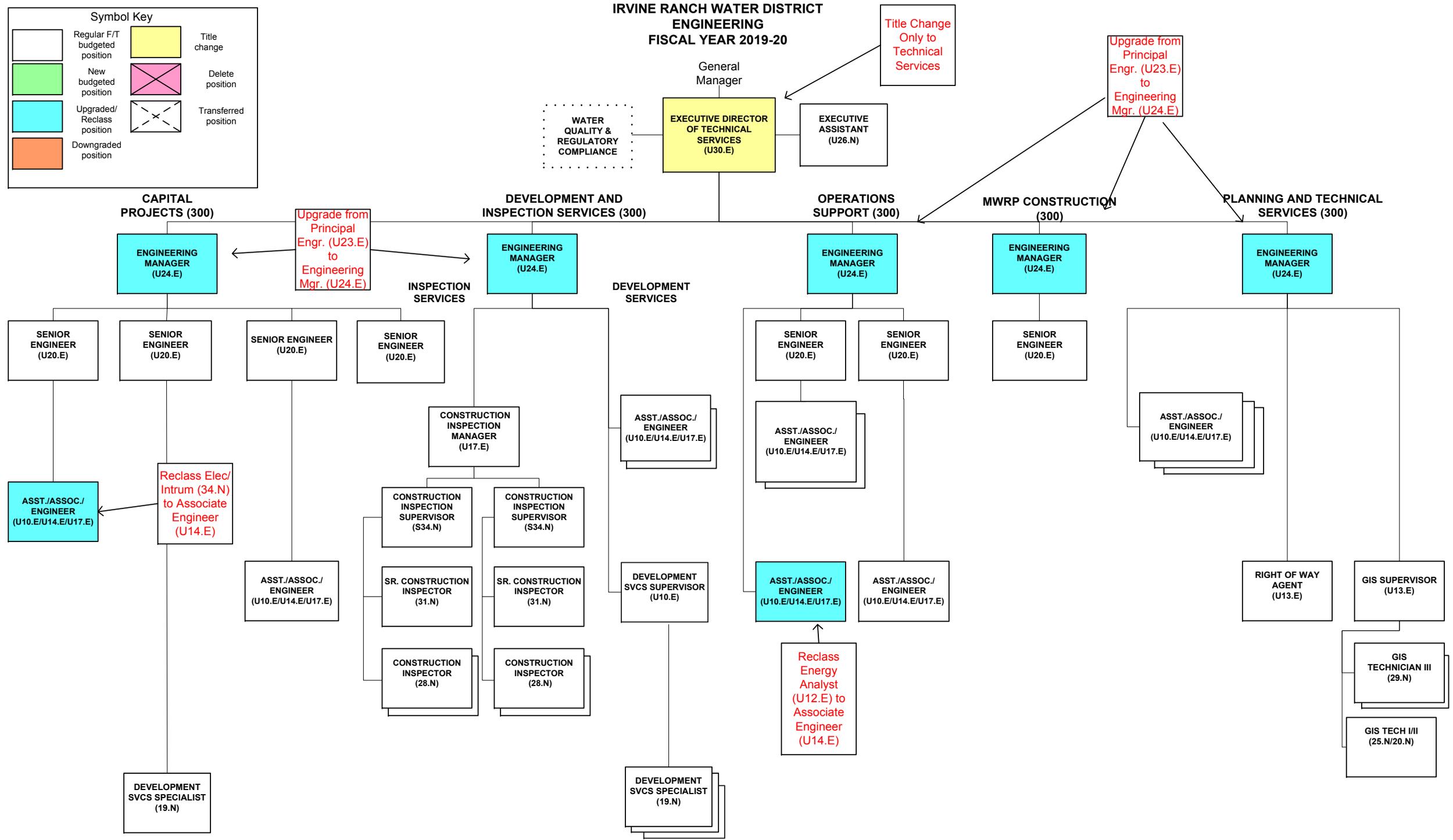
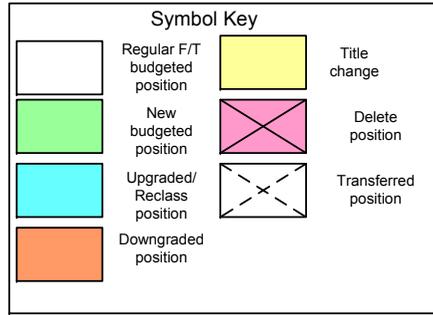
DEVELOPMENT SERVICES

- Heritage Fields Infrastructure design and construction;
- Orchard Hills Infrastructure design and construction;
- Los Olivos Infrastructure design and construction;
- Portola Springs Infrastructure design and construction;
- Tustin Legacy Infrastructure design and construction; and,
- Irvine Business Complex Redevelopment Infrastructure design and construction.

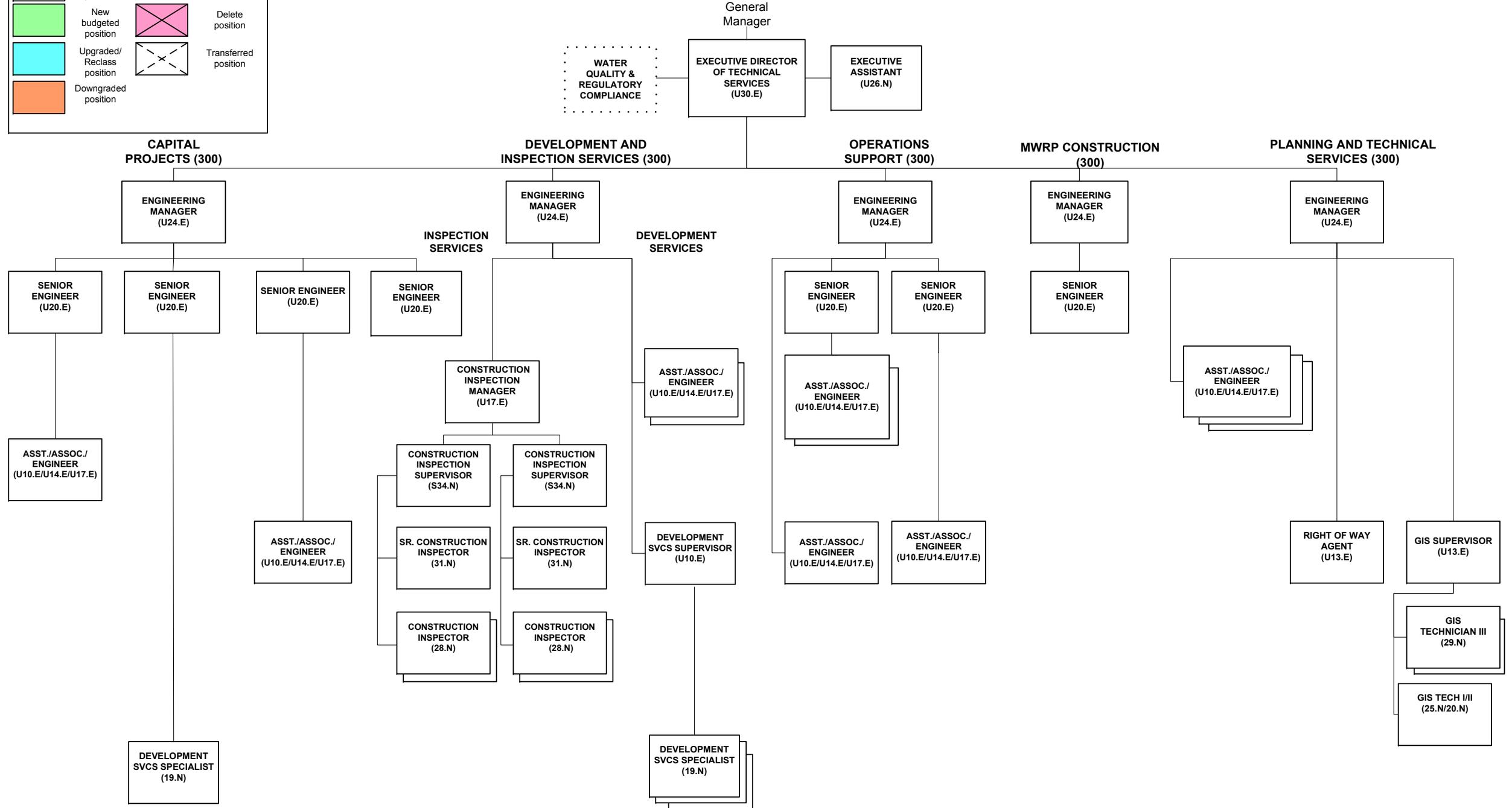
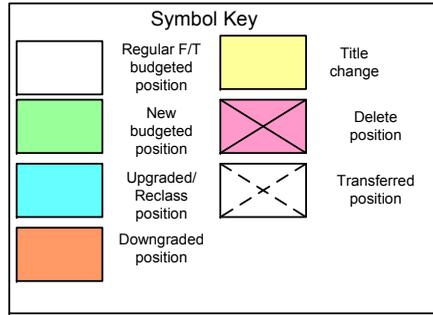
OPERATIONS SUPPORT

- Santiago Canyon Area Pipeline and Pump Stations Improvements design and construction;
- MWRP Emergency Diversion construction;
- Pipe rehabilitation construction of Laguna Canyon and Turtle Ridge;
- Well Rehabilitation design and construction;
- Sewer Siphons Improvements design and construction;
- San Joaquin Recycled Water Reservoir Filtration design and construction;
- Pelican Hills Golf Course Sewer Rehabilitation design and construction;
- Valve Vault Lid Replacement on Irvine Boulevard design and construction;
- Domestic and Recycled Water System-wide Valve Replacement design;
- Evaluate process control and water quality monitoring data to assess, correct or recommend performance improvement of membrane treatment facilities: IDP-SGU, IDP-PAP, IDP-PTP, DATS, CATS and the Wells 21/22 Desalter Plant; and,
- Develop test protocols, standard operating protocols and procedures, operate, perform sample collection and monitoring of bench, pilot and full-scale process facilities, including pilot and demonstration research projects.

**IRVINE RANCH WATER DISTRICT
ENGINEERING
FISCAL YEAR 2019-20**



**IRVINE RANCH WATER DISTRICT
ENGINEERING
FISCAL YEAR 2020-21**



Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Engineering		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Engineering						
300	Regular Labor	5,091,238	2,379,861	4,860,622	4,889,436	28,814
300	Overtime Labor	208,493	93,206	210,000	204,000	(6,000)
300	Contract Labor	216,250	171,560	432,000	320,000	(112,000)
300	Operating Supplies	5,129	2,269	10,000	5,800	(4,200)
300	Printing	17,258	2,975	20,000	16,000	(4,000)
300	Postage	3,327	1,204	2,800	3,000	200
300	Permits, Licenses and Fees	0	99	2,000	2,000	0
300	Office Supplies	8,577	3,853	9,900	9,900	0
300	Rep & Maint IRWD	0	2,348	0	0	0
300	Engineering Fees	126,974	27,506	152,000	152,000	0
300	Personnel Training	17,126	12,491	27,000	29,000	2,000
300	Other Professional Fees	4,492	2,378	3,000	10,000	7,000
300	Mileage Reimbursement	40	26	0	0	0
300	Commuter Program	0	(259)	0	0	0
Total Engineering		5,698,903	2,699,518	5,729,322	5,641,136	(88,186)
Total Engineering		5,698,903	2,699,518	5,729,322	5,641,136	(88,186)

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Engineering		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Engineering</u>						
300	Regular Labor	5,091,238	2,379,861	4,889,436	5,093,272	203,836
300	Overtime Labor	208,493	93,206	204,000	204,000	0
300	Contract Labor	216,250	171,560	320,000	245,000	(75,000)
300	Operating Supplies	5,129	2,269	5,800	5,800	0
300	Printing	17,258	2,975	16,000	8,000	(8,000)
300	Postage	3,327	1,204	3,000	3,000	0
300	Permits, Licenses and Fees	0	99	2,000	2,000	0
300	Office Supplies	8,577	3,853	9,900	9,900	0
300	Rep & Maint IRWD	0	2,348	0	0	0
300	Engineering Fees	126,974	27,506	152,000	112,000	(40,000)
300	Personnel Training	17,126	12,491	29,000	29,000	0
300	Other Professional Fees	4,492	2,378	10,000	10,000	0
300	Mileage Reimbursement	40	26	0	0	0
300	Commuter Program	0	(259)	0	0	0
Total Engineering		5,698,903	2,699,518	5,641,136	5,721,972	80,836
Total Engineering		5,698,903	2,699,518	5,641,136	5,721,972	80,836



WATER QUALITY and REGULATORY COMPLIANCE

OPERATING BUDGET SUMMARY

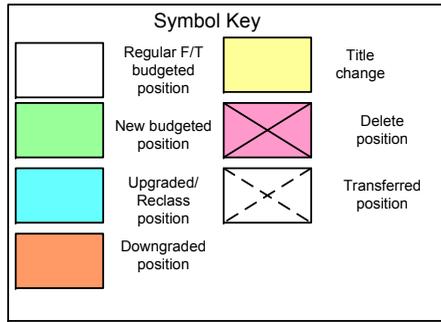
Program Description

The Water Quality and Regulatory Compliance Department provides laboratory and compliance related support to the operations and maintenance of the domestic and recycled water distribution, sewage collection systems, treatment facilities, and biosolids and energy recovery facilities. The department provides internal and external customers with field and facility monitoring, reproducible data of known and documented quality for regulatory monitoring and reporting, process control, research projects and capital projects utilizing state-of-the-art equipment and certified, analytical methods.

Staff also manages environmental permitting, reporting and compliance covering water, sewage, biosolids, air, hazardous waste, underground and aboveground storage tanks, universal waste, and Fats, Oils, and Grease (FOG). Staff actively participates in association meetings to stay current with developing rules and policies and to advocate on behalf of the District.

Major Goals

- Perform all monitoring and laboratory analyses to provide data to document the District's compliance status with all applicable federal, state and local environmental laws and regulations and for process control purposes;
- Complete analyses within specified hold times and meet quality control specifications;
- Research and implement new testing methods where justified, specifically when timing, compliance, cost or efficiencies support bringing a method in-house;
- Maintain Environmental Laboratory Accreditation Program (ELAP) certification, and complete the process to obtain national laboratory certification;
- Implement to the fullest extent possible automation in monitoring, laboratory processes, and compliance and process control reporting programs;
- Apply for and maintain all necessary permits and documentation to comply with environmental regulations;
- Maintain a knowledge base of all environmental compliance requirements;
- Communicate and provide training on these requirements to appropriate staff and leadership across the agency;
- Write compliance reports in an accurate and timely manner documenting compliance with all applicable permits, rules and laws;
- Negotiate with regulators to resolve compliance matters;
- Coordinate with other agencies and conduct appropriate inspections, monitoring and enforcement regarding industrial discharges under the pretreatment program; and,
- Participate in peer associations addressing laboratory and compliance issues.



**IRVINE RANCH WATER DISTRICT
WATER QUALITY
FISCAL YEAR 2019-20**

Exec Director of
Engineering & Water
Quality

**WATER QUALITY & REGULATORY
COMPLIANCE (600)**

**DIRECTOR WATER
QUALITY &
REGULATORY
COMPLIANCE
(U27.E)**

**EXECUTIVE
SECRETARY
(U22.N)**

WATER QUALITY (600)

QA/AC COMPLIANCE (600)

**REGULATORY
COMPLIANCE (650)**

**WATER QUALITY
MANAGER
(U18.E)**

**REGULATORY
COMPLIANCE
MANAGER
(U18.E)**

**ORGANIC
CHEMISTRY**

**INORGANIC
CHEMISTRY**

MICROBIOLOGY

**QA/QC COMPLIANCE
ADMINISTRATOR
(U14.E)**

**LABORATORY
SUPERVISOR
(U15.E)**

**LABORATORY
SUPERVISOR
(U15.E)**

**LABORATORY
SUPERVISOR
(U15.E)**

Reclass Regulatory
Compliance Analyst
(U10.E) to
Regulatory
Compliance
Administrator
(U12.E)

**REGULATORY
COMPLIANCE
ADMINISTRATOR
(U12.E)**

**SR SCIENTIST
(32.N)**

**SR SCIENTIST (32.N)
(Sci-28.N)**

**SR SCIENTIST
(32.N)**

**SR SCIENTIST
(32.N)**

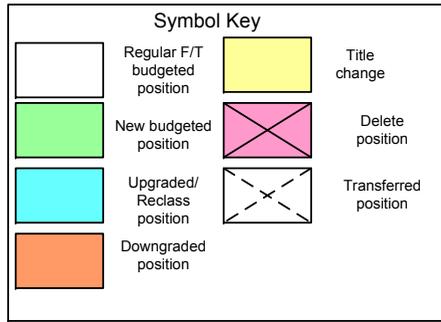
SCIENTIST (28.N)

SCIENTIST (28.N)

**SCIENTIST
(28.N)**

Reclass Lab Analyst
(16.N) to Scientist
(28.N)

**SCIENTIST
(28.N)**



**IRVINE RANCH WATER DISTRICT
WATER QUALITY
FISCAL YEAR 2020-21**

Exec Director of
Engineering & Water
Quality

**WATER QUALITY & REGULATORY
COMPLIANCE (600)**

**DIRECTOR WATER
QUALITY &
REGULATORY
COMPLIANCE
(U27.E)**

**EXECUTIVE
SECRETARY
(U22.N)**

WATER QUALITY (600)

QA/AC COMPLIANCE (600)

**REGULATORY
COMPLIANCE (650)**

**WATER QUALITY
MANAGER
(U18.E)**

**REGULATORY
COMPLIANCE
MANAGER
(U18.E)**

**ORGANIC
CHEMISTRY**

**INORGANIC
CHEMISTRY**

MICROBIOLOGY

**LABORATORY
SUPERVISOR
(U15.E)**

**LABORATORY
SUPERVISOR
(U15.E)**

**LABORATORY
SUPERVISOR
(U15.E)**

**QA/QC COMPLIANCE
ADMINISTRATOR
(U14.E)**

**New Budget
Position**

**REGULATORY
COMPLIANCE
ADMINISTRATOR
(U12.E)**

**SR SCIENTIST
(32.N)**

**SR SCIENTIST (32.N)
(Sci-28.N)**

**SR SCIENTIST
(32.N)**

SCIENTIST (28.N)

SCIENTIST (28.N)

**SCIENTIST
(28.N)**

**New Budget
Position**

**SR SCIENTIST
(32.N)**

**SCIENTIST
(28.N)**

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Quality		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
Water Quality						
600	Regular Labor	1,808,432	866,602	1,824,290	2,064,759	240,469
600	Overtime Labor	47,987	19,932	33,600	33,800	200
600	Contract Labor	110,732	71,686	115,300	165,600	50,300
600	Operating Supplies	435,325	192,216	447,000	471,000	24,000
600	Postage	1,035	597	600	1,100	500
600	Permits, Licenses and Fees	11,251	12,953	15,876	17,400	1,524
600	Office Supplies	3,996	1,575	4,000	4,000	0
600	Equipment Rental	1,078	0	0	0	0
600	Rep & Maint IRWD	149,294	135,438	234,200	251,500	17,300
600	Engineering Fees	94,096	96,734	138,000	236,400	98,400
600	Personnel Training	13,469	4,251	35,050	38,000	2,950
600	Other Professional Fees	2,071	1,478	24,650	25,100	450
600	Mileage Reimbursement	0	0	0	0	0
600	Safety	2,301	2,356	7,200	8,400	1,200
Total Water Quality		2,681,067	1,405,818	2,879,766	3,317,059	437,293

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Quality		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Water Quality</u>						
600	Regular Labor	1,808,432	866,602	2,064,759	2,299,640	234,881
600	Overtime Labor	47,987	19,932	33,800	36,350	2,550
600	Contract Labor	110,732	71,686	165,600	128,100	(37,500)
600	Operating Supplies	435,325	192,216	471,000	496,460	25,460
600	Postage	1,035	597	1,100	1,115	15
600	Permits, Licenses and Fees	11,251	12,953	17,400	19,200	1,800
600	Office Supplies	3,996	1,575	4,000	4,000	0
600	Equipment Rental	1,078	0	0	0	0
600	Rep & Maint IRWD	149,294	135,438	251,500	271,500	20,000
600	Engineering Fees	94,096	96,734	236,400	236,400	0
600	Personnel Training	13,469	4,251	38,000	41,000	3,000
600	Other Professional Fees	2,071	1,478	25,100	25,100	0
600	Mileage Reimbursement	0	0	0	0	0
600	Safety	2,301	2,356	8,400	8,600	200
Total Water Quality		2,681,067	1,405,818	3,317,059	3,567,465	250,406

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Quality		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
Regulatory Compliance						
650	Regular Labor	825,306	336,147	842,734	744,631	(98,103)
650	Overtime Labor	64,952	34,624	67,820	103,300	35,480
650	Contract Labor	21,658	40,847	16,000	64,800	48,800
650	Operating Supplies	61,298	36,963	61,850	77,600	15,750
650	Postage	2,298	663	1,600	3,000	1,400
650	Permits, Licenses and Fees	459,242	395,473	542,270	580,690	38,420
650	Office Supplies	356	119	800	500	(300)
650	Rep & Maint Other Agencies	6,026	1,300	0	4,000	4,000
650	Rep & Maint IRWD	217,344	67,947	252,800	185,500	(67,300)
650	Engineering Fees	60,666	172,160	359,320	340,324	(18,996)
650	Personnel Training	7,747	2,866	8,900	18,400	9,500
650	Other Professional Fees	1,022	1,157	2,400	2,200	(200)
650	Equipment Usage	0	0	0	0	0
650	Safety	0	0	2,000	1,000	(1,000)
Total Regulatory Compliance		1,727,915	1,090,266	2,158,494	2,125,945	(32,549)
Total Water Quality		4,408,982	2,496,084	5,038,260	5,443,004	404,744

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Quality		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Regulatory Compliance</u>						
650	Regular Labor	825,306	336,147	744,631	776,304	31,673
650	Overtime Labor	64,952	34,624	103,300	107,600	4,300
650	Contract Labor	21,658	40,847	64,800	68,000	3,200
650	Operating Supplies	61,298	36,963	77,600	79,700	2,100
650	Postage	2,298	663	3,000	2,500	(500)
650	Permits, Licenses and Fees	459,242	395,473	580,690	609,530	28,840
650	Office Supplies	356	119	500	500	0
650	Rep & Maint Other Agencies	6,026	1,300	4,000	8,000	4,000
650	Rep & Maint IRWD	217,344	67,947	185,500	202,500	17,000
650	Engineering Fees	60,666	172,160	340,324	316,324	(24,000)
650	Personnel Training	7,747	2,866	18,400	20,400	2,000
650	Other Professional Fees	1,022	1,157	2,200	2,000	(200)
650	Equipment Usage	0	0	0	0	0
650	Safety	0	0	1,000	1,000	0
Total Regulatory Compliance		1,727,915	1,090,266	2,125,945	2,194,358	68,413
Total Water Quality		4,408,982	2,496,084	5,443,004	5,761,823	318,819



WATER OPERATIONS

OPERATING BUDGET SUMMARY

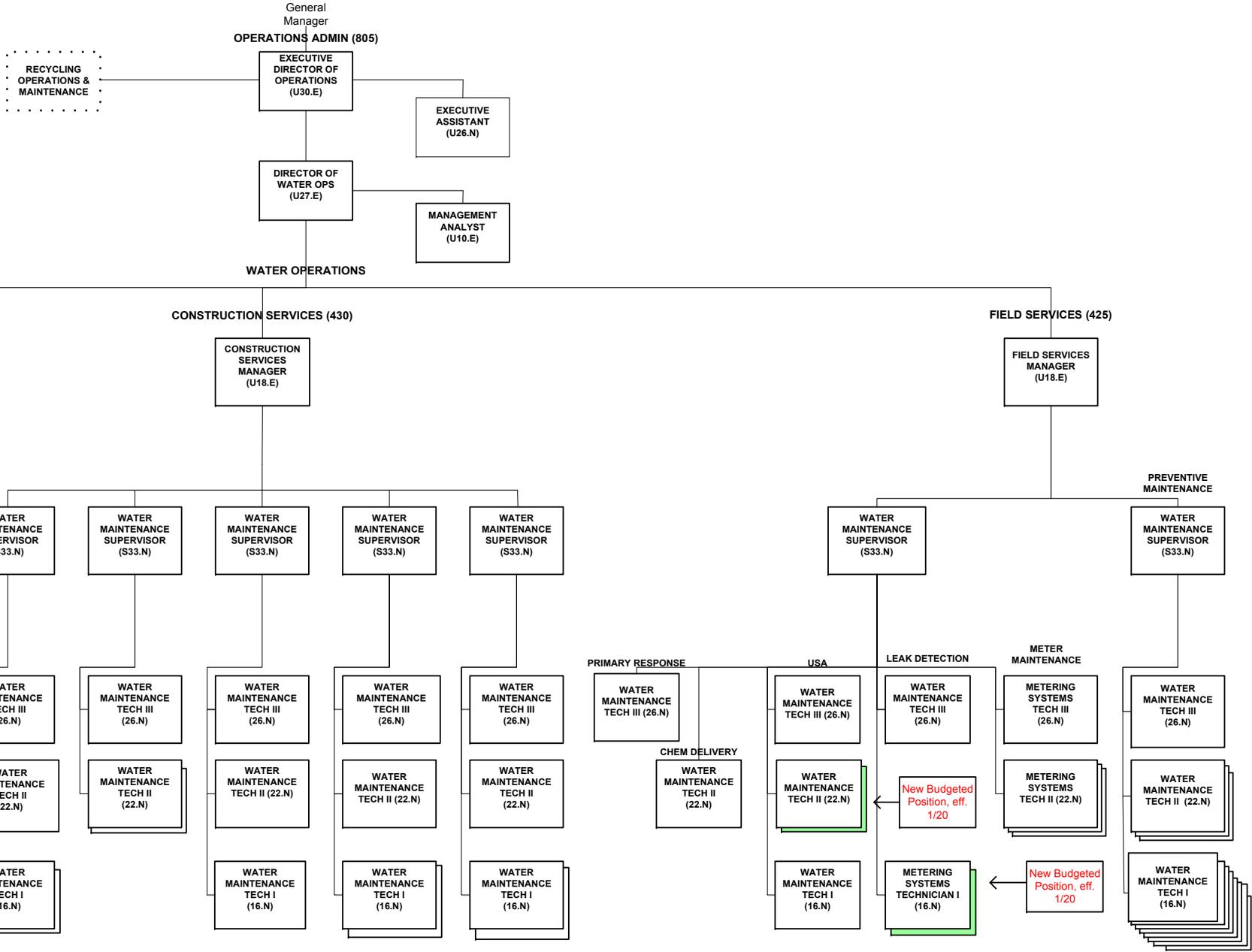
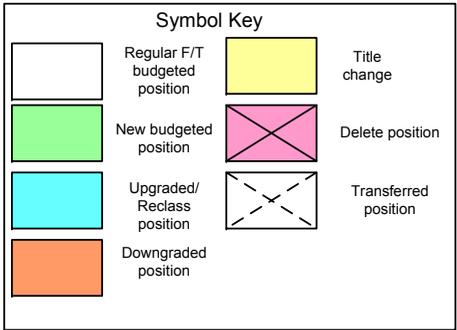
Program Description

The mission of the Water Operations Department is to operate and maintain the District's potable water, recycled water and untreated water systems in an efficient, cost effective and environmentally safe manner that provides a high level of customer satisfaction. These systems include the Dyer Road Wellfield, Deep Aquifer Treatment System, Wells 21/22 Treatment Plant, Irvine Desalter Project (Potable Treatment Plant, Principal Aquifer Plant and Shallow Groundwater Unit) and Baker Water Treatment Plant.

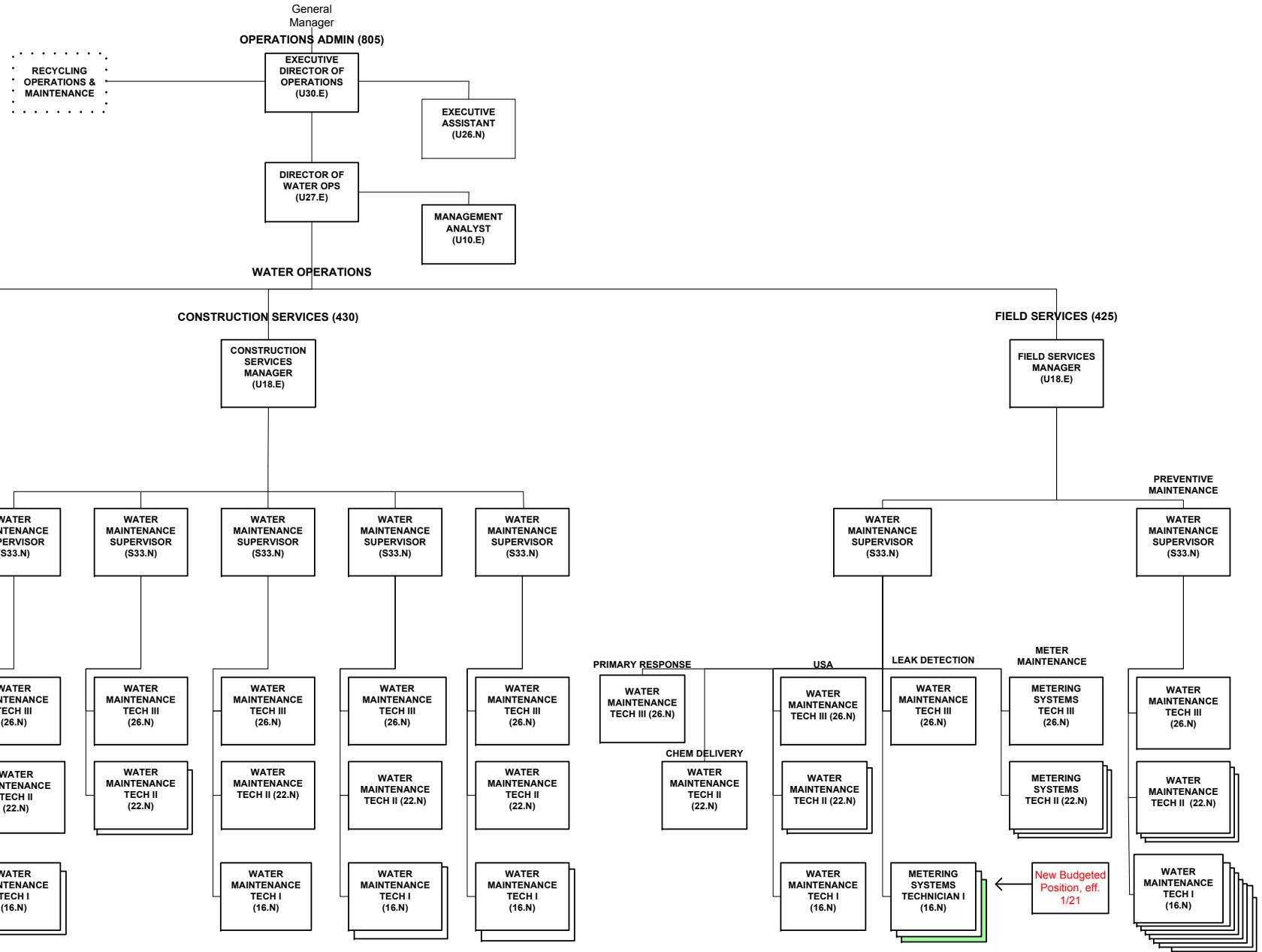
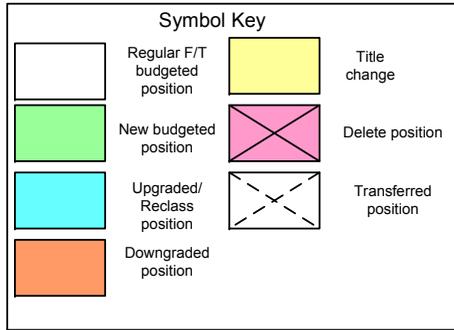
Major Goals

- Maintain 100% compliance with all regulatory permits;
- Meet the Department's adopted Operations and Maintenance budget;
- Maintain 5 or more Water Operators at the T-5 and D-5 certification level;
- Coordinate with the Finance, Engineering and Planning Departments on water supply and water banking opportunities to optimize cost effective operations;
- Achieve zero lost time accidents;
- Modify as needed and track adopted Operational Key Performance Indicators (KPI) to optimize operational efficiency and cost effectiveness;
- Maintain and develop staff competency through a combination of internal and external training;
- Operate and maintain the system to minimize energy consumption;
- Maintain the Dyer Road Well Field and Deep Aquifer Treatment System domestic water flows in accordance with the Ground Water Pumping Plan staying within the current Basin Pumping Percentage (BPP) of 70%;
- Operate the Irvine Desalter Project (Potable Treatment Plant, Principal Aquifer Plant and Shallow Groundwater Unit) in accordance with the joint agency agreement and submit required reports;
- Ensure efficient operation of all District pumping, dam operation, and reservoir facilities;
- Maintain a high level of customer satisfaction by responding promptly to all customer service requests and repair water leaks with minimal impact to customers; and,
- Identify the District's underground facilities by responding to Underground Service Alert (USA) tickets to prevent potential damages to the facilities from construction activities.

**IRVINE RANCH WATER DISTRICT
OPERATIONS ADMINISTRATION & WATER OPERATIONS
FISCAL YEAR 2019-20**



**IRVINE RANCH WATER DISTRICT
OPERATIONS ADMINISTRATION & WATER OPERATIONS
FISCAL YEAR 2020-21**



Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Operations Administration</u>						
805	Regular Labor	1,012,043	443,907	1,073,154	1,055,594	(17,560)
805	Telecommunication	2,480	1,242	3,200	4,400	1,200
805	Operating Supplies	18,463	1,067	7,300	9,450	2,150
805	Printing	0	0	3,000	3,000	0
805	Postage	73	38	1,000	1,000	0
805	Office Supplies	7,807	7,396	15,000	15,000	0
805	Rep & Maint IRWD	27,838	2,492	0	0	0
805	Personnel Training	49,559	32,499	84,800	91,500	6,700
805	Other Professional Fees	22,291	11,019	153,500	57,950	(95,550)
805	Equipment Usage	0	0	0	0	0
805	Mileage Reimbursement	0	55	0	0	0
805	Commuter Program	0	(97)	0	0	0
Total Operations Administration		1,140,554	499,618	1,340,954	1,237,894	(103,060)
Total Water Operations		62,206,154	33,259,812	61,659,620	64,459,965	2,800,345

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Operations Administration</u>						
805	Regular Labor	1,012,043	443,907	1,055,594	1,097,733	42,139
805	Telecommunication	2,480	1,242	4,400	4,620	220
805	Operating Supplies	18,463	1,067	9,450	9,700	250
805	Printing	0	0	3,000	3,500	500
805	Postage	73	38	1,000	1,000	0
805	Office Supplies	7,807	7,396	15,000	15,000	0
805	Rep & Maint IRWD	27,838	2,492	0	0	0
805	Personnel Training	49,559	32,499	91,500	99,200	7,700
805	Other Professional Fees	22,291	11,019	57,950	63,150	5,200
805	Equipment Usage	0	0	0	0	0
805	Mileage Reimbursement	0	55	0	0	0
805	Commuter Program	0	(97)	0	0	0
Total Operations Administration		1,140,554	499,618	1,237,894	1,293,903	56,009
Total Water Operations		62,206,154	33,259,812	64,459,965	70,872,206	6,412,242

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Operations		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Water Operations						
420	Water Purchases	39,933,298	21,167,905	37,454,466	39,241,990	1,787,524
420	Regular Labor	1,847,257	911,115	2,070,218	1,781,783	(288,435)
420	Overtime Labor	482,360	256,950	442,290	551,474	109,184
420	Electricity	9,070,451	5,620,527	9,905,210	10,811,863	906,653
420	Fuel	52,179	29,637	57,000	51,300	(5,700)
420	Telecommunication	75,971	29,552	77,900	84,860	6,960
420	Other Utilities	52,591	31,451	47,000	61,300	14,300
420	Chemicals	1,819,353	905,756	1,605,544	1,823,163	217,619
420	Operating Supplies	42,828	40,408	79,200	94,970	15,770
420	Printing	0	0	0	0	0
420	Permits, Licenses and Fees	233,879	83,643	251,500	260,552	9,052
420	Office Supplies	77	0	200	200	0
420	Duplicating Equipment	407	1,339	0	3,000	3,000
420	Equipment Rental	35,955	6,695	17,000	18,000	1,000
420	Rep & Maint Other Agencies	843,020	444,555	857,100	930,000	72,900
420	Rep & Maint IRWD	997,342	602,441	1,489,588	1,620,765	131,177
420	Engineering Fees	221,789	129,729	124,756	140,240	15,484
420	Data Processing	0	0	12,500	0	(12,500)
420	Personnel Training	354	(144)	1,340	6,500	5,160
420	Other Professional Fees	4,699	2,263	78,000	105,200	27,200
420	Equipment Usage	0	0	0	0	0
420	Safety	0	0	3,000	3,000	0
420	Commuter Program	0	(185)	0	200	200
Total Water Operations		55,713,810	30,263,637	54,573,812	57,590,359	3,016,547

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
Water Operations						
420	Water Purchases	39,933,298	21,167,905	39,241,990	44,681,254	5,439,264
420	Regular Labor	1,847,257	911,115	1,781,783	1,859,009	77,226
420	Overtime Labor	482,360	256,950	551,474	572,261	20,787
420	Electricity	9,070,451	5,620,527	10,811,863	11,313,243	501,380
420	Fuel	52,179	29,637	51,300	52,100	800
420	Telecommunication	75,971	29,552	84,860	84,860	0
420	Other Utilities	52,591	31,451	61,300	61,300	0
420	Chemicals	1,819,353	905,756	1,823,163	1,900,693	77,531
420	Operating Supplies	42,828	40,408	94,970	94,970	0
420	Printing	0	0	0	0	0
420	Permits, Licenses and Fees	233,879	83,643	260,552	260,552	0
420	Office Supplies	77	0	200	200	0
420	Duplicating Equipment	407	1,339	3,000	3,000	0
420	Equipment Rental	35,955	6,695	18,000	18,000	0
420	Rep & Maint Other Agencies	843,020	444,555	930,000	930,000	0
420	Rep & Maint IRWD	997,342	602,441	1,620,765	1,640,265	19,500
420	Engineering Fees	221,789	129,729	140,240	140,240	0
420	Data Processing	0	0	0	0	0
420	Personnel Training	354	(144)	6,500	6,500	0
420	Other Professional Fees	4,699	2,263	105,200	105,200	0
420	Equipment Usage	0	0	0	0	0
420	Safety	0	0	3,000	3,000	0
420	Commuter Program	0	(185)	200	200	0
Total Water Operations		55,713,810	30,263,637	57,590,359	63,726,846	6,136,488

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
Field Services						
425	Regular Labor	1,622,728	811,665	1,757,410	1,836,128	78,718
425	Overtime Labor	222,595	122,854	213,400	265,100	51,700
425	Contract Labor	278,221	187,104	203,440	133,120	(70,320)
425	Telecommunication	0	0	0	0	0
425	Chemicals	1,583	161	900	900	0
425	Operating Supplies	91,378	60,449	117,000	107,300	(9,700)
425	Permits, Licenses and Fees	22,630	10,842	18,000	19,600	1,600
425	Equipment Rental	16,727	8,488	17,500	17,500	0
425	Rep & Maint IRWD	235,372	105,097	354,100	262,300	(91,800)
425	Personnel Training	192	214	680	680	0
425	Other Professional Fees	733	148	500	500	0
425	Equipment Usage	0	0	0	0	0
425	Commuter Program	0	(175)	0	0	0
Total Field Services		2,492,159	1,306,847	2,682,930	2,643,128	(39,802)

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Field Services</u>						
425	Regular Labor	1,622,728	811,665	1,836,128	2,025,258	189,130
425	Overtime Labor	222,595	122,854	265,100	265,100	0
425	Contract Labor	278,221	187,104	133,120	36,000	(97,120)
425	Telecommunication	0	0	0	0	0
425	Chemicals	1,583	161	900	900	0
425	Operating Supplies	91,378	60,449	107,300	122,700	15,400
425	Permits, Licenses and Fees	22,630	10,842	19,600	19,600	0
425	Equipment Rental	16,727	8,488	17,500	17,500	0
425	Rep & Maint IRWD	235,372	105,097	262,300	264,800	2,500
425	Personnel Training	192	214	680	680	0
425	Other Professional Fees	733	148	500	500	0
425	Equipment Usage	0	0	0	0	0
425	Commuter Program	0	(175)	0	0	0
Total Field Services		2,492,159	1,306,847	2,643,128	2,753,038	109,910

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Construction Services</u>						
430	Regular Labor	1,573,059	775,251	1,726,964	1,884,175	157,211
430	Overtime Labor	250,385	126,947	241,000	253,640	12,640
430	Contract Labor	146,007	36,274	208,960	130,000	(78,960)
430	Telecommunication	0	0	0	0	0
430	Chemicals	827	0	800	600	(200)
430	Operating Supplies	82,479	55,682	144,800	160,320	15,520
430	Permits, Licenses and Fees	88,040	31,510	93,000	93,640	640
430	Equipment Rental	6,247	0	12,000	12,000	0
430	Rep & Maint IRWD	709,362	162,393	628,000	443,300	(184,700)
430	Personnel Training	3,226	1,815	6,400	8,000	1,600
430	Equipment Usage	0	0	0	0	0
430	Commuter Program	0	(161)	0	0	0
Total Construction Services		2,859,631	1,189,711	3,061,924	2,985,675	(76,249)

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Water Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Construction Services</u>						
430	Regular Labor	1,573,059	775,251	1,884,175	1,966,378	82,203
430	Overtime Labor	250,385	126,947	253,640	253,608	(32)
430	Contract Labor	146,007	36,274	130,000	135,200	5,200
430	Telecommunication	0	0	0	0	0
430	Chemicals	827	0	600	624	24
430	Operating Supplies	82,479	55,682	160,320	166,740	6,420
430	Permits, Licenses and Fees	88,040	31,510	93,640	97,380	3,740
430	Equipment Rental	6,247	0	12,000	12,000	0
430	Rep & Maint IRWD	709,362	162,393	443,300	455,260	11,960
430	Personnel Training	3,226	1,815	8,000	8,320	320
430	Equipment Usage	0	0	0	0	0
430	Commuter Program	0	(161)	0	0	0
Total Construction Services		2,859,631	1,189,711	2,985,675	3,095,510	109,835



RECYCLING OPERATIONS

OPERATING BUDGET SUMMARY

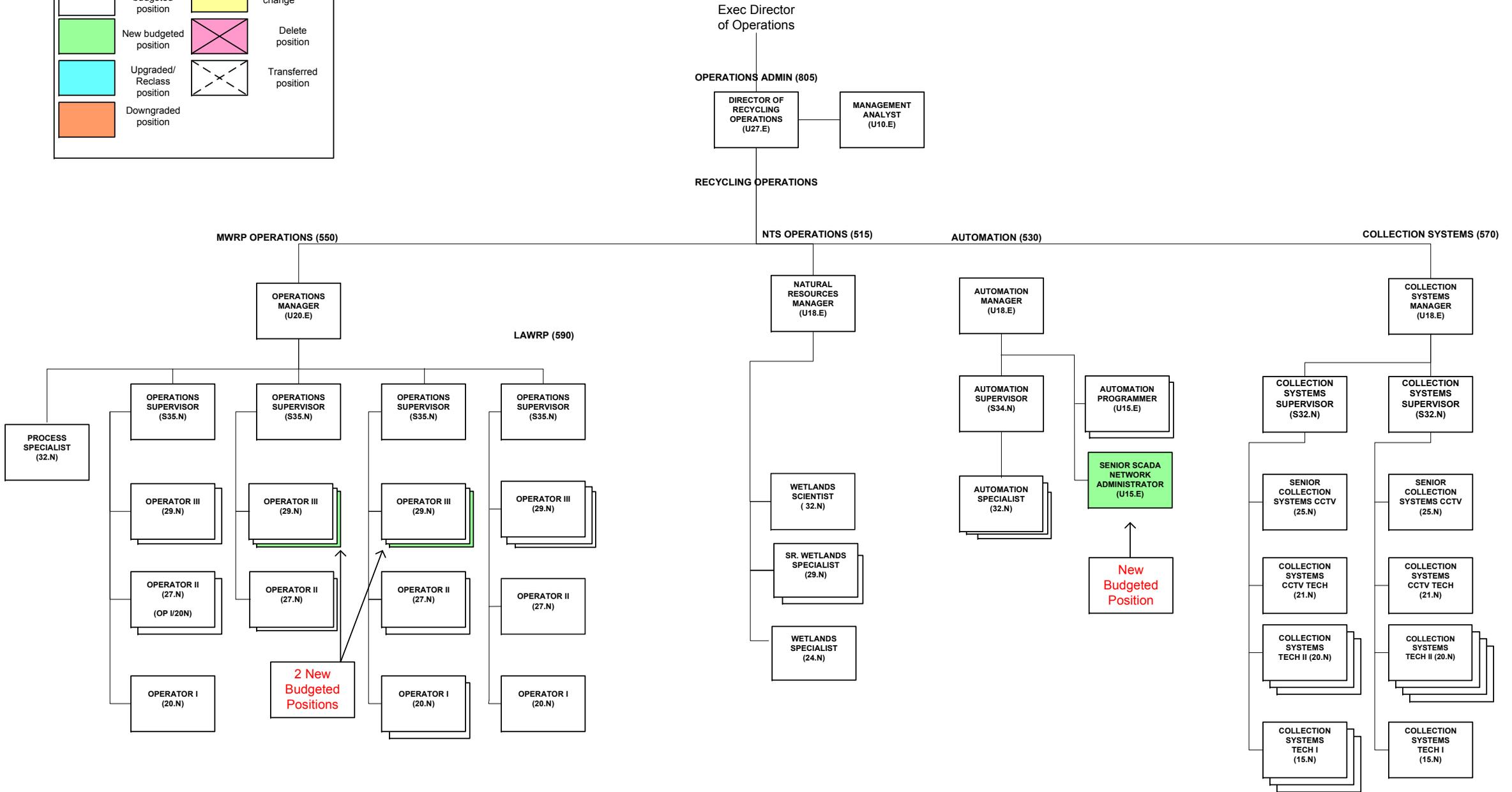
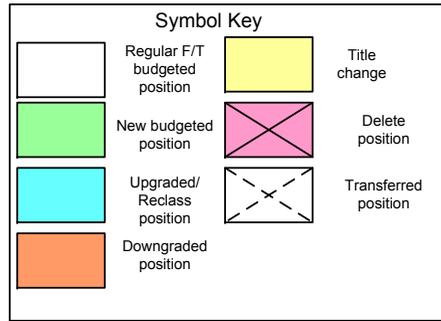
Program Description

The mission of the Recycling Operations Department is to operate the District's resource recovery systems in a regulatory compliant, efficient, and environmentally safe manner that provides the highest level of customer satisfaction. The Recycling Operations Department provides cost-effective, reliable and compliant operation of the collection systems, Michelson Water Recycling Plant (MWRP), Los Alisos Water Recycling Plant (LAWRP), Natural Treatment System (NTS), and administrative management of the Automated Process Control Systems.

Major Goals

- Maintain 100% compliance with all regulatory permits;
- Achieve zero lost time accidents;
- Coordinate with Water Operations to optimize production of recycled water and balance with system storage;
- Meet the Department's adopted Operations budget;
- Maintain and develop staff competency through a combination of internal and external training;
- Evaluate, optimize, and monitor chemical usage for the collection and recycling facilities systems;
- Provide operational assistance for functional and start-up testing for the Michelson Water Recycling Plant's Biosolids and Energy Recovery Facilities Project; and take over full Plant operation of the facility upon completion of the construction project;
- Finalize and implement options for the marketing and distribution of pellets from the MWRP Biosolids Project; and explore participation with other agencies for processing their Class B solids;
- Complete feasibility study of Lower San Diego Creek urban runoff diversions, and begin preliminary design report;
- Initiate Polyphagous Shothole Borer mitigation plan for the San Joaquin Marsh;
- Upgrade stations with legacy PLC hardware and software that is no longer manufactured or supported in an effort to improve reliability of service and minimize down time;
- Improve cybersecurity resiliency of the Industrial Control System (ICS)/SCADA infrastructure by adopting advanced cybersecurity standards and technologies;
- Replace communication systems utilizing the congested and license-free (open for public) 900 MHz frequency bands to the FCC licensed public safety 4.9 GHz frequency bands to avoid communication interference, operation disruption, and reliability;
- Improve SCADA communication resiliency and reliability by adding redundant communication paths to critical pump stations, lift stations, reservoirs and treatment plants;
- Evaluate the usage of artificial intelligence and machine learning to improve process controls, efficiency and water quality;
- Migrate all private SCADA cellular communications to a public safety tier to obtain higher prioritization during network congestion and disasters;
- Evaluate and implement options for cleaning and inspection of large sewer lines within the IRWD service area; and,
- Provide technical support to the Engineering projects specific to Sewer Lift Station improvements, Sewer Siphon rehabilitation, and other collection system improvements.

**IRVINE RANCH WATER DISTRICT
RECYCLING OPERATIONS
FISCAL YEAR 2019-20**



Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Recycling Operations		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
NTS Operations						
515	Regular Labor	353,144	207,243	436,036	457,349	21,313
515	Overtime Labor	2,100	1,148	8,000	4,000	(4,000)
515	Contract Labor	219,546	77,505	95,000	130,000	35,000
515	Electricity	174,327	106,704	201,000	210,000	9,000
515	Telecommunication	8,317	4,892	4,000	13,000	9,000
515	Operating Supplies	11,763	764	14,500	12,400	(2,100)
515	Printing	0	279	1,000	1,000	0
515	Postage	415	40	0	500	500
515	Permits, Licenses and Fees	30,958	3,090	4,000	4,800	800
515	Equipment Rental	5,736	2,999	0	8,000	8,000
515	Rep & Maint Other Agencies	16,436	9,559	20,000	20,800	800
515	Rep & Maint IRWD	1,130,357	441,284	1,144,000	1,695,300	551,300
515	Engineering Fees	278,226	42,378	192,500	16,000	(176,500)
515	Personnel Training	1,142	427	3,800	9,600	5,800
515	Other Professional Fees	5	0	0	192,800	192,800
515	Other	4,660	2,250	14,000	16,000	2,000
Total NTS Operations		2,237,132	900,562	2,137,836	2,791,549	653,713

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Recycling Operations

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
NTS Operations						
515	Regular Labor	353,144	207,243	457,349	545,587	88,238
515	Overtime Labor	2,100	1,148	4,000	4,600	600
515	Contract Labor	219,546	77,505	130,000	75,900	(54,100)
515	Electricity	174,327	106,704	210,000	218,400	8,400
515	Telecommunication	8,317	4,892	13,000	14,950	1,950
515	Operating Supplies	11,763	764	12,400	14,260	1,860
515	Printing	0	279	1,000	1,150	150
515	Postage	415	40	500	575	75
515	Permits, Licenses and Fees	30,958	3,090	4,800	5,520	720
515	Equipment Rental	5,736	2,999	8,000	9,200	1,200
515	Rep & Maint Other Agencies	16,436	9,559	20,800	23,920	3,120
515	Rep & Maint IRWD	1,130,357	441,284	1,695,300	1,920,595	225,295
515	Engineering Fees	278,226	42,378	16,000	18,400	2,400
515	Personnel Training	1,142	427	9,600	11,040	1,440
515	Other Professional Fees	5	0	192,800	221,720	28,920
515	Other	4,660	2,250	16,000	18,400	2,400
Total NTS Operations		2,237,132	900,562	2,791,549	3,104,217	312,668

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Recycling Operations

Dept No	Expense Name	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Automation						
530	Regular Labor	685,124	366,095	693,522	842,124	148,602
530	Overtime Labor	61,621	30,844	66,500	73,800	7,300
530	Operating Supplies	(10,590)	(1,316)	12,630	97,000	84,370
530	Postage	131	0	0	0	0
530	Rep & Maint IRWD	195,579	111,239	190,600	111,000	(79,600)
530	Personnel Training	0	0	170	0	(170)
530	Other Professional Fees	122,917	1,035	120,600	120,300	(300)
530	Equipment Usage	0	0	0	0	0
530	Safety	2,867	0	3,000	3,000	0
Total Automation		1,057,649	507,897	1,087,022	1,247,224	160,202

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Recycling Operations

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Automation</u>						
530	Regular Labor	685,124	366,095	842,124	874,546	32,422
530	Overtime Labor	61,621	30,844	73,800	78,200	4,400
530	Operating Supplies	(10,590)	(1,316)	97,000	97,000	0
530	Postage	131	0	0	0	0
530	Rep & Maint IRWD	195,579	111,239	111,000	111,000	0
530	Personnel Training	0	0	0	0	0
530	Other Professional Fees	122,917	1,035	120,300	120,300	0
530	Equipment Usage	0	0	0	0	0
530	Safety	2,867	0	3,000	3,000	0
Total Automation		1,057,649	507,897	1,247,224	1,284,046	36,822

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Recycling Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
MWRP Operations						
550	Regular Labor	1,412,762	659,474	1,521,788	1,770,686	248,898
550	Overtime Labor	116,853	57,736	119,900	157,740	37,840
550	Contract Labor	0	0	10,000	0	(10,000)
550	Electricity	2,932,804	1,828,371	2,774,964	4,628,684	1,853,720
550	Fuel	19,252	4,378	20,800	274,144	253,344
550	Telecommunication	0	0	1,800	0	(1,800)
550	Other Utilities	563	0	0	0	0
550	Chemicals	750,710	312,377	648,300	1,309,646	661,346
550	Operating Supplies	24,343	13,621	32,200	121,100	88,900
550	Rep & Maint Other Agencies	8,283,856	6,320,968	12,564,000	9,173,000	(3,391,000)
550	Rep & Maint IRWD	4,201	1,066	11,000	11,000	0
550	Engineering Fees	7,710	(7,710)	0	0	0
550	Personnel Training	825	343	4,020	2,800	(1,220)
550	Other Professional Fees	98,064	13,600	120,000	120,000	0
550	Equipment Usage	0	0	0	0	0
550	Safety	7,656	4,942	24,000	20,000	(4,000)
550	Biosolids Disposals	0	0	0	651,619	651,619
550	Commuter Program	0	(323)	0	0	0
550	Other	96,040	50,211	115,000	110,600	(4,400)
Total MWRP Operations		13,755,639	9,259,054	17,967,772	18,351,019	383,247

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Recycling Operations

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
MWRP Operations						
550	Regular Labor	1,412,762	659,474	1,770,686	1,848,352	77,666
550	Overtime Labor	116,853	57,736	157,740	162,220	4,480
550	Contract Labor	0	0	0	0	0
550	Electricity	2,932,804	1,828,371	4,628,684	5,470,174	841,490
550	Fuel	19,252	4,378	274,144	361,192	87,048
550	Telecommunication	0	0	0	0	0
550	Other Utilities	563	0	0	0	0
550	Chemicals	750,710	312,377	1,309,646	1,784,983	475,337
550	Operating Supplies	24,343	13,621	121,100	121,100	0
550	Rep & Maint Other Agencies	8,283,856	6,320,968	9,173,000	4,173,000	(5,000,000)
550	Rep & Maint IRWD	4,201	1,066	11,000	11,000	0
550	Engineering Fees	7,710	(7,710)	0	0	0
550	Personnel Training	825	343	2,800	2,800	0
550	Other Professional Fees	98,064	13,600	120,000	120,000	0
550	Equipment Usage	0	0	0	0	0
550	Safety	7,656	4,942	20,000	20,000	0
550	Biosolids Disposals	0	0	651,619	1,025,452	373,833
550	Commuter Program	0	(323)	0	0	0
550	Other	96,040	50,211	110,600	110,600	0
Total MWRP Operations		13,755,639	9,259,054	18,351,019	15,210,873	(3,140,146)

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Recycling Operations

Dept No	Expense Name	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Collections Systems						
570	Regular Labor	1,233,281	593,455	1,273,540	1,276,343	2,803
570	Overtime Labor	120,991	52,395	148,500	120,800	(27,700)
570	Contract Labor	20,655	5,755	0	6,000	6,000
570	Electricity	99,089	66,479	136,000	133,600	(2,400)
570	Telecommunication	15,614	10,152	24,000	24,000	0
570	Chemicals	479,005	252,507	600,000	600,000	0
570	Operating Supplies	54,305	22,441	70,360	70,200	(160)
570	Postage	146	0	0	0	0
570	Rep & Maint IRWD	391,331	214,940	490,800	579,000	88,200
570	Personnel Training	2,436	1,325	4,720	5,000	280
570	Other Professional Fees	1,503	11,003	50,000	75,200	25,200
570	Equipment Usage	0	0	0	0	0
570	Mileage Reimbursement	0	0	2,000	0	(2,000)
570	Safety	16,065	0	12,000	12,000	0
Total Collections Systems		2,434,421	1,230,452	2,811,920	2,902,143	90,223

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Recycling Operations

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Collections Systems</u>						
570	Regular Labor	1,233,281	593,455	1,276,343	1,329,211	52,868
570	Overtime Labor	120,991	52,395	120,800	128,000	7,200
570	Contract Labor	20,655	5,755	6,000	6,000	0
570	Electricity	99,089	66,479	133,600	137,608	4,008
570	Telecommunication	15,614	10,152	24,000	29,000	5,000
570	Chemicals	479,005	252,507	600,000	640,000	40,000
570	Operating Supplies	54,305	22,441	70,200	72,600	2,400
570	Postage	146	0	0	0	0
570	Rep & Maint IRWD	391,331	214,940	579,000	618,000	39,000
570	Personnel Training	2,436	1,325	5,000	5,000	0
570	Other Professional Fees	1,503	11,003	75,200	75,200	0
570	Equipment Usage	0	0	0	0	0
570	Mileage Reimbursement	0	0	0	0	0
570	Safety	16,065	0	12,000	12,000	0
Total Collections Systems		2,434,421	1,230,452	2,902,143	3,052,619	150,476

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Recycling Operations		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
LAWRP Operations						
590	Regular Labor	513,934	196,145	645,138	477,890	(167,248)
590	Overtime Labor	44,488	20,505	66,400	46,600	(19,800)
590	Electricity	734,486	441,509	662,545	720,355	57,810
590	Fuel	384	122	1,000	800	(200)
590	Chemicals	293,499	93,915	290,000	196,000	(94,000)
590	Operating Supplies	5,826	3,758	7,000	8,120	1,120
590	Office Supplies	279	0	500	0	(500)
590	Rep & Maint Other Agencies	264,694	114,648	256,000	256,000	0
590	Rep & Maint IRWD	81,498	29,651	99,000	89,000	(10,000)
590	Personnel Training	278	184	0	250	250
590	Other Professional Fees	150	0	450	500	50
590	Safety	852	0	1,700	1,700	0
590	Biosolids Disposals	16,153	8,618	20,000	18,000	(2,000)
Total LAWRP Operations		1,956,521	909,055	2,049,733	1,815,215	(234,518)
Total Recycling Operations		21,441,362	12,807,020	26,054,283	27,107,150	1,052,867

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Recycling Operations		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>LAWRP Operations</u>						
590	Regular Labor	513,934	196,145	477,890	497,168	19,278
590	Overtime Labor	44,488	20,505	46,600	49,060	2,460
590	Electricity	734,486	441,509	720,355	821,756	101,401
590	Fuel	384	122	800	824	24
590	Chemicals	293,499	93,915	196,000	201,880	5,880
590	Operating Supplies	5,826	3,758	8,120	8,364	244
590	Office Supplies	279	0	0	0	0
590	Rep & Maint Other Agencies	264,694	114,648	256,000	256,000	0
590	Rep & Maint IRWD	81,498	29,651	89,000	91,670	2,670
590	Personnel Training	278	184	250	258	8
590	Other Professional Fees	150	0	500	515	15
590	Safety	852	0	1,700	1,751	51
590	Biosolids Disposals	16,153	8,618	18,000	18,540	540
Total LAWRP Operations		1,956,521	909,055	1,815,215	1,947,785	132,570
Total Recycling Operations		21,441,362	12,807,020	27,107,150	24,599,540	(2,507,610)



MAINTENANCE OPERATIONS

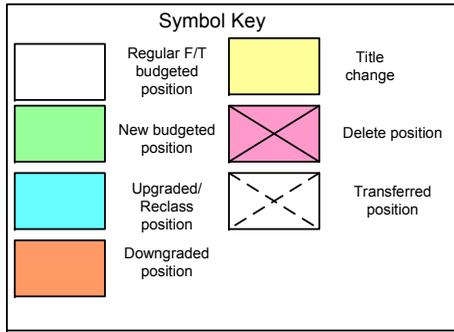
OPERATING BUDGET SUMMARY

Program Description

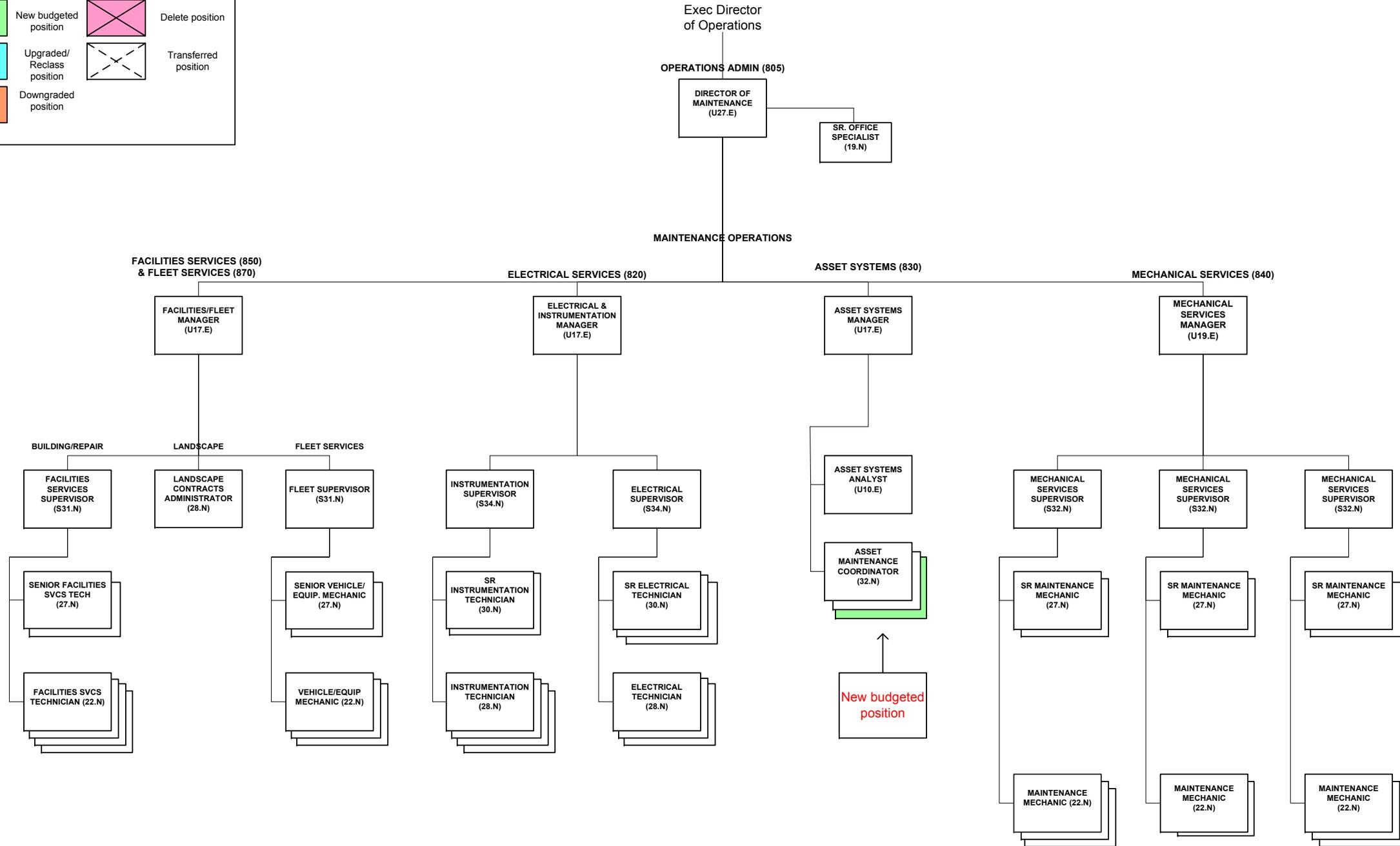
The mission of Maintenance Operations is to manage the District's assets to ensure optimal life expectancy, reliability, efficiency and safety goals while providing the highest level of customer satisfaction. Maintenance Operations coordinates the maintenance and repair of the District's electrical, mechanical, instrumentation, fleet and facility assets by utilizing a comprehensive enterprise asset management system to ensure safe, reliable, and cost effective operation.

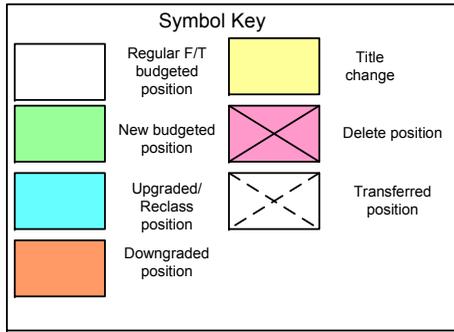
Major Goals

- Meet the Department's adopted Maintenance and General Plant budgets;
- Achieve zero lost time accidents;
- Maintain 100% compliance with all regulatory requirements;
- Identify and track operational Key Performance Indicators (KPIs) to optimize efficiency and cost effectiveness;
- Maintain and develop staff competency through a combination of internal and external training;
- Establish vendor and outside contractor maintenance service agreements for MWRP Biosolids and Energy Recovery Facilities major operating systems such as microturbines, biogas cleaning, flare, boilers and heat recovery system;
- Optimize predictive maintenance processes through further applications of pump efficiency testing, lube oil analysis, vibration analysis, ultrasound detection, and infrared thermography program;
- Investigate and expand the use of new technology to enhance and increase equipment reliability and staff productivity;
- Enhance the reliable operation of the Rattlesnake Zone A Pump Station with the replacement of the existing natural gas engines;
- Maintain all District buildings and facilities to ensure that expected life-cycles are reached and building systems function as designed;
- Perform all required maintenance on schedule to provide a safe, reliable, and cost effective fleet operation; and,
- Assure the reliable operation of the Rattlesnake Zone A Pump Station with the replacement of the existing natural gas engines with a combination of new engines and conversion to electric motors.

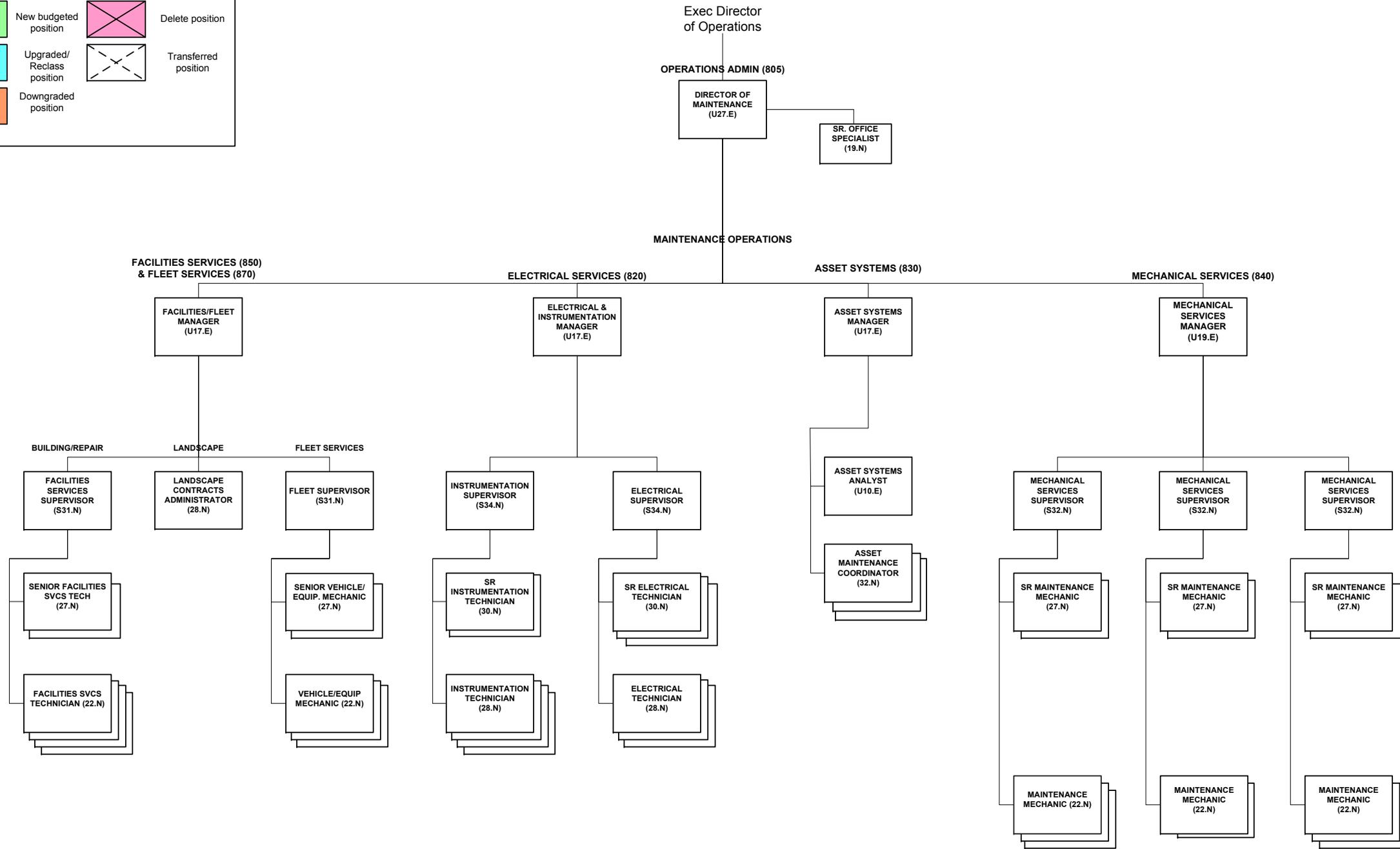


**IRVINE RANCH WATER DISTRICT
MAINTENANCE OPERATIONS
FISCAL YEAR 2019-20**





**IRVINE RANCH WATER DISTRICT
MAINTENANCE OPERATIONS
FISCAL YEAR 2020-21**



Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Maintenance		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Electrical Services						
820	Regular Labor	1,286,708	555,710	1,312,112	1,371,006	58,894
820	Overtime Labor	128,433	88,067	141,100	169,356	28,256
820	Contract Labor	0	8,755	0	295,008	295,008
820	Operating Supplies	33,490	263,828	108,400	543,700	435,300
820	Rep & Maint IRWD	843,498	222,718	910,600	1,483,316	572,716
820	Personnel Training	0	829	0	0	0
820	Other Professional Fees	35	208	800	0	(800)
820	Equipment Usage	0	0	0	0	0
820	Safety	22,023	5,082	16,800	18,400	1,600
Total Electrical Services		2,314,187	1,145,197	2,489,812	3,880,786	1,390,974

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Maintenance

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Electrical Services</u>						
820	Regular Labor	1,286,708	555,710	1,371,006	1,427,753	56,747
820	Overtime Labor	128,433	88,067	169,356	169,356	0
820	Contract Labor	0	8,755	295,008	295,008	0
820	Operating Supplies	33,490	263,828	543,700	543,700	0
820	Rep & Maint IRWD	843,498	222,718	1,483,316	1,473,292	(10,024)
820	Personnel Training	0	829	0	0	0
820	Other Professional Fees	35	208	0	0	0
820	Equipment Usage	0	0	0	0	0
820	Safety	22,023	5,082	18,400	18,400	0
Total Electrical Services		2,314,187	1,145,197	3,880,786	3,927,509	46,723

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Maintenance		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Asset Systems						
830	Regular Labor	256,794	164,421	387,240	503,422	116,182
830	Overtime Labor	5,167	819	5,000	4,500	(500)
830	Operating Supplies	54	41	2,000	200	(1,800)
830	Personnel Training	334	92	100	3,600	3,500
830	Other Professional Fees	43,236	21,300	100,000	200,000	100,000
830	Equipment Usage	0	0	0	0	0
830	Safety	0	0	1,000	0	(1,000)
Total Asset Systems		305,585	186,673	495,340	711,722	216,382

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Maintenance		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Asset Systems</u>						
830	Regular Labor	256,794	164,421	503,422	520,577	17,155
830	Overtime Labor	5,167	819	4,500	3,500	(1,000)
830	Operating Supplies	54	41	200	200	0
830	Personnel Training	334	92	3,600	3,600	0
830	Other Professional Fees	43,236	21,300	200,000	200,000	0
830	Equipment Usage	0	0	0	0	0
830	Safety	0	0	0	0	0
Total Asset Systems		305,585	186,673	711,722	727,877	16,155

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Maintenance		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Mechanical Services</u>						
840	Regular Labor	1,168,343	601,446	1,392,558	1,440,165	47,607
840	Overtime Labor	92,227	50,158	96,600	108,050	11,450
840	Contract Labor	7,987	0	40,000	80,000	40,000
840	Fuel	843	0	0	0	0
840	Operating Supplies	(2,975)	193,916	34,500	492,700	458,200
840	Rep & Maint IRWD	1,168,872	470,417	977,400	1,009,600	32,200
840	Personnel Training	931	462	0	0	0
840	Other Professional Fees	334	0	0	0	0
840	Equipment Usage	0	0	0	0	0
840	Safety	0	0	6,200	5,000	(1,200)
840	Commuter Program	0	(323)	0	0	0
Total Mechanical Services		2,436,562	1,316,076	2,547,258	3,135,515	588,257

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Maintenance		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Mechanical Services</u>						
840	Regular Labor	1,168,343	601,446	1,440,165	1,497,541	57,376
840	Overtime Labor	92,227	50,158	108,050	110,450	2,400
840	Contract Labor	7,987	0	80,000	80,000	0
840	Fuel	843	0	0	0	0
840	Operating Supplies	(2,975)	193,916	492,700	500,200	7,500
840	Rep & Maint IRWD	1,168,872	470,417	1,009,600	1,112,600	103,000
840	Personnel Training	931	462	0	0	0
840	Other Professional Fees	334	0	0	0	0
840	Equipment Usage	0	0	0	0	0
840	Safety	0	0	5,000	5,000	0
840	Commuter Program	0	(323)	0	0	0
Total Mechanical Services		2,436,562	1,316,076	3,135,515	3,305,791	170,276

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Maintenance		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
<u>Facilities Services</u>						
850	Regular Labor	724,243	354,710	730,898	761,128	30,230
850	Overtime Labor	36,440	25,858	42,000	42,000	0
850	Contract Labor	58,178	41,065	28,800	0	(28,800)
850	Electricity	388,029	235,222	390,833	404,000	13,167
850	Fuel	21,944	9,373	30,000	20,000	(10,000)
850	Telecommunication	20	0	400	0	(400)
850	Other Utilities	70,456	35,052	73,600	69,000	(4,600)
850	Operating Supplies	65,688	27,484	78,500	54,000	(24,500)
850	Rep & Maint Other Agencies	6,771	0	7,000	7,200	200
850	Rep & Maint IRWD	1,882,077	973,762	1,780,300	1,957,400	177,100
850	Engineering Fees	70,492	7,193	0	0	0
850	Personnel Training	47	69	120	120	0
850	Equipment Usage	0	0	0	0	0
Total Facilities Services		3,324,385	1,709,788	3,162,451	3,314,848	152,397

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Maintenance		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Facilities Services</u>						
850	Regular Labor	724,243	354,710	761,128	791,916	30,788
850	Overtime Labor	36,440	25,858	42,000	42,000	0
850	Contract Labor	58,178	41,065	0	0	0
850	Electricity	388,029	235,222	404,000	420,000	16,000
850	Fuel	21,944	9,373	20,000	20,000	0
850	Telecommunication	20	0	0	0	0
850	Other Utilities	70,456	35,052	69,000	69,000	0
850	Operating Supplies	65,688	27,484	54,000	54,000	0
850	Rep & Maint Other Agencies	6,771	0	7,200	7,200	0
850	Rep & Maint IRWD	1,882,077	973,762	1,957,400	1,957,400	0
850	Engineering Fees	70,492	7,193	0	0	0
850	Personnel Training	47	69	120	120	0
850	Equipment Usage	0	0	0	0	0
Total Facilities Services		3,324,385	1,709,788	3,314,848	3,361,636	46,788

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Maintenance		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
<b style="color: purple;">Fleet Services						
870	Regular Labor	434,528	199,369	416,484	456,562	40,078
870	Overtime Labor	17,873	8,898	8,300	8,000	(300)
870	Fuel	531,562	326,596	450,000	600,000	150,000
870	Other Utilities	58,338	28,391	61,600	64,000	2,400
870	Operating Supplies	5,072	340	6,950	7,700	750
870	Permits, Licenses and Fees	9,837	2,083	8,500	13,500	5,000
870	Equipment Rental	0	0	8,000	8,000	0
870	Rep & Maint IRWD	581,131	302,813	580,000	640,000	60,000
870	Personnel Training	747	316	1,692	1,700	8
870	Equipment Usage	0	0	0	0	0
870	Mileage Reimbursement	148,140	72,799	146,000	150,000	4,000
<b style="color: purple;">Total Fleet Services		1,787,228	941,605	1,687,526	1,949,462	261,936
Total Maintenance		10,167,947	5,299,339	10,382,387	12,992,333	2,609,946

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Maintenance		FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
<u>Dept No</u>	<u>Expense Name</u>	Actual	Actual thru 12/31/18	Proposed Budget	Proposed Budget	Incr/(Decr)
<u>Fleet Services</u>						
870	Regular Labor	434,528	199,369	456,562	475,951	19,389
870	Overtime Labor	17,873	8,898	8,000	8,000	0
870	Fuel	531,562	326,596	600,000	640,000	40,000
870	Other Utilities	58,338	28,391	64,000	64,000	0
870	Operating Supplies	5,072	340	7,700	7,700	0
870	Permits, Licenses and Fees	9,837	2,083	13,500	13,500	0
870	Equipment Rental	0	0	8,000	8,000	0
870	Rep & Maint IRWD	581,131	302,813	640,000	640,000	0
870	Personnel Training	747	316	1,700	1,700	0
870	Equipment Usage	0	0	0	0	0
870	Mileage Reimbursement	148,140	72,799	150,000	150,000	0
Total Fleet Services		1,787,228	941,605	1,949,462	2,008,851	59,389
Total Maintenance		10,167,947	5,299,339	12,992,333	13,331,664	339,331



RECYCLED WATER USE and CROSS-CONNECTION CONTROL

OPERATING BUDGET SUMMARY

Program Descriptions

The Water Resources and Policy Department is responsible for developing and implementing water resource supply and demand management programs to enhance the reliability of water supplies for District customers. This is, in part, accomplished by expanding the use of recycled water in compliance with State and local requirements. To ensure the protection of the public water supply, including at recycled water use sites, Cross-Connection plays an important role by implementing programs to protect public health.

Recycled Water Development: IRWD is recognized as a national leader in recycled water based in large part on the many years of experience IRWD has with recycled water, the large number of meters served, and groundbreaking projects IRWD has completed. IRWD currently serves more than 6,000 recycled water meters including:

- More than 100 commercial dual-plumbed buildings where recycled water is used for flushing toilets and urinals,
- More than 25 cooling towers, and,
- More than 650 single-family lots where recycled water is used for irrigating both the front and back yards.

IRWD is also recognized for its support of recycled water through organizations such as the WaterReuse Association, a national recycled water advocacy group. IRWD, in concert with WaterReuse California, is active in state-wide policy, legislation, regulation, and support for other agencies which face challenges as their programs are initiated or are being expanded. On a regional level, IRWD had a lead role in working with other water recycling agencies and the regulatory agencies in Orange County to establish standards for on-going inspection and testing of recycled water use sites.

Last fiscal year the Recycled Water Development Group worked on some innovative projects. IRWD partnered with the University of California, Irvine to serve their Central Plant cooling towers with recycled water that will conserve approximately 260 acre-feet per year of potable water. This project is IRWD's single largest industrial recycled water customer. The Group also worked with the Irvine Ice Foundation, a non-profit organization affiliated with the Anaheim Ducks, to use recycled water to make ice in four new ice rinks at the new 280,000 square foot facility in the Great Park. IRWD continues to work to add new recycled water customers by connecting sites which are the result of new construction and by converting existing potable or untreated water customers to recycled water.

Recycled Water Use Site Inspection and Testing: Ensuring the safe and proper use of recycled water is important not only to our customers but the community as well. This is accomplished by implementing a use site inspection and testing program. During the development process, staff reviews project plans and inspects for compliance with State and local requirements. Once the



RECYCLED WATER USE and CROSS-CONNECTION CONTROL

OPERATING BUDGET SUMMARY

sites are activated, IRWD has a responsibility to monitor those sites for on-going compliance with State and local requirements. This is done by having a recycled water use site inspection and testing program where each site is periodically inspected for proper system identification, hours of operation, avoiding runoff, to determine that there are no cross connections, and to ensure that Site Supervisors understand their roles and responsibilities. This work is currently accomplished by both staff and contractors.

Cross-Connection Control: Title 17 of the California Code of Regulations requires that water agencies protect the public water system from contamination. This is done by implementing a cross-connection control program. IRWD's program includes surveying properties to determine what hazards, if any, exist and what type of backflow prevention device is required to protect the public system. Once a backflow prevention device is installed, annual testing is required to make sure it functions properly. These tests are performed by a certified backflow device technicians hired by the property owners. IRWD sends letters to property owners with testable backflow prevention devices notifying them that their devices are to be tested. Once a device is tested, the technician is required to submit documentation to IRWD. There are currently more than 20,000 testable devices in IRWD's service area.

To confirm for on-going compliance at customer sites, IRWD staff conducts periodic field inspections to monitor for hazardous conditions and to determine if field conditions have changed that would warrant a change to the backflow requirements. These periodic field inspections are prioritized based on the types of activities conducted at customer sites.

IRWD itself has more than 100 backflow prevention devices at its properties that also require testing. These devices are tested by IRWD staff. If maintenance or repairs on IRWD's devices is required, that work is performed by IRWD staff.

Major Goals

RECYCLED WATER DEVELOPMENT

- Expand the use of recycled water consistent with Title 22 of the California Code of Regulations;
- Convert a minimum of 100 acre-feet of imported water use to recycled water;
- Pursue a new *Local Resources Program* funding agreement with MWD which provides a "per-acre foot" financial incentive to increase the use of recycled water;
- Assist WaterReuse California with its legislative agenda which includes allowing discharge of recycled water from impoundments during storm events;
- Remain active in the Orange County Chapter of WaterReuse California; and,
- Seek opportunities to dual-plumb commercial buildings, hotels, condominiums, and apartment properties.



RECYCLED WATER USE and CROSS-CONNECTION CONTROL

OPERATING BUDGET SUMMARY

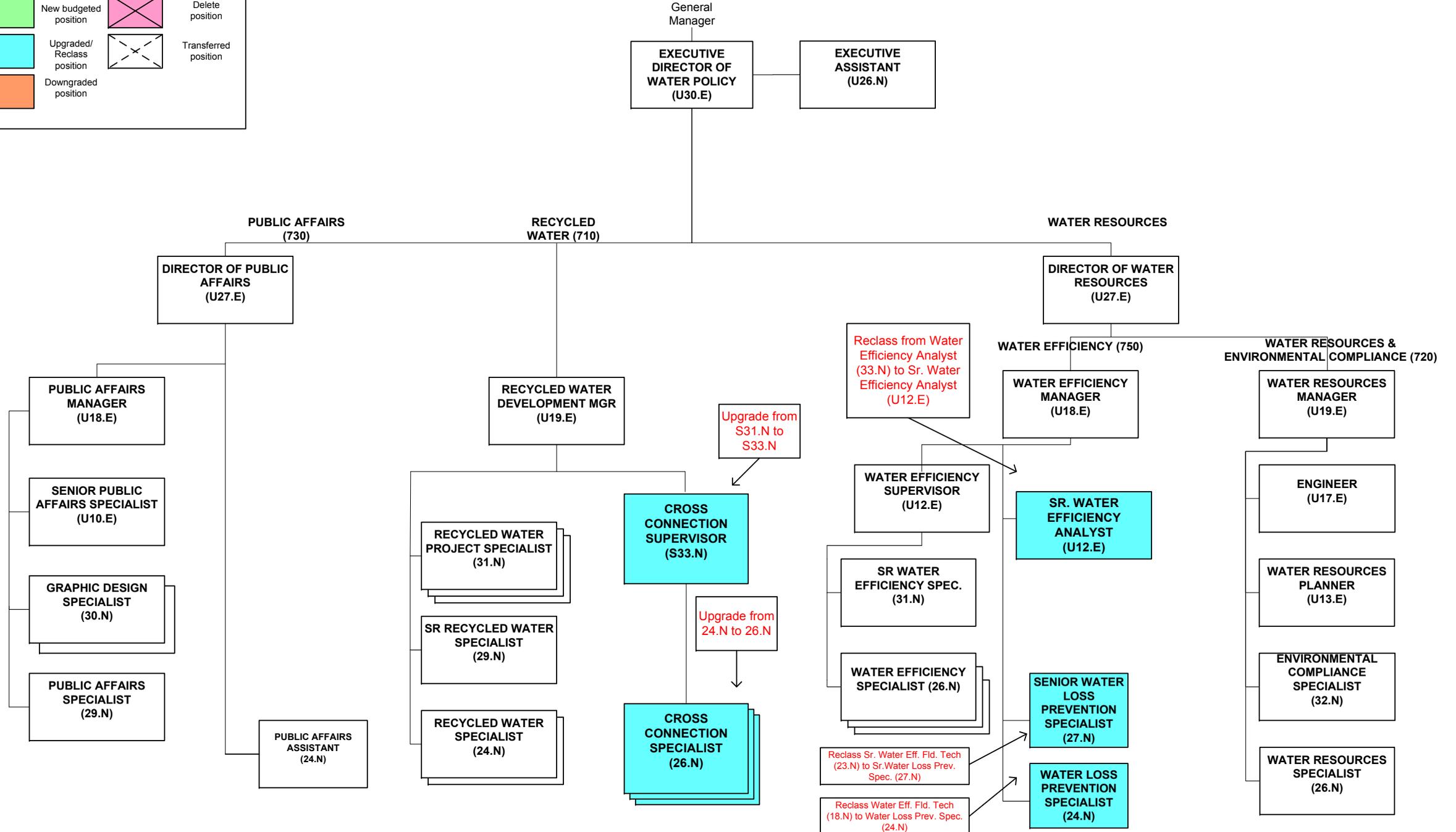
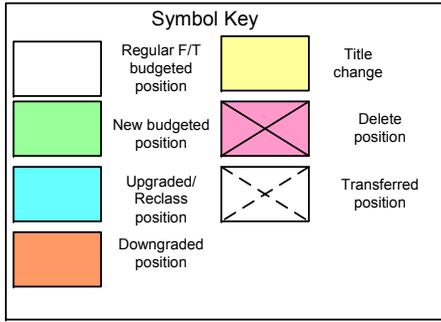
RECYCLED WATER USE SITE INSPECTION & TESTING

- Conduct periodic visual inspections, cross-connection tests, and Site Supervisor training at more than 1,500 recycled water use sites;
- Inform property owners of the things that need to be done to bring the site into compliance with State and local requirements; and,
- Keep records of the site inspection, site testing and Site Supervisor training.

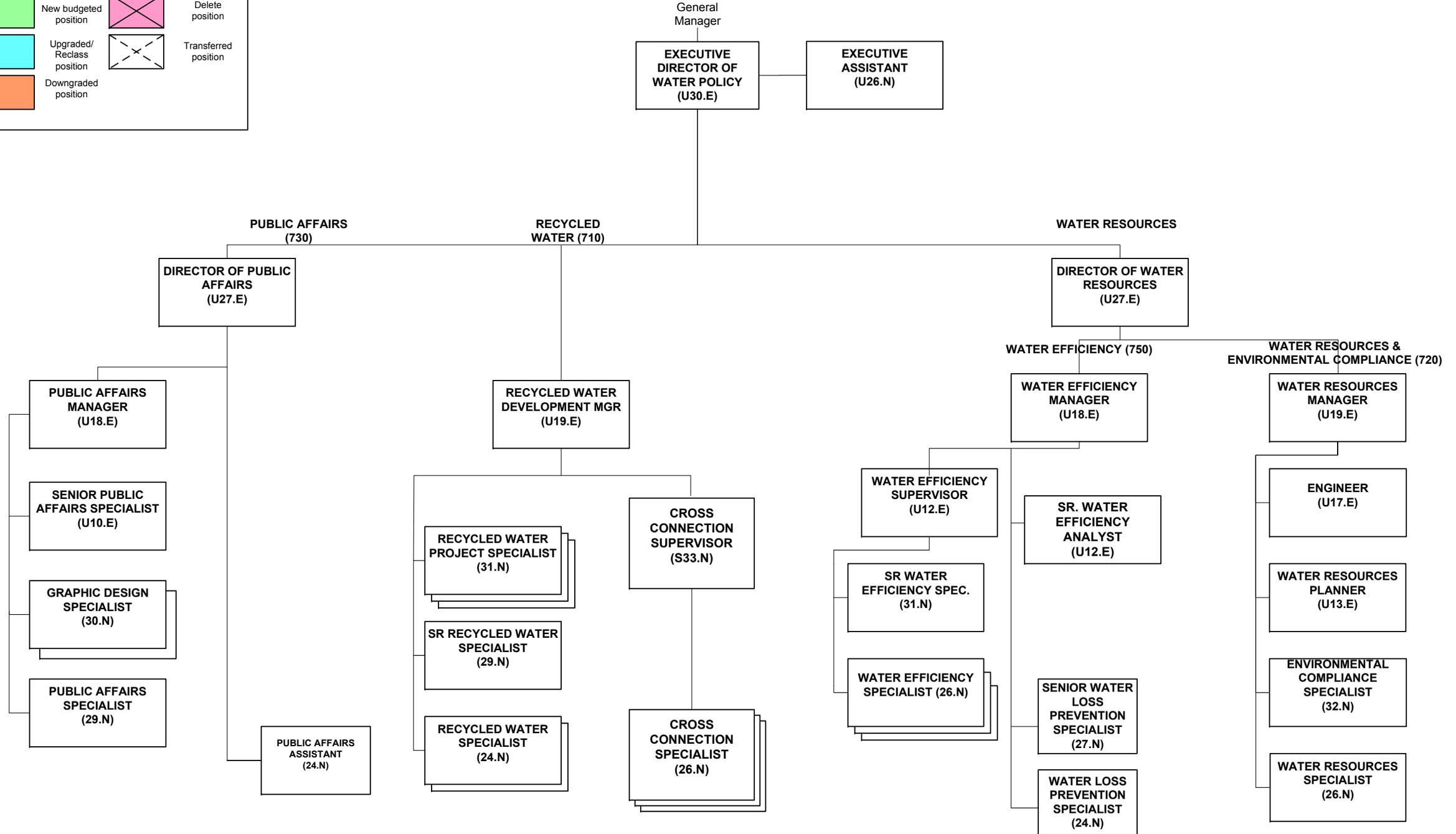
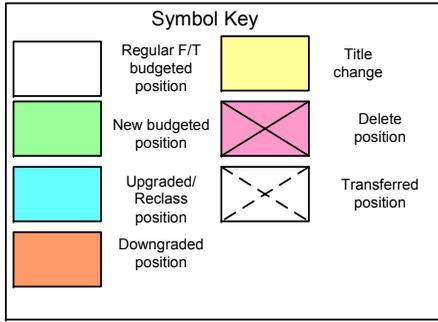
CROSS-CONNECTION CONTROL

- Send notifications to customers requesting they have their backflow prevention device(s) tested and if necessary, repaired. There are more than 20,000 testable backflow prevention devices in IRWD's service area;
- Conduct periodic inspections of customer sites to ensure the proper backflow prevention device(s) are in place;
- Compile a list of high-, medium-, and low-hazard sites in IRWD's service area that will be the basis for future inspections based on level of risk; and,
- Test IRWD owned backflow prevention devices and repair as necessary.

**IRVINE RANCH WATER DISTRICT
WATER RESOURCES AND POLICY
FISCAL YEAR 2019-20**



**IRVINE RANCH WATER DISTRICT
WATER RESOURCES AND POLICY
FISCAL YEAR 2020-21**



Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Resources and Policy		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Water Resources and Policy</u>						
710	Regular Labor	1,022,428	496,892	637,236	846,105	208,869
710	Overtime Labor	116	69	3,500	5,400	1,900
710	Contract Labor	16,320	24,005	70,400	16,500	(53,900)
710	Operating Supplies	9,926	5,167	5,000	5,000	0
710	Printing	255	0	0	0	0
710	Postage	1,979	544	0	1,200	1,200
710	Permits, Licenses and Fees	53,385	(11,754)	50,000	60,000	10,000
710	Office Supplies	2,963	1,077	0	2,800	2,800
710	Rep & Maint IRWD	79	246	0	2,500	2,500
710	Engineering Fees	118,397	0	0	0	0
710	Personnel Training	8,189	6,304	14,300	15,300	1,000
710	Other Professional Fees	406,417	185,337	463,600	417,800	(45,800)
710	Equipment Usage	0	0	0	0	0
710	Conservation	1,475	0	0	0	0
Total Water Resources and Policy		1,641,929	707,887	1,244,036	1,372,605	128,569

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Resources and Policy

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Water Resources and Policy</u>						
710	Regular Labor	1,022,428	496,892	846,105	875,460	29,355
710	Overtime Labor	116	69	5,400	5,400	0
710	Contract Labor	16,320	24,005	16,500	16,500	0
710	Operating Supplies	9,926	5,167	5,000	5,000	0
710	Printing	255	0	0	0	0
710	Postage	1,979	544	1,200	1,200	0
710	Permits, Licenses and Fees	53,385	(11,754)	60,000	60,000	0
710	Office Supplies	2,963	1,077	2,800	2,800	0
710	Rep & Maint IRWD	79	246	2,500	2,500	0
710	Engineering Fees	118,397	0	0	0	0
710	Personnel Training	8,189	6,304	15,300	15,300	0
710	Other Professional Fees	406,417	185,337	417,800	442,800	25,000
710	Equipment Usage	0	0	0	0	0
710	Conservation	1,475	0	0	0	0
Total Water Resources and Policy		1,641,929	707,887	1,372,605	1,426,960	54,355



WATER RESOURCES AND ENVIRONMENTAL COMPLIANCE

OPERATING BUDGET SUMMARY

Program Description

The Water Resources and Policy Department is responsible for developing and implementing water resource supply and demand management programs to enhance the reliability of water supplies for District customers. The department is also responsible for managing the District's water banking programs, environmental compliance activities, and energy efficiency and renewable energy programs.

Water Resources and Environmental Compliance: The Water Resources and Environmental Compliance Department is responsible for the development of water supply programs and banking projects primarily outside of the local Orange County area. These programs and projects are increasing the diversity and reliability of the District's water supplies by securing water supplies from sources outside of Orange County during wet periods and storing them for future use in groundwater banking projects in Kern County. The Department is also responsible for exploring and developing potential local water supply reliability opportunities. The District's efforts in the development of these programs and projects are needed in response to stressors on water supply reliability such as environmental pressures in the Delta, risks of major earthquakes, expanding statewide population, climate change, and expanding regulatory requirements.

This department is responsible for the planning and development of the District's water banking programs. In addition, this department is responsible for the negotiation and development of agreements with other agencies, banking partners and entities throughout the State of California for water transfer and exchanges that facilitate the recharge, storage and recovery of water at the water banking projects. It is also responsible for the negotiation and the development of agreements that facilitate the delivery of water recovered from the water banking projects to IRWD's service area through facilities owned by the California Department of Water Resources, Kern County Water Agency and Metropolitan Water District of Southern California (MWD). This department is also responsible for the participation of IRWD-owned lands located in the Palo Verde Irrigation District (PVID) in the PVID/MWD existing fallowing program and any new water conservation related programs that PVID and MWD implement in the future.

Other responsibilities of the Water Resources and Environmental Compliance department include managing the District's environmental compliance programs, and overseeing the District's salt management, energy efficiency, greenhouse gas reporting and verification, and renewable energy planning activities. The environmental compliance programs focus on fulfilling the District's compliance requirements for the operation of potable and recycled water and wastewater systems operations, facility replacements and the construction of new facilities.



WATER RESOURCES AND ENVIRONMENTAL COMPLIANCE

OPERATING BUDGET SUMMARY

Major Goals

WATER RESOURCES

- Bank supplemental water for IRWD, develop extraction and additional recharge and storage capacity as needed for IRWD and its water banking partners;
- Manage the [FS1] completion of planning and feasibility studies as well as the development of the agreements needed for the implementation of the Kern Fan Groundwater Storage Project;
- Oversee the formation of a Joint Powers Authority and work with the Authority's Program Manager to oversee the design, construction and operation of the Project;
- Negotiate a MWD Policy for the delivery of MWD system water to IRWD's Kern County Banking Projects;
- Finalize agreements for a pilot program through which other Orange County water agencies can participate in IRWD's water banking program;
- Implement long-term unbalanced exchange agreements with Central Coast Water Authority, Mojave Water Agency and others for IRWD's water banking program;
- Finalize a business plan for IRWD's water banking projects and programs;
- Implement long-term exchange program to facilitate exports of Kern River water to IRWD service area;
- Negotiate agreements to integrate IRWD's Strand Ranch and Stockdale West properties into the Kern Fan Groundwater Sustainability Agency under SGMA;
- Participate in water conservation programs implemented by MWD and Palo Verde Irrigation District, such as land fallowing, which can make water available for other uses;
- Investigate cost effective opportunities to purchase State Water Project Table A entitlement; and,
- Prepare and submit grant funding applications for eligible IRWD capital projects including Reclamation's WaterSMART funding.

ENVIRONMENTAL COMPLIANCE

- Complete the work and studies associated with the EIR for the Syphon Reservoir Improvement Project; and,
- Fulfill the District's environmental compliance requirements for capital projects, replacements and operations including the development and approval of Mitigated Negative Declarations, Environmental Impact Reports and Notices of Exemption.

ENERGY AND OTHER PLANNING

- Update the District's Salt Management Model and Plan;
- Evaluate the impact of varying water supplies on maintaining the District's salt balance;
- Update the Embedded Energy Plan;
- Seek grant opportunities for District energy projects;



WATER RESOURCES AND ENVIRONMENTAL COMPLIANCE

OPERATING BUDGET SUMMARY

- Participate in SCE's Direct Access Program; and,
- Maximize participation in Phase 2 of the SCE Water-Energy Pilot Program by jointly working with SCE on evaluating beneficial energy projects.

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2019-20

Water Resources and Policy		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Water Resources and Environmental Compliance</u>						
720	Regular Labor	710,272	346,401	1,030,956	1,186,290	155,334
720	Overtime Labor	1,244	0	400	400	0
720	Contract Labor	24,893	0	0	0	0
720	Electricity	5,595	0	466,220	155,700	(310,520)
720	Postage	0	17	0	0	0
720	Permits, Licenses and Fees	734,203	635,910	638,000	688,700	50,700
720	Rep & Maint IRWD	535,295	161,520	677,900	665,744	(12,156)
720	Personnel Training	743	752	0	0	0
720	Other Professional Fees	142,075	52,690	130,800	158,000	27,200
720	Mileage Reimbursement	40	47	0	0	0
Total Water Resources and Environmental Compliance		2,154,359	1,197,337	2,944,276	2,854,834	(89,442)

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Water Resources and Policy		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Water Resources and Environmental Compliance</u>						
720	Regular Labor	710,272	346,401	1,186,290	1,230,208	43,918
720	Overtime Labor	1,244	0	400	400	0
720	Contract Labor	24,893	0	0	0	0
720	Electricity	5,595	0	155,700	155,700	0
720	Postage	0	17	0	0	0
720	Permits, Licenses and Fees	734,203	635,910	688,700	652,450	(36,250)
720	Rep & Maint IRWD	535,295	161,520	665,744	632,549	(33,195)
720	Personnel Training	743	752	0	0	0
720	Other Professional Fees	142,075	52,690	158,000	148,800	(9,200)
720	Mileage Reimbursement	40	47	0	0	0
Total Water Resources and Environmental Compliance		2,154,359	1,197,337	2,854,834	2,820,107	(34,727)



PUBLIC AFFAIRS

OPERATING BUDGET SUMMARY

Program Description

The Water Resources and Policy Department is responsible for developing and implementing water resource supply and demand management programs to enhance the reliability of water supplies for District customers. The department is also responsible for managing the District's public affairs.

Public Affairs: The Public Affairs Department is responsible for communicating accurate and timely information about Irvine Ranch Water District services, projects, activities and programs. The department uses multiple platforms, including print, video, personal contact, education programs, publications, tours, and electronic and social media outlets. The IRWD communication program serves the District and its customers by:

- Creating and maintaining credibility and public trust;
- Increasing customer awareness of the services we provide;
- Promoting the District's value, activities and events of significance;
- Conveying accurate, timely information to the public on sensitive and controversial issues; and,
- Promoting transparency and easy-to-access information.

Major Goals

WATER EFFICIENCY OUTREACH

- Develop and implement an overarching message to educate customers about water efficiency;
- Educate the public about the value of recycled water;
- Teach customers how to reduce outdoor water use with the RightScape program;
- Maximize multiple outreach platforms including resident tours of IRWD facilities, meetings with community groups, print media, electronic media, internet, hallway displays and video;
- Provide students in the IRWD service area with learning opportunities regarding water supply, water reliability, tap water, and water use efficiency programs. Promote water education programs to schools in the IRWD service area and at facilities where students gather;
- Conduct outreach to customers who regularly exceed their monthly water budget; and,
- Teach customers how to save water and money by understanding their water bill.

COMMUNITY OUTREACH AND MEDIA PROGRAMS

- Create, update and refine multi-pronged social media outreach channels to inform IRWD customers, the media, business partners, IRWD employees and other government entities;
- Refine and execute tap water quality programs and infrastructure outreach programs;
- Enhance public trust by promoting customer service and answering customer questions;
- Enhance communications with customers through a targeted media outreach and public communications program including updates for construction and maintenance projects; and
- Provide enhanced customer outreach initiatives based on customer feedback programs.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Resources and Policy		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2018-19 Budget	FY 2019-20 Proposed Budget	Incr/(Decr)
Dept No	Expense Name					
<u>Public Affairs</u>						
730	Regular Labor	683,861	354,169	689,588	755,462	65,874
730	Overtime Labor	9,997	5,418	8,000	8,000	0
730	Operating Supplies	53	60	700	400	(300)
730	Printing	57,798	15,321	117,000	76,000	(41,000)
730	Postage	164	149	200	200	0
730	Office Supplies	3,648	2,132	6,000	6,000	0
730	Personnel Training	8,319	7,671	12,122	13,050	928
730	Other Professional Fees	1,738,655	901,772	1,999,400	1,743,350	(256,050)
730	Equipment Usage	0	0	0	0	0
730	Mileage Reimbursement	25	14	0	0	0
730	Conservation	1,278	0	0	0	0
Total Public Affairs		2,503,798	1,286,706	2,833,010	2,602,462	(230,548)

Irvine Ranch Water District
 Consolidated Operating Expense Budget for FY 2020-21

Water Resources and Policy

<u>Dept No</u>	<u>Expense Name</u>	FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
Public Affairs						
730	Regular Labor	683,861	354,169	755,462	790,016	34,554
730	Overtime Labor	9,997	5,418	8,000	8,000	0
730	Operating Supplies	53	60	400	400	0
730	Printing	57,798	15,321	76,000	55,000	(21,000)
730	Postage	164	149	200	200	0
730	Office Supplies	3,648	2,132	6,000	6,000	0
730	Personnel Training	8,319	7,671	13,050	13,050	0
730	Other Professional Fees	1,738,655	901,772	1,743,350	1,700,350	(43,000)
730	Equipment Usage	0	0	0	0	0
730	Mileage Reimbursement	25	14	0	0	0
730	Conservation	1,278	0	0	0	0
Total Public Affairs		2,503,798	1,286,706	2,602,462	2,573,016	(29,446)



WATER EFFICIENCY

OPERATING BUDGET SUMMARY

Program Description

The Water Resources and Policy Department is responsible for developing and implementing water resource supply and demand management programs to enhance the reliability of water supplies for District customers. The department is also responsible for managing the District's Water Efficiency Programs.

Water Efficiency: Demand management programs directly offset the need for developing additional water supplies and are a critical element in meeting the District's water resources/reliability objectives. IRWD has provided industry leadership through the development of innovative and aggressive demand management programs focusing on water use efficiency and sewage resource recycling. In 2019, the Department will use the results of a future potential water efficiency study to inform program development and update the 2013 Water Use Efficiency Plan. Water efficiency programs focused on outdoor water efficiency, adherence to new state mandates, tactical incentives and participation in innovative pilots and research that maintain IRWD's leadership position are incorporated into the two-year fiscal 2019-21 budget. IRWD will continue to be engaged in the development and implementation of local, regional, state-wide and national water efficiency and demand management policies.

Major Goals

WATER EFFICIENCY

- Complete the Future Potential Water Efficiency Study to identify new opportunities for water efficiency;
- Develop partnerships with private and public entities to leverage the effectiveness and reach of water efficiency programs;
- Research and implement, as appropriate, new technologies and innovative programs to assist customers with improving their water use efficiency with a special emphasis on outdoor efficiency programs;
- Continue to partner with commercial, industrial and institutional customers to implement cost-effective water use efficiency programs;
- Continue to support and expand enhanced customer engagement and reporting as a tool to motivate additional water use efficiency;
- Continue to support and expand educational programs for the professional landscape industry;
- Implement the use of enhanced GIS data to improve customer allocation-setting, outreach and programs targeted toward outdoor water use;
- Actively participate in statewide policy discussions addressing the water-energy nexus;
- Actively engage in discussions with the State Water Resources Control Board, the Department of Water Resources and other stakeholders on implementation of the State's Conservation as a California Way of Life legislation for efficient water use that balances local conditions, supplies, use of recycled water, prior conservation, growth and other equity adjustments;
- Establish the appropriate metrics and quantify water efficiency targets; and,
- Develop a Water Loss Control Plan to define District programs and annual Water Loss Audit Report guidance for data collection and management.

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2019-20

Water Resources and Policy		FY 2017-18	FY 2018-19	FY 2018-19	FY 2019-20	
Dept No	Expense Name	Actual	Actual thru 12/31/18	Budget	Proposed Budget	Incr/(Decr)
Water Efficiency						
750	Regular Labor	467,138	328,348	625,254	706,455	81,201
750	Overtime Labor	9,933	24,975	41,000	39,000	(2,000)
750	Contract Labor	108,681	56,816	124,000	178,000	54,000
750	Operating Supplies	2,192	372	2,500	5,700	3,200
750	Postage	0	51	0	0	0
750	Office Supplies	14	118	0	0	0
750	Rep & Maint IRWD	26,437	5,117	30,000	30,000	0
750	Personnel Training	16,310	12,173	17,500	20,000	2,500
750	Other Professional Fees	193,031	7,788	258,000	211,000	(47,000)
750	Conservation	1,539,271	228,729	2,050,000	963,000	(1,087,000)
Total Water Efficiency		2,363,007	664,487	3,148,254	2,153,155	(995,099)
Total Water Resources and Policy		8,663,093	3,856,417	10,169,576	8,983,056	(1,186,520)
GRAND TOTAL		152,240,177	80,431,044	161,390,126	171,347,341	9,957,215

Irvine Ranch Water District
Consolidated Operating Expense Budget for FY 2020-21

Water Resources and Policy		FY 2017-18 Actual	FY 2018-19 Actual thru 12/31/18	FY 2019-20 Proposed Budget	FY 2020-21 Proposed Budget	Incr/(Decr)
<u>Dept No</u>	<u>Expense Name</u>					
<u>Water Efficiency</u>						
750	Regular Labor	467,138	328,348	706,455	737,824	31,369
750	Overtime Labor	9,933	24,975	39,000	39,000	0
750	Contract Labor	108,681	56,816	178,000	178,000	0
750	Operating Supplies	2,192	372	5,700	5,700	0
750	Postage	0	51	0	0	0
750	Office Supplies	14	118	0	0	0
750	Rep & Maint IRWD	26,437	5,117	30,000	30,000	0
750	Personnel Training	16,310	12,173	20,000	20,000	0
750	Other Professional Fees	193,031	7,788	211,000	194,000	(17,000)
750	Conservation	1,539,271	228,729	963,000	1,003,000	40,000
Total Water Efficiency		2,363,007	664,487	2,153,155	2,207,524	54,369
Total Water Resources and Policy		8,663,093	3,856,417	8,983,056	9,027,607	44,551
GRAND TOTAL		152,240,177	80,431,044	171,347,341	178,093,510	6,746,169



GENERAL PLANT

SUMMARY *FY 2019-20*

<i>(in thousands)</i>	Fiscal Year 2018-19	Fiscal Year 2019-20	Increase (Decrease)
Information Systems	\$ 903	\$ 722	\$ (182)
Transportation Equipment	671	607	(64)
Laboratory Equipment	363	303	(60)
Work Equipment	757	637	(119)
Sub-Total	\$ 2,694	\$ 2,269	\$ (425)
Less: Vehicle Salvage Value	(49)	(52)	(3)
Total General Plant *	\$ 2,645	\$ 2,217	\$ (428)

Fiscal Year 2019-20

Funded by User Charges	\$ 1,700	76.67%
Funded by Capital Funds	418	18.86%
Funded by Overallocation Rev	99	4.48%
Total Fiscal Year 2019-20	\$ 2,217	100.00%

Fiscal Year 2018-19

Funded by User Charges	\$ 1,715	64.84%
Funded by Capital Funds	777	29.38%
Funded by Overallocation Rev	153	5.78%
Total Fiscal Year 2018-19	\$ 2,645	100.00%

* The asset listing detail is included in the Capital Budget book. Staff will continue to include a summary that identifies the funding source in the Operating Budget.



GENERAL PLANT

SUMMARY *FY 2020-21*

<i>(in thousands)</i>	Fiscal Year 2019-20	Fiscal Year 2020-21	Increase (Decrease)
Information Systems	\$ 722	\$ 329	\$ (393)
Transportation Equipment	607	355	(253)
Laboratory Equipment	303	264	(39)
Work Equipment	637	1,089	452
Sub-Total	\$ 2,269	\$ 2,036	\$ (233)
Less: Vehicle Salvage Value	(52)	(54)	(2)
Total General Plant *	\$ 2,217	\$ 1,982	\$ (235)

Fiscal Year 2020-21

Funded by User Charges	\$ 1,679	84.71%
Funded by Capital Funds	168	8.45%
Funded by Overallocation Rev	135	6.83%
Total Fiscal Year 2020-21	\$ 1,982	100.00%

Fiscal Year 2019-20

Funded by User Charges	\$ 1,700	76.67%
Funded by Capital Funds	418	18.86%
Funded by Overallocation Rev	99	4.48%
Total Fiscal Year 2019-20	\$ 2,217	100.00%

* The asset listing detail is included in the Capital Budget book. Staff will continue to include a summary that identifies the funding source in the Operating Budget.



(in thousands)

GENERAL PLANT

ANALYSIS BY DEPARTMENT

FY 2019-20

Description	Finance and Administrative Services	Engineering	Recycling and Water Operations	Water Quality and Regulatory Compliance	Water Policy	Maintenance	Total
Information Systems and Technology	\$ 722	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 722
Laboratory Equipment	-	-	-	303	-	-	303
Other General Plant	-	-	-	-	-	-	-
Work Class Equipment	89	-	504	-	4	40	637
Transportation	-	-	304	30	55	219	607
Subtotal	\$ 811	\$ -	\$ 808	\$ 333	\$ 59	\$ 259	\$ 2,269
Less Vehicle Salvage Value	-	-	(52)	-	-	-	(52)
Total Fiscal Year 2019-20	\$ 811	\$ -	\$ 756	\$ 333	\$ 59	\$ 259	\$ 2,217
Total Fiscal Year 2018-19	903	311	1,431	-	-	-	2,645
Increase/(Decrease)	\$ (93)	\$ (311)	\$ (675)	\$ 333	\$ 59	\$ 259	\$ (428)



(in thousands)

GENERAL PLANT

ANALYSIS BY DEPARTMENT FY 2020-21

Description	Finance and Administrative Services	Engineering	Recycling and Water Operations	Water Quality and Regulatory Compliance	Water Policy	Maintenance	Total
Information Systems and Technology	\$ 328	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 328
Laboratory Equipment	-	-	-	264	-	-	264
Other General Plant	-	-	-	-	-	-	-
Work Class Equipment	-	-	1,079	-	-	10	1,089
Transportation	25	49	281	-	-	-	355
Subtotal	\$ 353	\$ 49	\$ 1,360	\$ 264	\$ -	\$ 10	\$ 2,036
Less Vehicle Salvage Value	-	-	(54)	-	-	-	(54)
Total Fiscal Year 2020-21	\$ 353	\$ 49	\$ 1,306	\$ 264	\$ -	\$ 10	\$ 1,982
Total Fiscal Year 2019-20	811	-	756	333	59	259	2,217
Increase/(Decrease)	\$ (458)	\$ 49	\$ 550	\$ (68)	\$ (59)	\$ (249)	\$ (235)



GENERAL PLANT

GENERAL PLANT BUDGET DETAIL FY 2019-20

TASK	Item Description	Quantity	Price	FY 2019-20
Department: INFORMATION SERVICES				
250 8030.250.13	SCADA iPad Tablets	11	\$ 1,182	\$ 13,000
250 8031.250.10	Network Attached SCADA Storage Replacement	1	8,000	8,000
250 8031.250.11	SCADA Server Replacement	1	12,000	12,000
250 8031.250.14	Network Monitoring Software Upgrade/Replacement	1	24,500	24,500
250 8031.250.15	Internet Firewalls Replacement	3	29,667	89,000
250 8031.250.17	SCADA Server Replacement	2	25,000	50,000
250 8031.250.6	Audio Visual Equipment Replacement - Sand Canyon Multipurpose Room	1	27,000	27,000
250 8031.250.7	Wireless Network Equipment Replacement	1	93,000	93,000
250 8031.250.8	Endpoint Protection Software Replacement	1	12,000	12,000
250 8031.250.9	Industrial SCADA PC Replacement MWRP	20	1,250	25,000
250 8036.250.12	Operations Center Data Communications Fiber Cable Replacement	1	92,000	92,000
250 8041.250.1	PC Replacement	75	1,813	136,000
250 8041.250.16	Laptop for Emergency Operations Center (EOC)	10	2,500	25,000
250 8041.250.2	Laptop Replacement	64	1,250	80,000
250 8041.250.3	Laptops for SCADA Development	4	1,250	5,000
250 8041.250.4	Laptops for Water Quality Laboratory	5	2,500	12,500
250 8041.250.5	Laptops for Regulatory Compliance Field Staff	14	1,250	17,500
Sub-Total				\$ 721,500
Department: NTS OPERATIONS				
515 8036.515.12	Solar Powered Water Mixer	1	26,000	26,000
515 8036.515.13	Solar Powered Water Mixer	1	26,000	26,000
515 8036.515.14	Solar Powered Water Mixer	1	26,000	26,000
Sub-Total				\$ 78,000
Department: WATER QUALITY & REGULATORY COMPLIANCE				
600 8031.600.1	Misc. Laboratory Equipment for Unplanned Projects and Regulatory Requirements	1	45,000	45,000
600 8031.600.2	Laboratory Equipment for Biosolids and Energy Recovery Project.	1	25,000	25,000
600 8036.600.1	Laboratory Instrumentation for Future Biosolids and Energy Recovery Project	1	25,000	25,000
600 8036.600.2	Existing Laboratory Equipment Replacement	1	208,000	208,000
Sub-Total				\$ 303,000
Department: WATER RESOURCES AND POLICY				
710 8031.710.1	American Backflow Specialties - Duke Model EZ900, Robinar Hoses, Wilkins Quick Connect System plus other miscellaneous fittings.	1	4,000	4,000
Sub-Total				\$ 4,000



GENERAL PLANT

GENERAL PLANT BUDGET DETAIL FY 2019-20

TASK	Item Description	Quantity	Price	FY 2019-20
Department:	FLEET SERVICES			
870 8036.870.1	11,000 lb. Capacity Propane Forklift	1	\$ 41,000	\$ 41,000
870 8036.870.15	Utility Trailer and Hose Bridges	1	52,500	52,500
870 8036.870.2	8,000 lb. Capacity Propane Forklift	1	48,000	48,000
870 8036.870.3	Utility Cart	1	13,000	13,000
870 8036.870.4	Utility Cart	1	13,000	13,000
870 8036.870.5	Brake Lathe	1	14,000	14,000
870 8037.870.6	1,500 Gallon Truck Mounted Sewer Jetter	1	374,000	374,000
870 8037.870.7	Medium Duty Pickup Truck Mounted Aerial Lift	1	109,000	109,000
870 8051.870.10	Medium Duty Pickup Truck (Chassis Cab)	1	26,500	26,500
870 8055.870.11	Light Duty Pickup Truck 4x4	1	29,500	29,500
870 8055.870.16	Cargo Utility Van	1	42,500	42,500
870 8055.870.17	Medium Pickup Truck w/Utility Bed and Crane	1	67,500	67,500
870 8055.870.18	Medium Duty Pickup 4X2	1	28,500	28,500
870 8055.870.19	Medium Duty Pickup 4X2	1	28,500	28,500
870 8055.870.20	Medium Duty Pickup 4X2	1	28,500	28,500
870 8055.870.21	Light Duty Sport Utility Vehicle	1	26,500	26,500
870 8055.870.8	Medium Duty Pickup Truck w/Utility Bed, Crane, Compressor, and Generator	1	110,000	110,000
870 8055.870.9	Medium Duty Pickup Truck w/Utility Bed, Crane, Compressor, and Generator	1	110,000	110,000
Sub-Total				<u>\$ 1,162,500</u>
Total General Plant				<u><u>\$ 2,269,000</u></u>

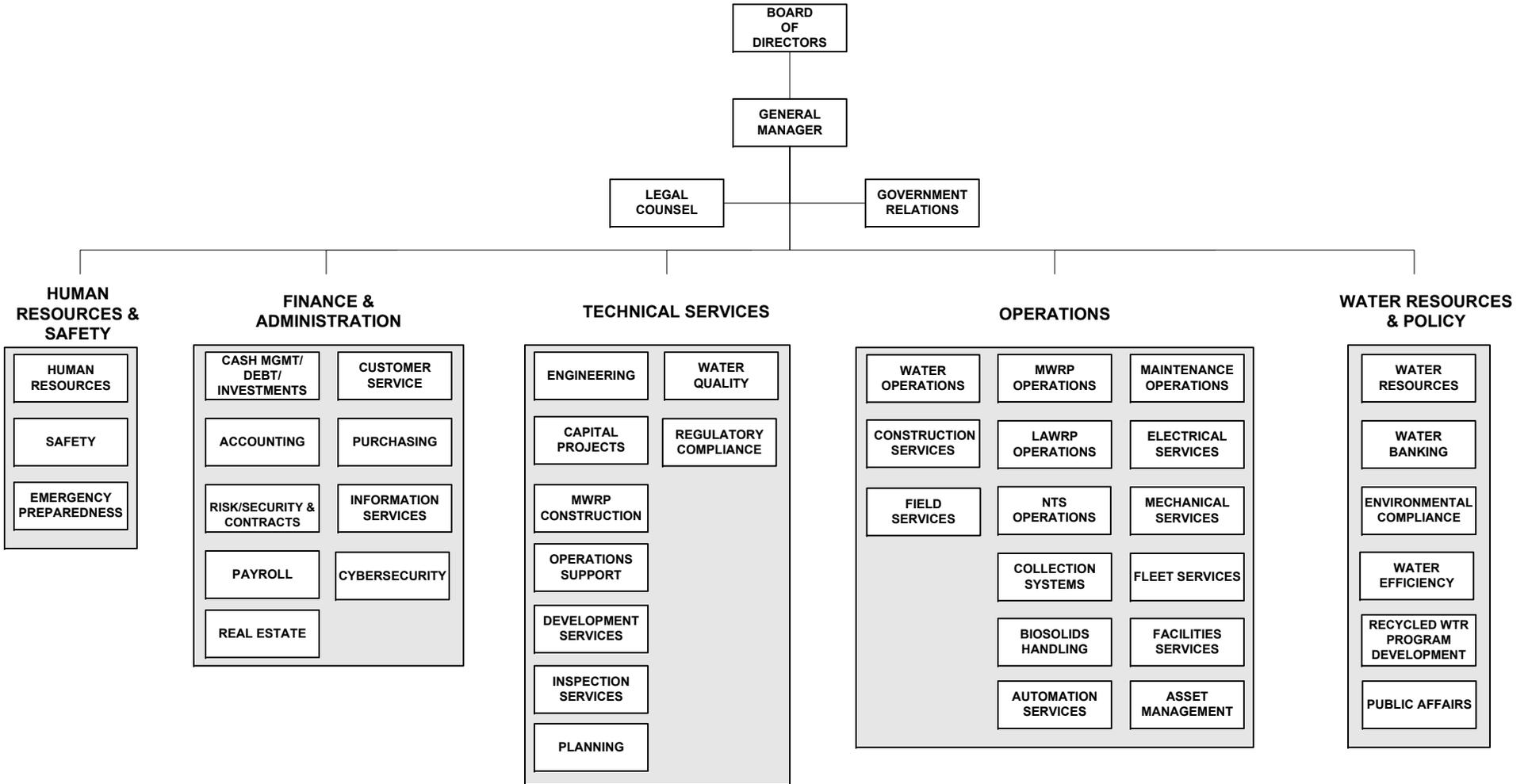


GENERAL PLANT

GENERAL PLANT BUDGET DETAIL FY 2020-21

TASK	Item Description	Quantity	Price	FY 2020-21
Department: INFORMATION SERVICES				
250 8030.250.13	SCADA iPad Tablets	4	\$ 1,250	\$ 5,000
250 8031.250.11	Cyber Security	1	100,000	100,000
250 8041.250.1	PC Replacement	75	1,813	136,000
250 8041.250.2	Laptop Replacement	64	1,250	80,000
250 8041.250.4	Laptops for Water Quality Laboratory	3	2,500	7,500
Sub-Total				\$ 328,500
Department: NTS OPERATIONS				
515 8036.515.24	Solar Powered Water Mixer	1	26,000	26,000
515 8037.515.25	Solar Powered Water Mixer	1	26,000	26,000
515 8038.515.26	Solar Powered Water Mixer	1	26,000	26,000
515 8039.515.27	Solar Powered Water Mixer	1	26,000	26,000
Sub-Total				\$ 104,000
Department: WATER QUALITY & REGULATORY COMPLIANCE				
600 8031.600.1	Misc. Laboratory Equipment for Unplanned Projects and Regulatory Requiremen	1	45,000	45,000
600 8036.600.2	Existing Laboratory Equipment Replacement	1	219,200	219,200
Sub-Total				\$ 264,200
Department: FLEET SERVICES				
870 8036.870.22	Camp Crew Truck	1	110,000	110,000
870 8036.870.23	Camp Crew Truck	1	110,000	110,000
870 8037.870.28	Portable Gantry	1	10,000	10,000
870 8037.870.29	Hydro Excavator	1	530,000	530,000
870 8037.870.30	Combo Sewer Truck	1	445,000	445,000
870 8055.870.10	Hybrid Sedan	1	24,500	24,500
870 8055.870.11	Hybrid Sedan	1	24,500	24,500
870 8055.870.12	Hybrid Sedan	1	24,500	24,500
870 8055.870.31	Light Duty Pickup Truck 4x4	1	29,500	29,500
870 8056.870.32	Medium Duty Pickup 4X4	1	31,500	31,500
Sub-Total				\$ 1,339,500
Total General Plant				\$ 2,036,200

**Irvine Ranch Water District
Organizational Chart
(By Function)**





POSITIONS BY COST CENTER

FOUR YEAR PERSONNEL COMPARISON

Department	Budget		Proposed	
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Administration				
Number of Positions	16.0	16.0	16.0	16.0
% change from prior year	6.7 %	0.0 %	0.0 %	0.0 %
Finance and Administrative Services				
Number of Positions	81.0	84.5	88.0	90.0
% change from prior year	1.3 %	4.3 %	4.1 %	2.3 %
Engineering				
Number of Positions	44.0	44.0	44.0	44.0
% change from prior year	4.8 %	0.0 %	0.0 %	0.0 %
Water Operations				
Number of Positions	77.0	82.0	80.0	81.0
% change from prior year	5.5 %	6.5 %	(2.4) %	1.3 %
Recycling Operations				
Number of Positions	55.0	56.0	59.0	60.0
% change from prior year	10.0 %	1.8 %	5.4 %	1.7 %
Water Quality and Regulatory Compliance				
Number of Positions *	28.0	29.0	29.0	31.0
% change from prior year	0.0 %	0.0 %	0.0 %	6.9 %
Water Policy				
Number of Positions *	29.0	31.5	35.0	35.0
% change from prior year	2.8 %	6.8 %	11.1 %	0.0 %
Maintenance				
Number of Positions	48.0	52.0	53.0	53.0
% change from prior year	(7.7) %	8.3 %	1.9 %	0.0 %
Total Number of Positions	378.0	395.0	404.0	410.0
Number of Changed Positions	10.0	16.0	9.0	6.0
% Change From Prior Year	2.7 %	4.2 %	2.3 %	1.5 %

* Prior years restated to reflect organizational changes



Salaries and Wages

SUMMARY OF SALARIES AND WAGES

FY 2019-20

(in thousands)

	Total	Administration	Finance and Administrative Services	Engineering	Water Operations	Recycling Operations	Water Quality and Regulatory Compliance	Water Policy	Maintenance
Current Authorized:									
Gross Pay	\$34,247	\$1,732	\$7,207	\$4,607	\$6,188	\$4,476	\$2,613	\$3,218	\$4,205
Annual Increase	1,512	97	343	282	308	349	117	17	238
Sub-Total Regular Salaries & Wages	\$35,997	\$1,829	\$7,550	\$4,889	\$6,496	\$4,824	\$2,730	\$3,235	\$4,443
New Positions:									
Gross Pay	684	0	194	0	62	0	79	260	89
Total Regular Salaries & Wages	\$36,681	\$1,829	\$7,744	\$4,889	\$6,558	\$4,824	\$2,809	\$3,494	\$4,532
Insurance and Benefits	9,089	453	1,919	1,212	1,625	1,195	696	866	1,123
Employment Tax & PERS Contributions	11,135	555	2,351	1,484	1,991	1,465	853	1,061	1,376
Total Regular Salaries & Wages, health Insurance and employment taxes	\$56,905	\$2,838	\$12,014	\$7,585	\$10,173	\$7,484	\$4,358	\$5,421	\$7,031
Employee Count:	404	16	88	44	80	59	29	35	53



Salaries and Wages

SUMMARY OF SALARIES AND WAGES

FY 2020-21

(in thousands)	<div style="display: flex; justify-content: space-between; font-size: small;"> Finance and Administrative Services Engineering Water Operations Recycling Operations Water Quality and Regulatory Compliance Water Policy Maintenance </div>								
	Total	Administration	Services	Engineering	Water Operations	Recycling Operations	Water Quality and Regulatory Compliance	Water Policy	Maintenance
Current Authorized:									
Gross Pay	\$36,681	\$1,829	\$7,744	\$4,889	\$6,558	\$4,824	\$2,809	\$3,494	\$4,532
Annual Increase	1,491	82	317	204	362	200	187	139	181
Sub-Total Regular Salaries & Wages	\$38,353	\$1,911	\$8,061	\$5,093	\$6,920	\$5,024	\$2,997	\$3,634	\$4,714
New Positions:									
Gross Pay	288	0	110	0	28	71	79	0	0
Total Regular Salaries & Wages	\$38,641	\$1,911	\$8,171	\$5,093	\$6,948	\$5,095	\$3,076	\$3,634	\$4,714
Insurance and Benefits	9,866	488	2,086	1,300	1,774	1,301	785	928	1,204
Employment Tax & PERS Contributions	11,727	580	2,480	1,546	2,109	1,546	933	1,103	1,431
Total Regular Salaries & Wages, health Insurance and employment taxes	\$60,234	\$2,979	\$12,737	\$7,939	\$10,831	\$7,942	\$4,795	\$5,664	\$7,348
Employee Count:	410	16	90	44	81	60	31	35	53



BENEFITS AND EMPLOYMENT TAX

HEALTH INSURANCE AND EMPLOYER CONTRIBUTIONS FY 2019-20

(in thousands)

	<u>FY 2018-19</u>	<u>FY 2019-20</u>	<u>Change</u>
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>



BENEFITS AND EMPLOYMENT TAX

HEALTH INSURANCE AND EMPLOYER CONTRIBUTIONS FY 2020-21

(in thousands)

	<u>FY 2019-20</u>	<u>FY 2020-21</u>	<u>Change</u>
Insurance and Benefits			
Health Ins Actives	\$ 5,889	\$ 6,478	\$ 589
Dental Premiums	464	488	24
Wrkrs Comp Premiums	727	763	36
Wrkrs Comp Paid Claims	735	772	37
Life Ins Actives	174	174	0
LT Disability Premiums	155	155	0
Medical Premiums - Retirees	170	177	7
Vision Benefit Premiums	85	85	0
RHCAP Payments - OPEB	496	575	79
Life Ins Retirees	13	13	(0)
Other	182	187	5
	<u>\$ 9,089</u>	<u>\$ 9,866</u>	<u>\$ 777</u>
Employment Tax and PERS			
PERS Employer Portion	\$ 7,897	\$ 8,319	\$ 422
PERS In Excess Of ARC	1,372	1,909	537
401A Employer Match Portion	924	973	49
401A Employer Direct Portion	367	387	20
Medicare Tax	525	553	28
St Unemployment Tax	50	50	0
	<u>\$ 11,135</u>	<u>\$ 12,191</u>	<u>\$ 1,056</u>
Total Insurance, Benefits, and Taxes	<u>\$ 20,224</u>	<u>\$ 22,057</u>	<u>\$ 1,833</u>

**FY 2019/20 Budget
Summary of Proposed Budgeted Personnel Changes**

Proposed Changes to Existing Budgeted Positions						
Dept	Job Title	Current Sal Grade	Proposed Action	Proposed Job Title	Proposed Sal Grade	Salary Costs
110	Office Specialist	15.N	Reclass 1 Position	Sr. Office Specialist	19.N	\$5,676
220	Customer Service Specialist II	17.N	Reclass 1 Position	Customer Service Specialist III	21.N	\$6,576
220	Customer Service Specialist I	13.N	Reclass 1 Position	Customer Service Specialist II	17.N	\$5,448
300	Elect./Instrum. Designer	34.N	Reclass 1 Position	Associate Engineer	U14.E	\$7,368
300	Energy Analyst	U12.E	Reclass 1 Position	Associate Engineer	U14.E	\$6,816
300	Principal Engineer	U23.E	Upgrade 5 Positions	Engineering Manager	U24.E	\$24,180
300	Exec. Director of Eng. & Water Qlty.	U30.E	Title Change Only	Executive Director of Technical Services	U30.E	\$0
600	Laboratory Analyst	16.N	Reclass 1 Position	Scientist	28.N	\$22,512
650	Regulatory Compliance Analyst	U10.E	Reclass 1 Position	Regulatory Compliance Administrator	U12.E	\$6,384
750	Water Efficiency Analyst	31.N	Reclass 1 Position	Sr. Water Efficiency Analyst	U12.E	\$8,304
750	Water Efficiency Field Technician	16.N	Reclass 1 Position	Water Loss Prevention Specialist	24.N	\$13,800
750	Sr. Water Efficiency Field Tech	21.N	Reclass 1 Position	Sr. Water Loss Prevention Specialist	27.N	\$12,324
710	Cross Connection Specialist	24.N	Upgrade 3 Positions	Cross Connection Specialist	26.N	\$12,708
710	Cross Connection Supervisor	S31.N	Upgrade 1 Position	Cross Connection Supervisor	S33.N	\$4,944
Subtotal						\$137,040

Proposed New Positions				
Dept	Job Title	Sal Grade	Salary Costs	Number of Positions
210	Accountant	27.N	\$77,088	1
210	Risk Assistant	22.N	\$66,696	1
240	Material Control Clerk I	11.N	\$50,220	1
425	Water Maintenance Technician II	22.N	\$33,348	0.5
425	Metering Systems Technician I	16.N	\$28,434	0.5
550	Operator III	27.N	\$154,176	2
530	Sr. SCADA Network Administrator	U15.E	\$105,336	1
830	Asset Management Coordinator	32.N	\$89,196	1
Subtotal			\$604,494	8
Total			\$741,534	



LABOR

LABOR CHANGES

FY 2019/20

**Personnel Budget Changes Reflected in the
FY 2019/20 Operating Budget**

Title and Salary Grade Changes for Existing Positions/Job Titles

General Manager (110):

Office Specialist (Salary Grade 15.N) to Senior Office Assistant (Salary Grade 19.N)
This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Customer Service (220):

Customer Service Specialist II (Salary Grade 17.N) to Customer Service Specialist III (Salary Grade 21.N)

This position reclassification is being requested to meet the needs of the department.

Customer Service Specialist I (Salary Grade 13.N) to Customer Service Specialist II (Salary Grade 17.N)

This position reclassification is being requested to meet the needs of the department.

Engineering (300):

Electrical/Instrumentation Designer (Salary Grade 34.N) to Associate Engineer (Salary Grade U14.E)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Energy Analyst (Salary Grade U12.E) to Associate Engineer (Salary Grade U14.E)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Principal Engineer (Salary Grade U23.E) to Engineering Manager (Salary Grade U24.E)
– 5 positions

This title and salary upgrade is being requested to more properly reflect the specific duties and responsibilities of the position.

Executive Director of Engineering & Water Quality (Salary Grade U30.E) to Executive Director of Technical Services (Salary Grade U30.E)

This title change is being requested to more properly reflect the new duties and responsibilities of the position.



LABOR

LABOR CHANGES FY 2019/20

Water Quality & Regulatory Compliance (600)

Laboratory Analyst (Salary Grade 16.N) to Scientist (Salary Grade 28.N)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Regulatory Compliance Analyst (Salary Grade U10.E) to Regulatory Compliance Administrator (Salary Grade U12.E) – 1 position

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Water Policy (700)

Water Efficiency Analyst (Salary Grade 31.N) to Sr. Water Efficiency Analyst (Salary Grade U12.E)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Water Efficiency Field Technician (Salary Grade 16.N) to Water Loss Prevention Specialist (Salary Grade 24.N)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Sr. Water Efficiency Field Technician (Salary Grade 21.N) to Sr. Water Loss Prevention Specialist (Salary Grade 27.N)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Cross Connection Specialist (Salary Grade 24.N to Salary Grade 26.N) – 3 positions

This salary upgrade is being requested to more properly reflect the specific duties and responsibilities of the position.

Cross Connection Supervisor (Salary Grade S31.N to Salary Grade S33.N) – 1 position

This salary upgrade is being requested to more properly reflect the specific duties and responsibilities of the position.



LABOR

LABOR CHANGES *FY 2019/20*

New Positions

Finance (210):

Accountant (Salary Grade 27.N) – 1 position

This position is to serve as back up to payroll and payroll accounting functions.

Risk Assistant (Salary Grade 22.N) – 1 position

This position is to assist with new security responsibilities in Risk Management.

Material Control Clerk I (Salary Grade 11.N) – 1 position

This position is due to increased workload and to reduce temporary labor.

Field Services (425):

Water Maintenance Technician II (Salary Grade 22.N) – 1 position, effective 1/1/20

This position is required due to the increased workload and to reduce temporary labor.

Metering Systems Technician I (Salary Grade 16.N) – 1 position, effective 1/1/20

This position is required due to the increased workload and to reduce temporary labor.

Automation (530):

Sr. SCADA Network Administrator (Salary Grade U15.E) – 1 position

This new position is required to assist with the growing complexity of SCADA.

MWRP Operations (550):

Operator III (Salary Grade 27.N) – 2 positions

These positions are required to assist with the increased workload due to Biolsolids.

Asset Systems (830):

Asset Management Coordinator (Salary Grade 32.N) – 1 position

This position is required to assist with the increased workload and complexity of Maximo.

**FY 2020/21 Budget
Summary of Proposed Budgeted Personnel Changes**

Proposed Changes to Existing Budgeted Positions						
Dept	Job Title	Current Sal Grade	Proposed Action	Proposed Job Title	Proposed Sal Grade	Salary Costs
210	Sr. Accounting Clerk	20.N	Reclass 1 Position	Accountant	27.N	\$14,184
210	Accountant	27.N	Reclass 1 Position	Sr. Accountant	U11.E	\$14,568
Subtotal						<u>\$28,752</u>

Proposed New Positions				
Dept	Job Title	Sal Grade	Salary Costs	Number of Positions
220	Customer Service Specialist I	13.N	\$52,740	1
220	Customer Service Field Technician	16.N	\$56,868	1
425	Metering Systems Technician I	16.N	\$28,434	0.5
515	Wetlands Specialist	24.N	\$70,668	1
650	Regulatory Compliance Administrator	U12.E	\$94,956	1
600	Scientist	28.N	\$79,380	1
Subtotal			<u>\$383,046</u>	<u>5.5</u>
Total			<u>\$411,798</u>	



LABOR

LABOR CHANGES

FY 2020/21

Personnel Budget Changes Reflected in the FY 2020/21 Operating Budget

Title and Salary Grade Changes for Existing Positions/Job Titles

Finance (210):

Sr. Accounting Clerk (Salary Grade 20.N) to Accountant (Salary Grade 27.N)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

Accountant (Salary Grade 27.N) to Sr. Accountant (Salary Grade U11.E)

This position reclassification is being requested to more properly reflect the specific duties and responsibilities of the position.

New Positions

Customer Service (220):

Customer Service Specialist I (Salary Grade 13.N) – 1 position

This position is required due to increased workload and to reduce temporary labor.

Customer Service Field Technician (Salary Grade 16.N) – 1 position

This position is required due to increased workload and to reduce temporary labor.

Water Quality & Regulatory Compliance (600):

Scientist (Salary Grade 28.N) – 1 position

This position is required due to the increased workload and to reduce temporary labor.

Regulatory Compliance Administrator (Salary Grade U12.E) – 1 position

This position is required due to the increased workload.

Field Services (425):

Metering Systems Technician I (Salary Grade 16.N) – 1 position, effective 1/1/21

This position is required due to the increased workload and to reduce temporary labor.

NTS Operations (515):

Wetlands Specialist (Salary Grade 24.N) – 1 position

This position is required to assist with the increased workload due to additional basins.



Irvine Ranch Water District Notice of Proposed Water and Sewer Rate Change

The Irvine Ranch Water District (IRWD) is a public agency that provides water and sewer service. Our rates are based on the actual cost to provide water and sewer service to our customers and are developed during the budget process. **The proposed rates for FY 2019-20 and FY 2020-21 are expected to increase the average residential bill by 2.6% in each fiscal year (FY).** See below for how the rates are calculated. A critical IRWD business objective is to keep costs, and therefore rates, as low as possible for our customers. When compared with other agencies providing similar services in Orange County, IRWD's rates are consistently among the lowest.

Two-Year Budget Cycle

New this year is the kickoff of a two-year (biennial) budget cycle which will result in the adoption of rates for FY 2019-20 and FY 2020-21. The adoption of a two-year budget is intended to improve IRWD's long term planning, enhance funding stability and to create greater efficiency in the budgeting process. The proposed rates will become effective on July 1, 2019 and July 1, 2020, respectively.

Understanding Basic Components of Your Residential Water Bill

- **Water Usage Charges:** Variable costs – for the amount of water you use both inside and outside the home each month. They are based on the cost of local and imported water and other costs of providing service that vary based on usage.
- **Service Charges:** Fixed costs – to recover the fixed expenses of operating and maintaining IRWD's infrastructure. There are separate service charges for water and sewer service. These monthly fixed costs fluctuate depending on the number of days in a billing cycle.

Variable Water Usage Charge

To encourage wise water use, each residence is assigned a monthly water usage budget. How much you pay for each 100 cubic feet of water (ccf) depends on whether you stay within your budget. Rates are broken into four tiers. Each tier is assigned a rate based on the actual cost of service. Cost of service includes both the cost of water based on the source of water and other variable costs as detailed below. For example, ground water from local wells is the least expensive, while imported water from out of state or Northern California costs the most. The low volume and base rate tiers are for customers who use water within their budget, which reduces the need to import expensive water. District wide conservation provides education programs. Cost associated with targeted conservation, urban runoff, and water banking are paid for by customers in the inefficient and wasteful tiers. The District would not need these programs if all customers remained within budget.

Proposed Variable Water Rates per ccf for FY 2019-20

Service	Low Volume Tier	Base Tier	Inefficient Tier	Wasteful Tier
Total Water Source Cost	\$1.47	\$1.97	\$3.06	\$3.17
District Wide Conservation		\$0.03	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Urban Runoff Costs and Water Banking Costs			\$1.77	\$10.43
Total Cost Per Tier Proposed FY 2019-20	\$1.47	\$2.00	\$4.86	\$13.63
FY 2018-19 Rates by Tier	\$1.40	\$1.89	\$4.73	\$13.35
Change	\$0.07	\$0.11	\$0.13	\$0.28

Proposed Variable Water Rates per ccf for FY 2020-21

Service	Low Volume Tier	Base Tier	Inefficient Tier	Wasteful Tier
Total Water Source Cost	\$1.54	\$2.09	\$3.18	\$3.18
District Wide Conservation		\$0.03	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Natural Treatment System Costs and Water Banking Costs			\$1.70	\$10.44
Total Cost Per Tier Proposed FY 2020-21	\$1.54	\$2.12	\$4.91	\$13.65
FY 2019-20 Rates by Tier	\$1.47	\$2.00	\$4.86	\$13.63
Change	\$0.07	\$0.12	\$0.05	\$0.02



Why Did the Cost of Water Service Increase?

The main reasons for the change include uncontrollable costs attributed to:

- Pass through charges from the Orange County Water District (OCWD) for pumping local groundwater (5.0% increase each year) which is the lowest cost of water.
- Pass through charges from the Metropolitan Water District (MWD) for imported water purchased through the regional wholesaler, the Municipal Water District of Orange County (MWDOC) (3.0% increase each year).
- Pass through charges from Southern California Edison (SCE) for electricity (4.5% increase) in FY 2020-21.

Summary of Proposed Residential Variable Water Rates for FY 2019-20 and FY 2020-21

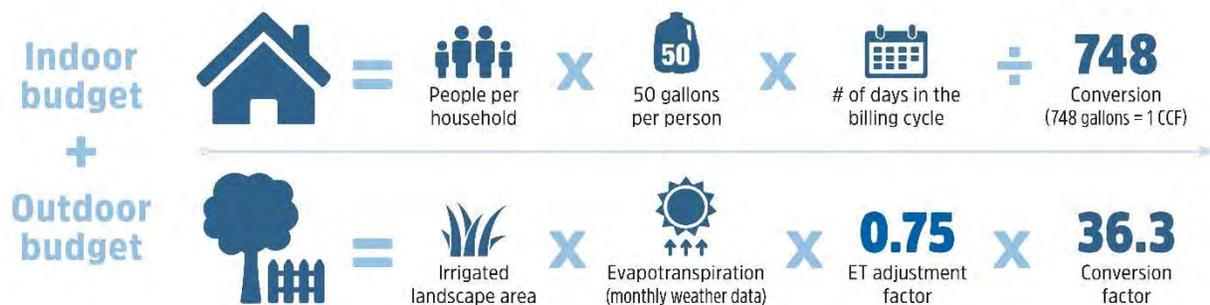
Tier	% of Monthly Water Budget for Single Family / Condo	% of Monthly Water Budget Multi- Family	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rates per ccf Effective July 1, 2020
Low Volume	0-40%	0-50%	\$1.40	\$1.47	\$1.54
Base Rate	41-100%	51-100%	\$1.89	\$2.00	\$2.12
Inefficient	101-140%	101-120%	\$4.73	\$4.86	\$4.91
Wasteful	141%+	121%+	\$13.35	\$13.63	\$13.65

How your Water Budget is Calculated

Your monthly household water usage budget is the sum of your **indoor + outdoor budgets**. Together they represent an efficient volume of water to meet your individualized water needs.

- **Indoor Water Budget:** 50 gallons per person per day (divided by 748, to convert gallons to ccf). For single-family homes, we assume a default of four people per household.
- **Outdoor Water Budget:** is calculated for your property using actual data from local weather stations. We calculate your irrigated landscape area x evapotranspiration x 0.75 ET adjustment factor x 36.3 conversion factor to convert cubic inches to ccf.

- ✓ **CCF** is the basic measurement of water use. One ccf equals 100 cubic feet of water – about 748 gallons.
- ✓ **Evapotranspiration or ET** is a measure of actual daily plant water loss in inches.
- ✓ **ET Adjustment Factor** accounts for the fact that at least 40% of your landscape is drought-tolerant and provide 20% additional water to account for inefficiency in your irrigation system.



Water & Sewer Fixed Service Charges

In addition to the water usage charges that you control, your bill contains fixed charges for water service and sewer service. Water service charges are based on the size of the meter required to provide water flow to your property. These charges are assessed whether or not you use water that month and may increase or decrease based on the number of days in the billing period. Monthly service charges are fixed charges which cover IRWD's cost of operations, maintenance and infrastructure and do not change based on the amount of a customer's monthly water or sewer use. Monthly service charges are based on a 30 day calendar month so billing cycles which are longer or shorter than 30 days are billed based on the proportional number of days. The fixed charge includes an amount set aside for the future inevitable repair and replacement of infrastructure such as pipes, pumping stations and treatment facilities. This way, the District can avoid significant one time rate spikes when the repairs and replacements are made. These charges are not used to pay for facilities that extend service to new development.



Irvine Ranch Water District Notice of Proposed Water and Sewer Rate Change

Water Fixed Service Charges

The fixed monthly water service charges for the average residential customer are used to pay for operations and maintenance costs, including inevitable infrastructure enhancements and replacements. The charge is based on the size of your meter.

Proposed Water Service Fixed Monthly Charges for System Operation and Maintenance

Residential meter size homes, condos, apartments	Current Meter Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020 -21 Rates Effective July 1, 2020
5/8" x 3/4"	\$10.35	\$10.35	\$10.40
3/4" disc meter	\$15.55	\$15.55	\$15.65
1" disc meter	\$25.90	\$25.90	\$26.05
1-1/2" disc meter	\$51.75	\$51.75	\$52.00
2" disc meter	\$82.80	\$82.80	\$83.20
2" turbo meter	\$108.70	\$108.70	\$109.25
3" turbo meter	\$248.40	\$248.40	\$249.65
4" turbo meter	\$517.50	\$517.50	\$520.10
6" turbo meter	\$1,035.05	\$1,035.05	\$1,040.25
8" turbo meter	\$1,811.35	\$1,811.35	\$1,820.40
6" Omni F2 meter	\$1,447.50	\$1,447.50	\$1,454.75
8" Omni F2 meter	\$2,574.15	\$2,574.15	\$2,587.00
Residential master meter (shared) apartments and condominiums 5/8" x 3/4" meter	\$10.35	\$10.35	\$10.40

The current amount for your meter size appears on your bill. Customers that remain in the low volume tier for most of the year will have a larger percentage of their bill made up of the fixed charge. Customers that remain in the low volume tier for 9 out of 12 months of the prior calendar year will receive a \$2.00 credit per month which will be itemized on each bill. New customers do not receive this credit unless they have been with the District for a full calendar year.

Sewer Fixed Service Charges

The proposed fixed monthly sewer service charges for the average residential customer are used to pay for operations and maintenance costs including inevitable infrastructure enhancements and replacements. The tiered sewer service fixed charge is based on the 3 months with the lowest potable water usage from the prior calendar year. New customers are billed at the highest tier until they have established a full calendar year of usage history.

Proposed Changes to Fixed Monthly Charges for System Operation and Maintenance

Usage	Current Monthly Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020 -21 Rates Effective July 1, 2020
Average water usage exceeds 10 ccfs per month	\$25.75	\$26.10	\$26.35
Average water usage falls between 5 and 10 ccfs	\$23.20	\$23.50	\$23.70
Average water usage falls below 5 ccfs	\$19.30	\$19.55	\$19.75

Proposed Changes for Areas Receiving Collection or Treatment Only

Usage	Current Monthly Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020 -21 Rates Effective July 1, 2020
Service Charge - Collection Only	\$8.40	\$8.50	\$8.60
Service Charge - Treatment Only	\$14.80	\$15.00	\$15.15

Pumping Surcharges

A pumping surcharge will be added to the commodity rate for those customers who reside at higher elevations and cause the District to incur additional pumping costs to supply their water. The surcharge is based on the actual prevailing energy costs and varies depending upon the elevation of the area served. If you live in an area affected by a pumping surcharge, the charge is itemized on your monthly bill. Please visit the IRWD website at <https://www.irwd.com/services/proposed-rates> to see charges by zone.



Irvine Ranch Water District Notice of Proposed Water and Sewer Rate Change

Proposed Changes to Pumping Surcharges, Set-up and Reconnection Fees

Component	Current Rates	FY 2019–20 Effective July 1, 2020	FY 2020–21 Effective July 1, 2020
Pumping Surcharges by Zone	\$0.21 to \$0.65/ccf	\$0.25 to \$0.68/ccf	\$0.30 to \$0.72/ccf
One-time Setup Fee for New Accounts	\$25.00	\$25.00	\$25.00
Shutoff Reconnection Fees	\$70.00 - \$95.00	\$50.00 - \$95.00	\$50.00 - \$95.00

Monthly Water Budgets, Rate Calculator & Sample Bills Available on IRWD.com

To find out more information on the rate tiers, the types of usage that determine the monthly water budget, how the monthly water budget is calculated and to use the IRWD budget based rate calculator, please visit the IRWD website at <https://www.irwd.com/services/proposed-rates>. The calculator shows how staying within your monthly water budget or exceeding it will affect your monthly bill. Sample bills are also provided as well as technical water budget formulas. Free internet access is available Monday – Friday from 8am to 5pm in the IRWD lobby at 15600 Sand Canyon Avenue, Irvine, CA.

Automatic Pass-Through Adjustments

IRWD used its best available information to calculate proposed increases in the cost of imported water IRWD purchases from MWD through MWDOC, the replenishment charges paid to OCWD for pumping groundwater, and the cost for regional treatment of sewage paid to the Orange County Sanitation District (OCSD). IRWD has no control over the amounts set by regional agencies (MWD, MWDOC, OCWD, OCSD, SCE, etc.) or taxes and fees assessed by the state, and must pass those costs through to IRWD customers. Should any of the Regional Agencies or California adopt an additional increase (or decrease) in its charges, taxes, or fees ("Pass-Through Amount"), IRWD may automatically recalculate its rates to include the Pass-Through Amount. If this occurs, the automatic IRWD rate adjustment will not require a public hearing or any additional action by the IRWD Board of Directors. At least 30 days before the effective date of the adjustment, IRWD will provide its customers with the expected adjustment(s), which will generally be calculated as the total projected cost increase divided by the projected annual water consumption or annual total sewage flow as appropriate. This calculation will vary as necessary to reflect IRWD's different service areas and service classes.

Public Hearing

Any customer or property owner within the IRWD service area may file a written protest for the proposed rate increases with IRWD by sending a letter to IRWD, P.O. Box 5149, Irvine, CA 92616. A valid protest letter must include your name, the address at which you receive service from IRWD, a statement of protest and your original signature. Protest letters received by June 24 will be tabulated and presented to the Board of Directors at a public hearing regarding the rate increase to be held on June 24, 2019 at 5pm in the IRWD Board Room, 15600 Sand Canyon Ave., Irvine, CA. Any customer or property owner may appear at the hearing to make comments regarding the proposed rates. Letters may be delivered in person at the hearing, and must be received prior to the conclusion of the June 24 public hearing.

Additional Information

For more information on IRWD's water efficiency programs, rebates and tips on how you can conserve, visit www.irwd.com. If you have any additional questions, please contact IRWD Customer Service at **949-453-5300**.



The Irvine Ranch Water District (IRWD) is a public agency that provides water and sewer service. Our rates are based on the actual cost to provide water and sewer service to our customers and are developed during the budget process. A critical IRWD business objective is to keep costs, and therefore rates, as low as possible for our customers. When compared with other agencies providing similar services in Orange County, IRWD's rates are consistently among the lowest.

Two-Year Budget Cycle

New this year is the kickoff of a two-year (biennial) budget cycle which will result in the adoption of rates for Fiscal Year (FY) 2019-20 and FY 2020-21. The adoption of a two-year budget is intended to improve IRWD's long term planning, enhance funding stability and create greater efficiency in the budgeting process. The proposed rates will become effective on July 1, 2019 and July 1, 2020, respectively.

Understanding Basic Components of Your Water Bill

- **Water Usage Charges:** Variable costs – for the amount of water you use both inside and outside your business each month. They are based on the cost of local and imported water and other costs of providing service that vary based on usage.
- **Service Charges:** Fixed costs – to recover the fixed expenses of operating and maintaining IRWD's infrastructure. There are separate service charges for water and sewer service. These monthly fixed costs fluctuate depending on the number of days in a billing cycle.

Variable Water Usage Charge

To encourage wise water use, each customer is assigned a monthly water usage budget. How much you pay for each 100 cubic feet of water (ccf) depends on whether you stay within your budget. Rates are broken into two tiers. Each tier is assigned a rate based on the actual cost of service. Cost of service includes both the cost of water based on the source of water and other variable costs as detailed below. For example, ground water from local wells is the least expensive, while imported water from out of state or Northern California costs the most. The base rate tier is for customers who use water within their budget, which reduces the need to import expensive water. District wide conservation provides education programs. Cost associated with targeted conservation, urban runoff, and water banking are paid for by customers in the wasteful tier. The District would not need these programs if all customers remained within budget.

Proposed Variable Water Rates per ccf for FY 2019-20		
Service	Base Tier	Wasteful Tier
Total Water Source Cost	\$1.97	\$3.17
District Wide Conservation	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Urban Runoff Costs and Water Banking Costs		\$10.43
Total Cost Per Tier Proposed FY 2019-20	\$2.00	\$13.63
FY 2018-19 Rates by Tier	\$1.89	\$13.35
Change	\$0.11	\$0.28
Proposed Variable Water Rates per ccf for FY 2020-21		
Service	Base Tier	Wasteful Tier
Total Water Source Cost	\$2.09	\$3.21
District Wide Conservation	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Urban Runoff Costs and Water Banking Costs		\$10.41
Total Cost Per Tier Proposed FY 2020-21	\$2.12	\$13.65
FY 2019-20 Rates by Tier	\$2.00	\$13.63
Change	\$0.12	\$0.02



Why Did the Cost of Water Service Increase?

The main reasons for the change include uncontrollable costs attributed to:

- Pass through charges from the Orange County Water District (OCWD) for pumping local groundwater (5.0% increase each year), which is the lowest cost of water.
- Pass through charges from the Metropolitan Water District (MWD) for imported water purchased through the regional wholesaler, the Municipal Water District of Orange County (MWDOC) (3.0% increase each year).
- Pass through charges from Southern California Edison (SCE) for electricity (4.5% increase) in FY 2020-21.

How your Water Budget is Calculated

Your monthly water usage budget represents an efficient volume of water to meet your specific business water use needs and uses. Business specific water budget and tiered pricing provide an economic incentive to encourage efficient water use.

Variable Water Charges

IRWD is proposing a variable water (commodity) charge increase as shown in the chart below. The Base rate tier is for customers that stay within their monthly water budget. The Wasteful tier is for customers that exceed their monthly water budget.

Proposed Potable Commercial Commodity Rates for FY 2019-20 and FY 2020-21				
Tier	% of Monthly Water Budget	FY 2019-20 Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rates per ccf Effective July 1, 2020
Base Rate	0 -100 %	\$1.89	\$2.00	\$2.12
Wasteful	101+	\$13.35	\$13.63	\$13.65

Proposed Recycled Water Commercial Commodity Rates				
Tier	% of Monthly Water Budget	FY 2017-18 Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-2021 Rates per ccf Effective July 1, 2020
Base Rate	0 -100 %	\$1.07	\$1.19	\$1.25
Wasteful	101+	\$6.44	\$6.62	\$6.97

Water & Sewer Fixed Service Charges

In addition to the water usage charges that you control, your bill contains fixed charges for **water service** and **sewer service**. Water service charges are based on the size of the meter required to provide water flow to your property. These charges are assessed whether or not you use water that month and may increase or decrease based on the number of days in the billing period. Monthly service charges are fixed charges which cover IRWD's cost of operations, maintenance and infrastructure and do not change based on the amount of a customer's monthly water or sewer use. Monthly service charges are based on a 30 day calendar month so billing cycles which are longer or shorter than 30 days are billed based on the proportional number of days. The fixed charge includes an amount set aside for the future inevitable repair and replacement of infrastructure such as pipes, pumping stations and treatment facilities. This way, the District can avoid significant one time rate spikes when the repairs and replacements are made. These charges are not used to pay for facilities that extend service to new development.

Water Fixed Service Charges

The fixed monthly water service charges are used to pay for operations and maintenance costs, including inevitable infrastructure enhancements and replacements. The charge is based on the size of your meter. The proposed fixed monthly charges are presented below. The current charge for your meter size appears on your bill. The baseline fixed charge is calculated on the meter's maximum flow capacity and the demand on the system.



Proposed Fixed Water Service Charges

Meter Type	Current Meter Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020-21 Rates Effective July 1, 2020
5/8" x 3/4" disc	\$10.35	\$10.35	\$10.40
3/4" disc	\$15.55	\$15.55	\$15.65
1" disc	\$25.90	\$25.90	\$26.05
1-1/2" disc	\$51.75	\$51.75	\$52.00
2" disc	\$82.80	\$82.80	\$83.20
2" turbo	\$108.70	\$108.70	\$109.25
3" turbo	\$248.40	\$248.40	\$249.65
4" turbo	\$517.50	\$517.50	\$520.10
6" turbo	\$1,035.05	\$1,035.05	\$1,040.25
8" turbo	\$1,811.35	\$1,811.35	\$1,820.40
10" turbo	\$2,173.60	\$2,173.60	\$2,184.45
2" magnetic	\$160.95	\$160.95	\$161.75
4" magnetic	\$643.30	\$643.30	\$646.50
6" magnetic	\$1,447.50	\$1,447.50	\$1,454.75
8" magnetic	\$2,574.15	\$2,574.15	\$2,587.00
6" propeller	\$698.65	\$698.65	\$702.15
8" propeller	\$931.55	\$931.55	\$936.20
10" propeller	\$1,242.05	\$1,242.05	\$1,248.25
12" or 14" propeller	\$1,746.65	\$1,746.65	\$1,755.40
16", 18" or 20" propeller	\$2,949.90	\$2,949.90	\$2,964.65
4" Omni F2	\$643.30	\$643.30	\$646.50
6" Omni F2	\$1,447.50	\$1,447.50	\$1,454.75
8" Omni F2	\$2,574.15	\$2,574.15	\$2,587.00
10" Omni F2	\$2,949.90	\$2,949.90	\$2,964.65

Sewer Fixed Service Charges

The fixed monthly sewer service charges are used to pay for operations and maintenance costs, including inevitable infrastructure enhancements and replacements. Additional fixed monthly charges for the operation and maintenance of the system are based on the volume of water used and treated in excess of 10 ccf per month. The proposed fixed and variable monthly charges are presented below.

Proposed Changes for Sewer Service Fixed Monthly Charges for System Operation and Maintenance

Monthly Usage	Current Monthly Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020 -21 Rates Effective July 1, 2020
Average water usage <= 10 ccf per month	\$25.75	\$26.10	\$26.35
Quantity Service Charge (beyond 10 ccf)	\$2.74/ccf	\$2.78/ccf	\$2.81/ccf
Industrial Waster Service Charge (if applicable)	\$0.134/ccf	\$0.136/ccf	\$0.137/ccf
OCSD Special Permit Discharge Rate (if applicable)	Up to \$1,433.49 per million gallons	Up to \$1,489.42 per million gallons	Up to \$1,545.35 per million gallons

Proposed Changes for Areas Receiving Collection Service or Treatment Service Only

Monthly Usage	Current Monthly Rates	FY 2019-20 Rates Effective July 1, 2019	FY 2020 -21 Rates Effective July 1, 2020
Collection Service Charge	\$8.40	\$8.50	\$8.60
Treatment Service Charge	\$14.80	\$15.00	\$15.15



Pumping Surcharges

A pumping surcharge will be added to the commodity rate for customers at higher elevations that cause the District to incur additional pumping costs to supply their water. The surcharge is based on the actual prevailing energy costs and varies depending upon the elevation of the area served. If you are in an area affected by a pumping surcharge, the charge is itemized on your monthly bill. Please visit the IRWD website at <https://www.irwd.com/services/proposed-rates> to see charges by zone.

Proposed Changes to Pumping Surcharges, Set-up and Reconnection Fees

Component	Current Rates	FY 2019–20 Effective July 1, 2019	FY 2020 – 21 Effective July 1, 2020
Pumping Surcharges by Zone	\$0.21 to \$0.65/ccf	\$0.13 to \$0.68/ccf	\$0.13 to \$0.72/ccf
One-time Setup Fee for New Accounts	\$25.00	\$25.00	\$25.00
Shutoff Reconnection Fees	\$70.00 - \$95.00	\$50.00 - \$95.00	\$50.00 - \$95.00

Automatic Pass-Through Adjustments

IRWD used its best available information to calculate proposed increases in the cost of imported water IRWD purchases from MWD through MWDOC, the replenishment charges paid to OCWD for pumping groundwater, and the cost for regional treatment of sewage paid to the Orange County Sanitation District (OCSD). IRWD has no control over the amounts set by regional agencies (MWD, MWDOC, OCWD, OCSD, SCE, etc.) or taxes and fees assessed by the state, and must pass those costs through to IRWD customers. Should any of the Regional Agencies or California adopt an additional increase (or decrease) in its charges, taxes, or fees (“Pass-Through Amount”), IRWD may automatically recalculate its rates to include the Pass-Through Amount. If this occurs, the automatic IRWD rate adjustment will not require a public hearing or any additional action by the IRWD Board of Directors. At least 30 days before the effective date of the adjustment, IRWD will provide its customers with the expected adjustment(s), which will generally be calculated as the total projected cost increase divided by the projected annual water consumption or annual total sewage flow as appropriate. This calculation will vary as necessary to reflect IRWD’s different service areas and service classes.

Public Hearing

Any customer or property owner within the IRWD service area may file a written protest for the proposed rate increases with IRWD by sending a letter to IRWD, P.O. Box 5149, Irvine, CA 92616. A valid protest letter must include your name, the address at which you receive service from IRWD, a statement of protest and your original signature. Protest letters received by June 24 will be tabulated and presented to the Board of Directors at a public hearing regarding the rate increase to be held on June 24, 2019 at 5pm in the IRWD Board Room, 15600 Sand Canyon Ave., Irvine, CA. Any customer or property owner may appear at the hearing to make comments regarding the proposed rates. Letters may be delivered in person at the hearing, and must be received prior to the conclusion of the June 24 public hearing.

Additional Information

For more information on IRWD’s water efficiency programs, rebates and tips on how you can conserve, visit www.irwd.com. If you have any additional questions, please contact IRWD Customer Service at **949-453-5300**.



The Irvine Ranch Water District (IRWD) is a public agency that provides water and sewer service. Our rates are based on the actual cost to provide water and sewer service to our customers and are developed during the budget process. See below for how the rates are calculated. A critical IRWD business objective is to keep costs, and therefore rates, as low as possible for our customers. When compared with other agencies providing similar services in Orange County, IRWD's rates are consistently among the lowest.

Two-Year Budget Cycle

New this year is the kickoff of a two-year (biennial) budget cycle which will result in the adoption of rates for Fiscal Year 2019-20 and FY 2020-21. The adoption of a two-year budget is intended to improve IRWD's long term planning, enhance funding stability and to create greater efficiency in the budgeting process. The proposed rates will become effective on July 1, 2019 and July 1, 2020, respectively.

Understanding Basic Components of Your Water Bill

- **Water Usage Charges:** Variable costs – for the amount of water you use outside. They are based on the cost of local and imported water and other costs of providing service that vary based on usage.
- **Service Charges:** Fixed costs – to recover the fixed expenses of operating and maintaining IRWD's infrastructure. There are separate service charges for water. These monthly fixed costs fluctuate depending on the number of days in a billing cycle.

Landscape / Non Agricultural Customers

Variable Water Usage Charge

To encourage wise water use, each customer is assigned a monthly water usage budget. How much you pay for each 100 cubic feet of water (ccf) depends on whether you stay within your budget. Rates are broken into four tiers. Each tier is assigned a rate based on the actual cost of service, which varies according to the water source. For example, ground water from local wells is the least expensive, while imported water from out of state or Northern California costs the most. The low volume and base rate tiers are for customers who use water within their budget, which reduces the need to import expensive water. District wide conservation provides education programs. Cost associated with targeted conservation, urban runoff, and water banking are paid for by customers in the inefficient and wasteful tiers. The District would not need these programs if all customers remained within budget.

Proposed Potable Variable Water Rates per ccf for FY 2019-20

Service	Low Volume Tier	Base Tier	Inefficient Tier	Wasteful Tier
Total Water Source Cost	\$1.47	\$1.97	\$3.06	\$3.17
District Wide Conservation		\$0.03	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Urban Runoff Costs and Water Banking Costs			\$1.77	\$10.43
Total Cost Per Tier Proposed FY 2019-20	\$1.47	\$2.00	\$4.86	\$13.63
FY 2018-19 Rates by Tier	\$1.40	\$1.89	\$4.73	\$13.35
Change	\$0.07	\$0.11	\$0.13	\$0.28

Proposed Potable Variable Water Rates per ccf for FY 2020-21

Service	Low Volume Tier	Base Tier	Inefficient Tier	Wasteful Tier
Total Water Source Cost	\$1.54	\$2.09	\$3.18	\$3.18
District Wide Conservation		\$0.03	\$0.03	\$0.03
Conservation Targeted to Over Budget Customers, Natural Treatment System Costs and Water Banking Costs			\$1.70	\$10.44
Total Cost Per Tier Proposed FY 2020-21	\$1.54	\$2.12	\$4.91	\$13.65
FY 2019-20 Rates by Tier	\$1.47	\$2.00	\$4.86	\$13.63
Change	\$0.07	\$0.12	\$0.05	\$0.02



Proposed Potable Non Agricultural / Landscape Variable Water Rates

Tier	% of Monthly Water Budget	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Low Volume	0-40%	\$1.40	\$1.47	\$1.54
Base Rate	41-100%	\$1.89	\$2.00	\$2.12
Inefficient	101-160%	\$4.73	\$4.86	\$4.91
Wasteful	161%+	\$13.35	\$13.63	\$13.65

Proposed Non-Potable & Recycled Non Agricultural / Landscape Variable Water Rates

Tier	% of Monthly Water Budget	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Low Volume	0-40%	\$1.13	\$1.19	\$1.25
Base Rate	41-100%	\$1.47	\$1.57	\$1.72
Inefficient	101-140%	\$3.11	\$3.15	\$3.28
Wasteful	141%+	\$6.44	\$6.62	\$6.97

Water Budgets for Potable Landscape and Non-Potable & Recycled Water Customers (Non-Agricultural)

Your monthly water usage budget is based on your irrigated landscape area and represents an efficient volume of water to meet your individualized water needs.

Potable Landscape Water Budget: is calculated for your property using actual data from local weather stations. We calculate your **irrigated landscape area** (in acres) x **evapotranspiration** x **0.75 ET Adjustment Factor** (assumes that your landscape is 60% warm-season turf and includes 20% additional water to account for inefficiency in your irrigation system) x **36.3 conversion factor** (to convert cubic acre inches to CCF).

- ✓ **CCF** is the basic measurement of water use. One CCF equals 100 cubic feet of water – about 748 gallons.
- ✓ **Evapotranspiration or ET** is a measure of actual daily plant water loss in inches.
- ✓ **ET Adjustment Factor** adjusts for the plants in your landscape and provides an allowance for inefficiency in your irrigation system.



- **Non-Potable and Recycled (Non-Agricultural) Water Budget:** is calculated for your property using actual data from local weather stations. We calculate your **irrigated landscape area** (in acres) x **evapotranspiration** x **0.87 ET adjustment factor** (assumes that 100% of your landscape is warm-season turf and it includes 25% additional water to account for inefficiency in your irrigation system) x **36.3 conversion factor** (to convert acre inches to CCF).



Fixed Water Service Charges

Monthly service charges are fixed charges which cover IRWD’s cost of operations, maintenance and infrastructure and do not change based on the amount of a customer’s water use. Monthly service charges are based on a 30-day calendar month so billing cycles which are longer or shorter than 30 days are billed based on the proportional number of days. The fixed charge includes an amount set aside for the future inevitable repair and replacement of infrastructure such as pipes, pumping stations and treatment facilities. This way, the District can avoid significant one time rate spikes when the repairs and replacements are made. These charges are not used to pay for facilities that extend service to new development. The charge is based on the size of your meter. The current amount for your meter size appears on your bill. Customers that remain in the low volume tier for



most of the year will have a larger percentage of their bill made up of the fixed charge. The fixed charge is calculated on the meter's maximum flow capacity and the demand on the system. Potable customers that remain in the low volume tier for 9 out of 12 months will receive a \$2.00 credit per month which will be itemized on each bill. New customers do not receive this credit unless they have been with the District for a full calendar year.

Proposed Fixed Water Service Charges			
Meter Type	Current Monthly Rates per Meter	FY 2019-20 Rates per Meter Effective July 1, 2019	FY 2020-21 Rater per Meter Effective July 1, 2020
5/8" by 3/4" Disc	\$10.35	\$10.35	\$10.40
3/4" Disc	\$15.55	\$15.55	\$15.65
1" Disc	\$25.90	\$25.90	\$26.05
1 1/2" Disc	\$51.75	\$51.75	\$52.00
2" Disc	\$82.80	\$82.80	\$83.20
2" Turbo	\$108.70	\$108.70	\$109.25
3" Turbo	\$248.40	\$248.40	\$249.65
4" Turbo	\$517.50	\$517.50	\$520.10
6" Turbo	\$1,035.05	\$1,035.05	\$1,040.25
8" Turbo	\$1,811.35	\$1,811.35	\$1,820.40
10" Turbo	\$2,173.60	\$2,173.60	\$2,184.45
2" Magnetic Meter	\$160.95	\$160.95	\$161.75
4" Magnetic Meter	\$643.30	\$643.30	\$646.50
6" Magnetic Meter	\$1,447.50	\$1,447.50	\$1,454.75
8" Magnetic Meter	\$2,574.15	\$2,574.15	\$2,587.00
6" Propeller	\$698.65	\$698.65	\$702.15
8" Propeller	\$931.55	\$931.55	\$936.20
10" Propeller	\$1,242.05	\$1,242.05	\$1,248.25
12" or 14" Propeller	\$1,746.65	\$1,746.65	\$1,755.40
16", 18", or 20" Propeller	\$2,949.90	\$2,949.90	\$2,964.65
4" Omni F2	\$643.30	\$643.30	\$646.50
6" Omni F2	\$1,447.50	\$1,447.50	\$1,454.75
8" Omni F2	\$2,574.15	\$2,574.15	\$2,587.00
10" Omni F2	\$2,949.90	\$2,949.90	\$2,964.65
1 1/2" Single Jet	\$51.75	\$51.75	\$52.00
2" Single Jet	\$82.80	\$82.80	\$83.20
6" Single Jet	\$517.50	\$517.50	\$520.10

Agricultural Customers

Variable Water Charge

Commodity charges are billed monthly based on the actual volume of water used. IRWD is proposing a commodity charge increase as shown in the chart below.

Proposed Potable Agricultural Variable Water Rates			
Tier	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Base Rate	\$2.62	\$2.77	\$2.94

Proposed Non-Potable / SAC Agricultural Variable Water Rates			
Type	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Non-Potable	\$1.58	\$1.70	\$1.82
SAC Water	\$1.75	\$1.80	\$1.92

Proposed Recycled Agricultural Commodity Rates			
Tier	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Base Rate	\$1.52	\$1.64	\$1.79



All Customers

Why Did the Cost of Water Service Increase?

The main reasons for the change include uncontrollable costs attributed to:

- Pass through charges from the Orange County Water District (OCWD) for pumping local groundwater (5.0% increase each year), which is the lowest cost of water.
- Pass through charges from the Metropolitan Water District (MWD) for imported water purchased through the regional wholesaler, the Municipal Water District of Orange County (MWDOC) (3.0% increase each year).
- Pass through charges Southern California Edison (SCE) for electricity (4.5% increase) in FY 2020-21.

Variable Pumping Surcharges

A pumping surcharge will be added to the commodity rate for those customers who are located at higher elevations and cause the District to incur additional pumping costs to supply their water. The surcharge is based on the actual prevailing energy costs and varies depending upon the elevation of the area served. If your property is in an area affected by a pumping surcharge, the charge is itemized on your monthly bill. Please visit the IRWD website at <https://www.irwd.com/services/proposed-rates> to see charges by zone.

Proposed Changes to Pumping Surcharges, Set-up and Reconnection Fees			
Component	Current Rates per ccf	FY 2019-20 Rates Effective July 1, 2019	FY 2020-21 Rate Effective July 1, 2020
Pumping Surcharges by Zone	\$0.21 to \$0.65/ccf	\$0.13 to \$0.68/ccf	\$0.13 to \$0.72/ccf
One-time Setup Fee for New Accounts	\$25.00	\$25.00	\$25.00
Shutoff Reconnection Fees	\$70.00 - \$95.00	\$50.00 - \$95.00	\$50.00 - \$95.00

Monthly Water Budgets, Rate Calculator & Sample Bills Available on IRWD.com

To find out more information on the rate tiers, the types of usage that determine the monthly water budget, how the monthly water budget is calculated and to use the IRWD budget based rate calculator, please visit the IRWD website at <https://www.irwd.com/services/proposed-rates>. The calculator shows how staying within your monthly water budget or exceeding it will affect your monthly bill. Sample bills are also provided as well as technical water budget formulas. Free internet access is available Monday – Friday from 8am to 5pm in the IRWD lobby at 15600 Sand Canyon Avenue, Irvine, CA.

Automatic Pass-Through Adjustments

IRWD used its best available information to calculate proposed increases in the cost of imported water IRWD purchases from MWD through MWDOC and the replenishment charges paid to OCWD for pumping groundwater. IRWD has no control over the amounts set by regional agencies (MWD, MWDOC, OCWD, SCE, etc.) or taxes and fees assessed by the state, and must pass those costs through to IRWD customers. Should any of the Regional Agencies or California adopt an additional increase (or decrease) in its charges, taxes, or fees ("Pass-Through Amount"), IRWD may automatically recalculate its rates to include the Pass-Through Amount. If this occurs, the automatic IRWD rate adjustment will not require a public hearing or any additional action by the IRWD Board of Directors. At least 30 days before the effective date of the adjustment, IRWD will provide its customers with the expected adjustment(s), which will generally be calculated as the total projected cost increase divided by the projected annual water consumption or annual total sewage flow as appropriate. This calculation will vary as necessary to reflect IRWD's different service areas and service classes.

Public Hearing

Any customer or property owner within the IRWD service area may file a written protest for the proposed rate increases with IRWD by sending a letter to IRWD, P.O. Box 5149, Irvine, CA 92616. A valid protest letter must include your name, the address at which you receive service from IRWD, a statement of protest and your original signature. Protest letters received by June 24 will be tabulated and presented to the Board of Directors at a public hearing regarding the rate increase to be held on June 24, 2019 at 5pm in the IRWD Board Room, 15600 Sand Canyon Ave., Irvine, CA. Any customer or property owner may appear at the hearing to make comments regarding the proposed rates. Letters may be delivered in person at the hearing, and must be received prior to the conclusion of the June 24 public hearing.

Additional Information

For more information on IRWD's water efficiency programs, rebates and tips on how you can conserve, visit www.irwd.com. If you have any additional questions, please contact IRWD Customer Service at 949-453-5300.



Background

The Irvine Ranch Water District (IRWD) is a public agency that provides water and sewer service. Our rates are based on the actual cost to provide these services and are set each year during the annual budget process. **The proposed sewer rates are expected to increase the residential bill by 1.3% in fiscal year (FY) 2019-20 and 0.9% in FY 2020-21.** A critical IRWD business objective is to keep costs, and therefore rates, as low as possible for our customers. When compared with other agencies providing similar services in Orange County, IRWD's rates are consistently among the lowest.

Two-Year Budget Cycle

New this year is the kickoff of a two-year (biennial) budget cycle which will result in the adoption of rates for FY 2019-20 and FY 2020-21. The adoption of a two-year budget is intended to improve IRWD's long term planning, enhance funding stability and create greater efficiency in the budgeting process. The proposed rates will become effective on July 1, 2019 and July 1, 2020, respectively.

Sewer Fixed Service Charges

Monthly sewer service charges are fixed monthly charges which cover IRWD's cost of operations, maintenance and infrastructure and do not change based on the amount of a customer's water or sewer use. Monthly service charges are based on a 30 day calendar month so billing cycles which are longer or shorter than 30 days are billed based on the proportional number of days. The fixed charge includes an amount set aside for the future inevitable repair and replacement of infrastructure such as pipes, pumping stations and treatment facilities. This way, the District can avoid significant one time rate spikes when the repairs and replacements are made. These charges are not used to pay for facilities that extend service to new development. The proposed fixed monthly sewer service charges for the average residential customer are used to pay for operations and maintenance costs including inevitable infrastructure enhancements and replacements.

Proposed Changes for Sewer Service Fixed Monthly Charges for System Operation and Maintenance			
Usage	Current Monthly Rates	FY 2019-20	FY 2020-21
Single Family Homes, Townhouses, & Condominiums	\$25.75	\$26.10	\$26.35
Apartments	\$19.30	\$19.55	\$19.75

Automatic Pass-Through Adjustments

IRWD used its best available information to calculate proposed increases in the cost for regional treatment of sewage paid to the Orange County Sanitation District (OCSD). IRWD has no control over the amounts set by regional agencies (OCSD, SCE, etc.) or taxes and fees assessed by the state, and must pass those costs through to IRWD customers. Should any of the Regional Agencies or California adopt an additional increase (or decrease) in its charges, taxes, or fees ("Pass-Through Amount"), IRWD may automatically recalculate its rates to include the Pass-Through Amount. If this occurs, the automatic IRWD rate adjustment will not require a public hearing or any additional action by the IRWD Board of Directors. At least 30 days before the effective date of the adjustment, IRWD will provide its customers with the expected adjustment(s), which will generally be calculated as the total projected cost increase divided by the projected annual total sewage flow as appropriate. This calculation will vary as necessary to reflect IRWD's different service areas and service classes.

Public Hearing

Any customer or property owner within the IRWD service area may file a written protest for the proposed rate increases with IRWD by sending a letter to IRWD, P.O. Box 5149, Irvine, CA 92616. A valid protest letter must include your name, the address at which you receive service from IRWD, a statement of protest and your original signature. Protest letters received by June 24 will be tabulated and presented to the Board of Directors at a public hearing regarding the rate increase to be held on June 24, 2019 at 5pm in the IRWD Board Room, 15600 Sand Canyon Ave., Irvine, CA. Any customer or property owner may appear at the hearing to make comments regarding the proposed rates. Letters may be delivered in person at the hearing, and must be received prior to the conclusion of the June 24 public hearing.

Additional Information

For more information on IRWD's water efficiency programs, rebates and tips on how you can conserve, visit www.irwd.com. If you have any additional questions, please contact IRWD Customer Service at 949-453-5300.

Exhibit "C"

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT,
ORANGE COUNTY, CALIFORNIA
APPROVING THE DISTRICT'S OPERATING BUDGETS FOR
FISCAL YEAR 2019-20 AND FISCAL YEAR 2020-21 AND DETERMINING
COMPLIANCE WITH
ARTICLE XIII B OF THE CALIFORNIA CONSTITUTION

WHEREAS, the Board of Directors of the Irvine Ranch Water District (IRWD) has considered the financial needs of IRWD for purposes of operational costs during Fiscal Year 2019-20 and Fiscal Year 2020-21; and

WHEREAS, Operating Budgets, as set forth in the attached Exhibit "A", have been prepared and reviewed by this Board of Directors; and

WHEREAS, 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; and

WHEREAS, Section 8 of Article XIII B specifically excludes user charges or fees or regulatory fees as long as such fees and charges do not produce revenues exceeding the costs reasonably borne in providing the regulation, product or service and Section 9 of Article XIII B excludes from the appropriations subject to limitation an appropriation for debt service or for a qualified capital outlay project, 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); and

WHEREAS, IRWD's Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21 are totally funded from user charges which are excluded from the appropriations formula established by Article XIII B, Section 8, and other monies that are not proceeds of taxes, such as proceeds of bonds or other indebtedness, and/or are expenditures for debt service or qualified capital outlay projects pursuant to Article XIII B, Section 9.

NOW, THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE and ORDER as follows:

Section 1. That relative to appropriations subject to limitation under Article XIII B of the Constitution of the State of California, IRWD's Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21 are hereby determined to be funded totally by revenues other than the proceeds of taxes as defined in Article XIII B, Section 8(c), and/or that the expenditures identified in the Operating Budgets are funded by other monies that are not proceeds of taxes, such as proceeds of bonds or other indebtedness, and/or are expenditures for debt service or qualified capital outlay projects pursuant to Article XIII B, Section 9, and that the documentation used in making such determination has been on file in the offices of IRWD for not less than

fifteen days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California.

Section 2. That IRWD's Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21 are in compliance with the provisions of Article XIII B of the Constitution of the State of California.

Section 3. That pursuant to Section 21080(b) (8) of the Public Resources Code providing 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 (CEQA), it is hereby found that the Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21, including proposed 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) meeting operating expenses, (2) purchasing or leasing supplies, equipment or materials, (3) meeting financial reserve needs and requirements, and (4) obtaining funds for capital projects necessary to maintain service within existing areas.

Section 4. That the proposed Operating Budgets for Fiscal Year 2019-20 and Fiscal Year 2020-21 are consistent with the recommendations of the cost of service study approved on June 8, 2015.

Section 5. That the Operating Budgets for IRWD for Fiscal Year 2019-20 and Fiscal Year 2020-21 as set forth in the Summary of the Operating Budgets dated April 22, 2019 which is by this reference incorporated herein, be and the same are hereby approved.

ADOPTED, SIGNED AND APPROVED this 22nd day of April, 2019.

President, IRVINE RANCH WATER DISTRICT
and the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:
LEWIS BRISBOIS
Legal Counsel – IRWD

By: _____



FY 2019-20 and 2020-21 Operating Budgets and Proposed Rates

Board Workshop

April 22, 2019



Schedule for Budget & Rate Adoption

FY 2019-20 and 2020-21 Operating Budgets and Rates

March 5	F&P Committee: Preliminary Budget Review
March 19	Special F&P Committee: Detailed Budget Review
April 2	F&P Committee: Budget Update, Impact on Rates
April 8	First Board Workshop
April 22	Second Board Workshop: Staff recommends adoption of Budget and approval of Proposition 218 Notices
May 3	Proposition 218 Notices mailed
June 24	Adopt FY 2019-20 and FY 2020-21 Rates & Charges

Irvine Ranch Water District 2

Agenda

First Workshop (held April 8th):

- FY 2019-20 and 2020-21 Budgets Detailed Review
 - Significant factors affecting rate setting
 - Operating sources and uses by system
 - Rate development
 - Proposed Rates
- Comparison of Proposed Rates
- Non-Operating Net Income
- Schedule for Budget & Rate Adoption

Tonight's Workshop:

- FY 2019-20 and 2020-21 Budgets Review
- Comparison of Proposed Rates
- Non-Operating Net Income Recap
- Review of the Proposition 218 Notices
- Recommendations and Next Steps

FY 2019-20 Operating Budget

Key drivers comparison to prior year budget

(in millions)	Budget	Proposed	Increase / (Decrease)	%
	FY 2018-19	Budget FY 2019-20		
Salaries and Benefits	\$ 58.1	\$ 61.5	\$ 3.4	6.0%
Purchased Water	37.5	39.2	1.7	4.8%
Repairs and Maintenance	24.0	21.8	(2.2)	-9.3%
Electricity	14.5	17.1	2.6	17.4%
Other Expenses	23.0	27.4	4.4	18.9%
Net Operating Budget	\$ 157.1	\$ 167.0	\$ 9.8	6.3%

Operating Budget FY 2019-20

SOURCES AND USES					
(in thousands)	Water	Sewer	Recycled	Conserve & NTS	Total
Revenue:					
Commodity	\$ 45,467	\$ -	\$ 20,293	\$ -	\$ 65,760
Service	36,594	55,060	6,836	-	98,490
Over-Allocation				13,310	13,310
Total Revenues	\$ 82,061	\$ 55,060	\$ 27,129	\$ 13,310	\$ 177,560
Contribution to Enhancement and Replacement Funds	(8,691)	(19,695)	(1,120)	-	(29,506)
Net Revenues	\$ 73,370	\$ 35,365	\$ 26,009	\$ 13,310	\$ 148,054
Expenses:					
<i>Total Direct</i>	\$ 59,356	\$ 23,967	\$ 21,344	\$ 9,076	\$ 113,743
<i>Total Indirect</i>	13,384	10,646	4,347	4,135	32,512
General Plant	630	752	318	99	1,799
Total Expenses	\$ 73,370	\$ 35,365	\$ 26,009	\$ 13,310	\$ 148,054
Net Operating Position	\$ -				

Irvine Ranch Water District

Operating Budget FY 2019-20

Potable Rate Development				
Tiers	Low	Base	Inefficient	Wastful
	Volume	Rate		
Lowest Cost Source of Water	\$1.47			
Melded Cost of Water		\$1.97		
Blended Cost of Baker and Potable Imported			\$3.06	
Loaded Cost of Imported Water				\$3.17
District Wide Conservation		\$0.03	\$0.03	\$0.03
Water Banking				\$1.87
Targeted Conservation			\$1.37	\$5.75
Natural Treatment Systems (NTS)			\$0.40	\$2.81
Total Cost per Tier	\$1.47	\$2.00	\$4.86	\$13.63
FY 2018-19 Rates by Tier	\$1.40	\$1.89	\$4.73	\$13.35
Change	\$0.07	\$0.11	\$0.13	\$0.28
Use of Sinking Fund for Rate Parity (M)	\$0.7	\$0.9		

Irvine Ranch Water District

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Operating Budget FY 2019-20

Recycled Rate Development

Tiers	Low	Base		
	Volume	Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.19			
Melded Cost of Water		\$1.54		
Loaded Cost of Imported Water			\$2.73	\$2.73
District Wide Conservation		\$0.03	\$0.03	\$0.03
Targeted Conservation			\$0.00	\$1.05
Natural Treatment Systems (NTS)			\$0.39	\$2.81
Total Cost per Tier	\$1.19	\$1.57	\$3.15	\$6.62
FY 2018-19 Rates by Tier	\$1.13	\$1.47	\$3.11	\$6.44
Change	\$0.06	\$0.10	\$0.04	\$0.18

Operating Budget FY 2020-21

Key drivers comparison to prior year budget

(in millions)	Budget	Budget	Increase / (Decrease)	% Change
	FY 2019-20	FY 2020-21		
Salaries and Benefits	\$ 61.5	\$ 64.5	\$ 3.0	4.9%
Purchased Water	39.2	44.7	5.5	13.9%
Repairs and Maintenance	21.7	17.1	(4.6)	-21.0%
Electricity	17.1	18.5	1.4	8.6%
Other Expenses	27.5	28.8	1.3	4.6%
Net Operating Budget	\$ 167.0	\$ 173.6	\$ 6.6	4.0%

Operating Budget FY 2020-21

SOURCES AND USES					
(in thousands)	Water	Sewer	Recycled	Conserve & NTS	Total
Revenue:					
Commodity	\$ 49,719	\$ -	\$ 21,849	\$ -	\$ 71,568
Service	37,717	55,463	7,014	-	100,194
Over-Allocation				13,637	13,637
Total Revenues	\$ 87,436	\$ 55,463	\$ 28,863	\$ 13,637	\$ 185,399
Contribution to Enhancement and Replacement Funds	(8,776)	(20,432)	(1,154)	-	(30,362)
Net Revenues	\$ 78,660	\$ 35,031	\$ 27,709	\$ 13,637	\$ 155,037
Expenses:					
<i>Total Direct</i>	\$ 63,585	\$ 21,908	\$ 22,244	\$ 9,070	\$ 116,807
<i>Total Indirect</i>	14,059	12,765	5,160	4,432	36,416
General Plant	1,016	358	305	135	1,814
Total Expenses	\$ 78,660	\$ 35,031	\$ 27,709	\$ 13,637	\$ 155,037
Net Operating Position	\$ -				

Irvine Ranch Water District

Operating Budget FY 2020-21

Potable Rate Development

Tiers	Low Volume	Base Rate	Inefficient	Wastful
Lowest Cost Source of Water	\$1.54			
Melded Cost of Water		\$2.09		
Loaded Cost of Imported Water			\$3.18	\$3.18
District Wide Conservation		\$0.03	\$0.03	\$0.03
Water Banking				\$1.79
Targeted Conservation			\$1.25	\$5.40
Natural Treatment Systems (NTS)			\$0.45	\$3.25
Total Cost per Tier	\$1.54	\$2.12	\$4.91	\$13.65
FY 2019-20 Rates by Tier	\$1.47	\$2.00	\$4.86	\$13.63
Change	\$0.07	\$0.12	\$0.05	\$0.02
Use of Sinking Fund for Rate Parity (M)	\$0.7	\$0.9		

Irvine Ranch Water District

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Operating Budget FY 2020-21

Recycled Rate Development

Tiers	Low Volume	Base Rate	Inefficient	Wasteful
Lowest Cost Source of Water	\$1.25			
Melded Cost of Water		\$1.69		
Loaded Cost of Imported Water			\$2.79	\$2.79
District Wide Conservation		\$0.03	\$0.03	\$0.03
Targeted Conservation			\$0.00	\$0.99
Natural Treatment Systems (NTS)			\$0.46	\$3.16
Total Cost per Tier	\$1.25	\$1.72	\$3.28	\$6.97
FY 2019-20 Rates by Tier	\$1.19	\$1.57	\$3.15	\$6.62
Change	\$0.06	\$0.15	\$0.13	\$0.35

PROPOSED RATES



Proposed Rates – FY 2019-20 and FY 2020-21

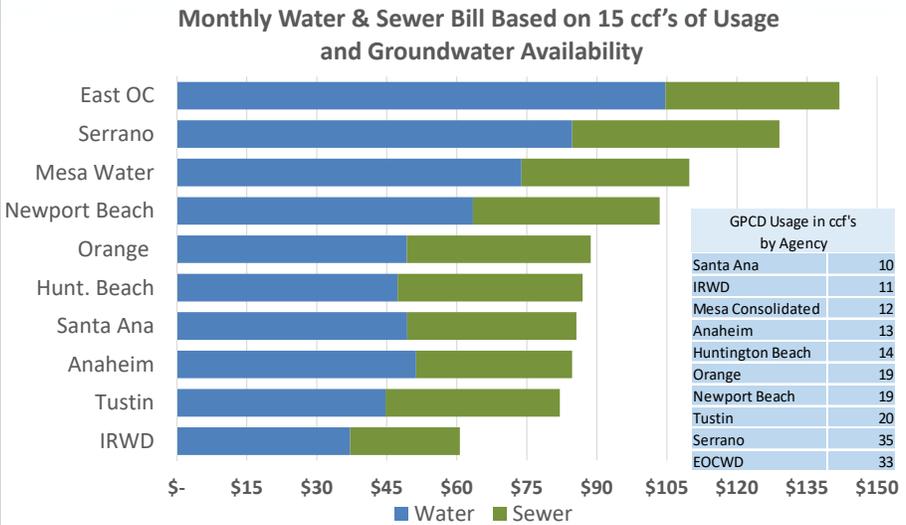
Typical Residential Customer

	Current Rate FY 2018-19	Proposed Rate FY 2019-20	Rate Change	% Change	Proposed Rate FY 2020-21	Rate Change	% Change
Water							
Service Charge *	\$10.35	\$10.35	\$0.00		\$10.40	\$0.05	
Commodity Charge **	<u>20.23</u>	<u>21.35</u>	<u>1.12</u>		<u>22.54</u>	<u>1.19</u>	
Total Water Charge	\$30.58	\$31.70	\$1.12		\$32.94	\$1.24	
Sewer							
Service Charge *	\$23.20	\$23.50	\$0.30		\$23.70	\$0.20	
Total Typical Residential Monthly Bill	\$53.78	\$55.20	\$1.42	2.6%	\$56.64	\$1.44	2.6%

* Treated water service charge assumes a 5/8" x 3/4" meter. Both the water and sewer service charges include components for enhancement and replacement capital. No additions have been included for either fund.

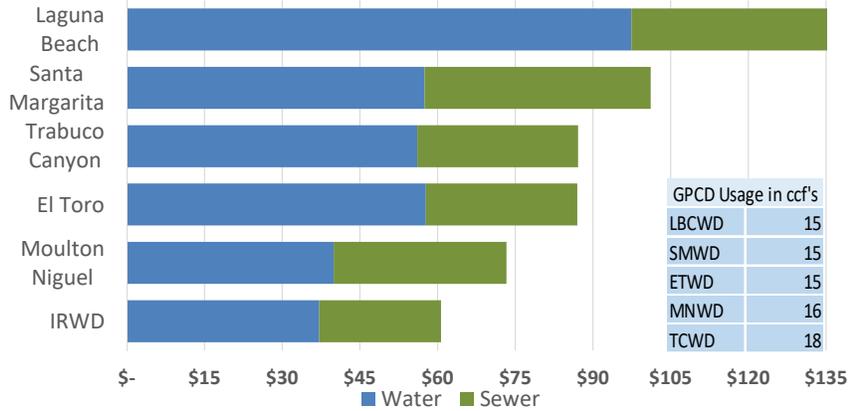
** Commodity charges for a typical residential customer are based on 12 ccf (District average).
 Current Rates: Low Volume \$1.40 Base \$1.89
 Proposed FY 2019-20: Low Volume \$1.47 Base \$2.00
 Proposed FY 2020-21: Low Volume \$1.54 Base \$2.12

Comparison of Proposed FY 2019-20 Rates

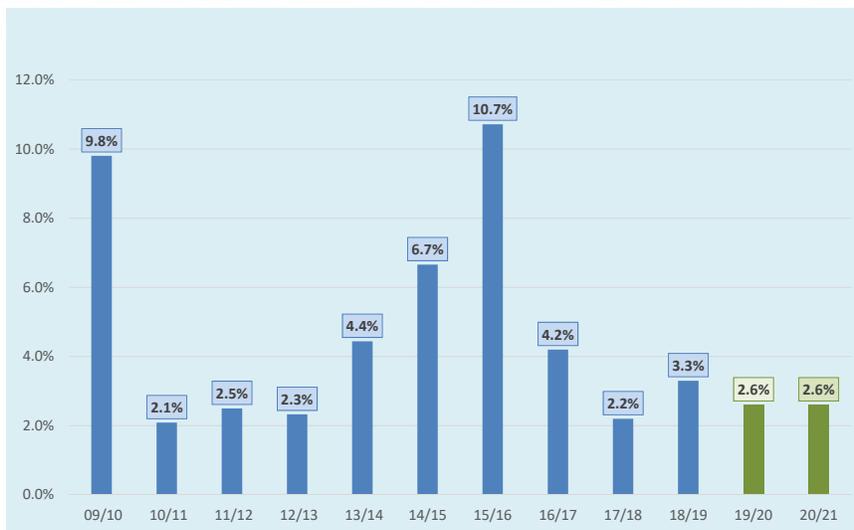


Comparison of Proposed FY 2019-20 Rates

Monthly Water & Sewer Bill Based on 15 ccf's Usage and Imported Water



Average Yearly Rate Increase History



NON-OPERATING NET INCOME



Non Operating Budget FY 2019-20

NON-OPERATING NET INCOME				
(in thousands)	Budget FY 2018-19	Forecast FY 2018-19	Budget FY 2019-20	Increase / (Decrease) from Forecast
Revenues:				
Property Taxes	\$ 59,300	\$ 62,900	\$ 66,000	\$ 3,100
Investment Income	4,768	5,768	8,200	2,432
Connection Fees	20,000	20,000	19,000	(1,000)
Real Estate Income	17,000	17,600	17,400	(200)
Real Estate Fair Value Change*	6,300	6,300	6,600	300
Other Income	8,000	11,000	8,000	(3,000)
Total Revenue	\$ 115,368	\$ 123,568	\$ 125,200	\$ 1,632
Expenses:				
Interest Expense	\$ 26,294	\$ 26,294	\$ 24,700	(\$ 1,594)
Real Estate Expense	5,170	5,170	5,800	630
Other Expenses	2,000	2,000	2,000	-
Total Expense	\$ 33,464	\$ 33,464	\$ 32,500	(\$ 964)
Net Income	\$ 81,904	\$ 90,104	\$ 92,700	\$ 2,596

*Non-Cash

Non Operating Budget FY 2020-21

NON-OPERATING NET INCOME

(in thousands)	<u>FY 2019-20</u>	<u>FY 2020-21</u>	<u>Increase / (Decrease)</u>
Revenues:			
Property Taxes	\$ 66,000	\$ 68,700	\$ 2,700
Investment Income	8,200	10,000	1,800
Connection Fees	19,000	18,000	(1,000)
Real Estate Income	17,400	16,600	(800)
Real Estate Fair Value Change*	6,600	7,000	400
Other Income	8,000	8,000	-
Total Revenue	<u>\$ 125,200</u>	<u>\$ 128,300</u>	<u>\$ 3,100</u>
Expenses:			
Interest Expense	\$ 24,700	\$ 24,900	\$ 200
Real Estate Expense	5,800	5,700	(100)
Other Expenses	2,000	2,000	-
Total Expense	<u>\$ 32,500</u>	<u>\$ 32,600</u>	<u>\$ 100</u>
Net Income	<u>\$ 92,700</u>	<u>\$ 95,700</u>	<u>\$ 3,000</u>

*Non-cash

PROPOSITION 218 NOTICES



PROPOSITION 218 NOTICES

Customer friendly 4 page format

- Water budget and basic rate components
- Proposed variable rates including rate builds
- Proposed monthly fixed charges
- Other required notice information including automatic pass through adjustments

PROP 218 STRUCTURE

Summary of Proposed Residential Variable Water Rates for FY 2019-20 and FY 2020-21

Tier	% of Monthly Water Budget Single Family / Condos	% of Monthly Water Budget Multi- Family	Current Rates per ccf	FY 2019-20 Rates per ccf Effective July 1, 2019	FY 2020-21 Rate per ccf Effective July 1, 2020
Low Volume	0-40%	0-50%	\$ 1.40	\$ 1.47	\$ 1.54
Base Rate	41-100%	51-100%	\$ 1.89	\$ 2.00	\$ 2.12
Inefficient	101-140%	101-120%	\$ 4.73	\$ 4.86	\$ 4.91
Wasteful	141%+	121%+	\$13.35	\$13.63	\$13.65

PROP 218 STRUCTURE

Proposed Water Service Fixed Monthly Charges for System Operation and Maintenance

Residential meter size – homes, condos, apartments	Current Rates	Effective July 1, 2019	Effective July 1, 2020
5/8 x 3/4"	\$10.35	\$10.35	\$10.40
3/4" disc meter	\$15.55	\$15.55	\$15.65
1" disc meter	\$25.90	\$25.90	\$26.05
1 1/2" disc meter	\$51.75	\$51.75	\$52.00
2" disc meter	\$82.80	\$82.80	\$83.20
2" turbo meter	\$108.70	\$108.70	\$109.25
3" turbo meter	\$248.40	\$248.40	\$249.65
4" turbo meter	\$517.50	\$517.50	\$520.10
6" turbo meter	\$1,035.05	\$1,035.05	\$1,040.25
8" turbo meter	\$1,811.35	\$1,811.35	\$1,820.40
6" Omni F2 meter	\$1,447.50	\$1,447.50	\$1,454.75
8" Omni F2 meter	\$2,574.15	\$2,574.15	\$2,587.00
Residential master meter (shared) apartments and condominiums 5/8" x 3/4" meter	\$10.35	\$10.35	\$10.40

Irvine Ranch Water District

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PROP 218 STRUCTURE

Proposed Sewer Rates for System Operations and Maintenance

Usage	Current Monthly Rates	Effective July 1, 2019	Effective July 1, 2020
Average water usage exceeds 10 ccfs per month	\$25.75	\$26.10	\$26.35
Average water usage falls between 5 and 10 ccfs	\$23.20	\$23.50	\$23.70
Average water usage falls below 5 ccfs	\$19.30	\$19.55	\$19.75
Commercial, Industrial, & Public Authority			
Quantity Service Charge (beyond 10 ccf)	\$2.74/ccf	\$2.78/ccf	\$2.81/ccf
Industrial Waster Service Charge (if applicable)	\$0.134/ccf	\$0.136/ccf	\$0.137/ccf

Proposed Sewer Rates for Collection or Treatment Only

Usage	Current Monthly Rates	Effective July 1, 2019	Effective July 1, 2020
Service Charge (Collection only)	\$8.40	\$8.50	\$8.60
Service Charge (Treatment only)	\$14.80	\$15.00	\$15.15

Irvine Ranch Water District

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PROP 218 STRUCTURE

Proposed Potable Commercial Commodity Rates per CCF

Tier	% of Monthly Water Budget	Current Rates	Effective July 1, 2019	Effective July 1, 2020
Base Rate	0 -100%	\$1.89	\$2.00	\$2.12
Wasteful	101+	\$13.35	\$13.63	\$13.65

Proposed Commercial Recycled Water Commodity Rates per CCF

Tier	% of Monthly Water Budget	Current Rates	Effective July 1, 2019	Effective July 1, 2020
Base Rate	0 -100%	\$1.07	\$1.19	\$1.25
Wasteful	101+	\$6.44	\$6.62	\$6.97

PROP 218 STRUCTURE

Proposed Pumping Surcharges, Set-up and Reconnection Fees

Component	Current Rates	Proposed Rates	Proposed Rates
Pumping Surcharges by Zone	\$0.21 to \$0.64/ccf	\$0.13 to \$0.68/ccf	\$0.13 to \$0.72/ccf
One-time Setup Fee for New Accounts	\$25.00	\$25.00	\$25.00
Shutoff Reconnection Fees	\$70.00 - \$95.00	\$50.00 - \$95.00	\$50.00 - \$95.00

PROP 218 STRUCTURE

Other Required Disclosures

- Automatic pass-through adjustments
- Public Hearing date and location

Recommendations & Next Steps

Recommended Board Actions:

1. Adopt the Resolution to Approve the FY 2019-20 and 2020-21 Operating Budgets
2. Approve the Proposition 218 Notices

Next Steps:

1. Mail Proposition 218 Notices (~May 3)
2. Independent Auditors to receive and Tabulate Responses over 45 day period
3. June 24, 2019: Adopt proposed Rates & Charges, with 2019-20 rates effective July 1, 2019 and 2020-21 rates effective July 1, 2020
4. 1st Bills with application of new rates will occur in August of each year

QUESTIONS/DISCUSSION



April 22, 2019

Prepared by: M. Robinson / E. Akiyoshi

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *[Signature]*

BOARD WORKSHOP

TWO-YEAR CAPITAL BUDGET FOR FISCAL YEARS 2019-20 AND 2020-21

SUMMARY:

IRWD has transitioned from annual to biennial Capital and Operating Budgets. Staff will provide a presentation on the Two-year Capital Budget for Fiscal Year (FY) 2019-20 and FY 2020-21. The forecasted capital expenditures for FY 2019-20 and FY 2020-21 are \$90.9 and \$93.8 million, respectively. Staff recommends the Board adopt a resolution approving the District's Capital Budget for Fiscal Years 2019-20 and 2020-21.

BACKGROUND:

This year, IRWD transitioned from annual to biennial operating and capital budgets. Traditionally, staff presented the upcoming FY capital expenditures and Capital Budget. This year, staff will present the Two-Year Capital Budget. The presentation, attached as Exhibit "A," includes a review of the FY 2018-19 forecasted-to-actual capital expenditures, preview of the forecasted FY 2019-20 and FY 2020-21 capital expenditures, and update on the Long-Term Capital Program.

Capital Budgeting Highlights:

In the current fiscal year (FY 2018-19), forecasted expenditures were originally estimated at \$94.8 million: Actual expenditures are on track to be \$92.5 million or approximately 95% of forecasted expenditures.

Estimated capital expenditures for FY 2019-20 and FY 2020-21 are \$90.9 and \$93.8 million, respectively. For FY 2019-20 three expenditure groups make up approximately 50% of projected expenditures:

- 1) Replacement and Rehabilitation projects;
- 2) Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities; and
- 3) Regional Development.

Similarly, for FY 2020-21 three expenditure groups make up approximately 50% of projected expenditures:

- 1) Replacement and Rehabilitation projects;
- 2) Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities; and
- 3) OCSD CORF / Equity and Solids Lease.

FISCAL IMPACTS:

The following table shows the major expenditure groups for FY 2019-20 and FY 2020-21. The Capital Budget for FY 2019-20 and 2020-21, attached as Exhibit “B”, provides details on all capital projects with anticipated expenditures in FY 2019-20 and 2020-21.

Expenditure Group Description	FY 2019-20 (\$ Million)	FY 2020-21 (\$ Million)
Replacement and Rehabilitation	17.7	24.4
Operational	15.6	14.9
Development	15.4	7.0
Property Management	14.3	0.0
Water Banking	11.7	15.5
Solids Handling	9.8	5.5
Well Rehabilitation	3.1	2.0
Non-potable Storage	3.1	4.8
Replacement Business Software	2.4	1.8
General Plant	2.3	2.0
Planning	2.0	2.1
Water Resources	1.1	2.3
OCWD Annexation	0.6	0.6
Sewage Treatment	0.5	0.9
OCSD CORF / Equity / Solids Lease	(8.7)	10.0
Total All Projects	\$90.9	\$93.8

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 16, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2019 –

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY
CALIFORNIA, APPROVING THE DISTRICT’S CAPITAL
BUDGET FOR FISCAL YEARS 2019-20 AND 2020-21

LIST OF EXHIBITS:

- Exhibit “A” – Capital Budget Presentation
- Exhibit “B” – Two-Year Capital Budget for FY 2019-20 and 2020-21
- Exhibit “C” – Resolution

EXHIBIT "A"

Two-Year Capital Budget Fiscal Years 2019-20 and 2020-21

Board of Directors Workshop
April 22, 2019



Presentation Outline

- Review Fiscal Year (FY) 2018-19 budget
- Provide Development Update
- Preview Proposed FY 2019-20 and FY 2020-21 Capital Budgets
- Review Long-Term Capital Program

Two-Year Capital Budget

Accomplishes the following objectives

- Identifies all capital projects for next two years
- Reflects Board approval for the capital budgets
- Forecasts annual capital expenditures
- Identifies “Flagged” projects for further Board discussion
- Aligns with the two-year Operating budget cycle

Review FY 2018-19 Capital Budget



FY 2018-19 Overview

Description	Projected Expenditures (\$ Millions)*	Actual Expenditures (\$ Millions)*
Top 10 project groups	82.6	81.4
Other projects	12.2	11.1
Subtotal	\$94.8	\$92.5

* Projected through June 2019.

Irvine Ranch Water District

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Compare Projected to Actual Expenditures

No.	Description	Projected (\$ Millions)	Actual (\$ Millions)*
1	Replacement & Rehabilitation	18.4	22.7
2	Solids Handling	18.4	17.3
3	Regional Development	11.0	2.3
4	OCSD - CORF - Solids Lease	9.7	10.2
5	Zone 1 Reservoir No. 2	6.2	3.4
6	Operational	5.4	4.7
7	Development - PA51	3.9	11.5
8	ILP Zone C+ Conversion	3.7	5.1
9	Well Rehabilitation	3.2	1.4
10	General Plant	2.7	2.8
	Other Projects	12.2	11.1
	Subtotal	\$94.8	\$92.5

* Projected through June 2019.

Irvine Ranch Water District

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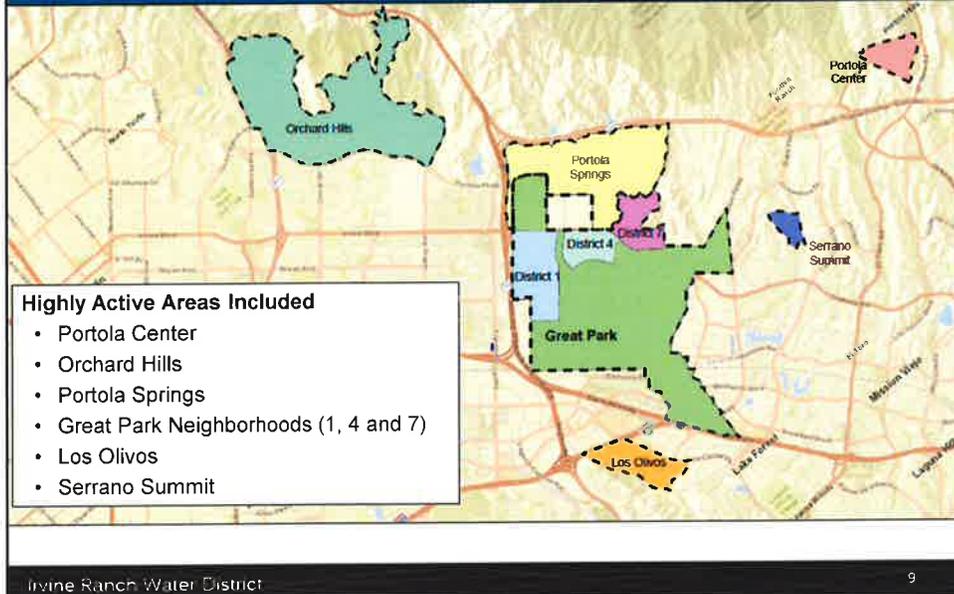
Compare Projected to Actual Expenditures

Description	Under / Over Projected (\$ Millions)	Explanation
Multi-Zone BPS Zone A-C	-3.9	Delayed Construction
Multi-Zone BPS Zone A-B	-3.5	
Zone 1 Reservoir	-2.8	
PA 51 Development	7.6	Accelerated Construction

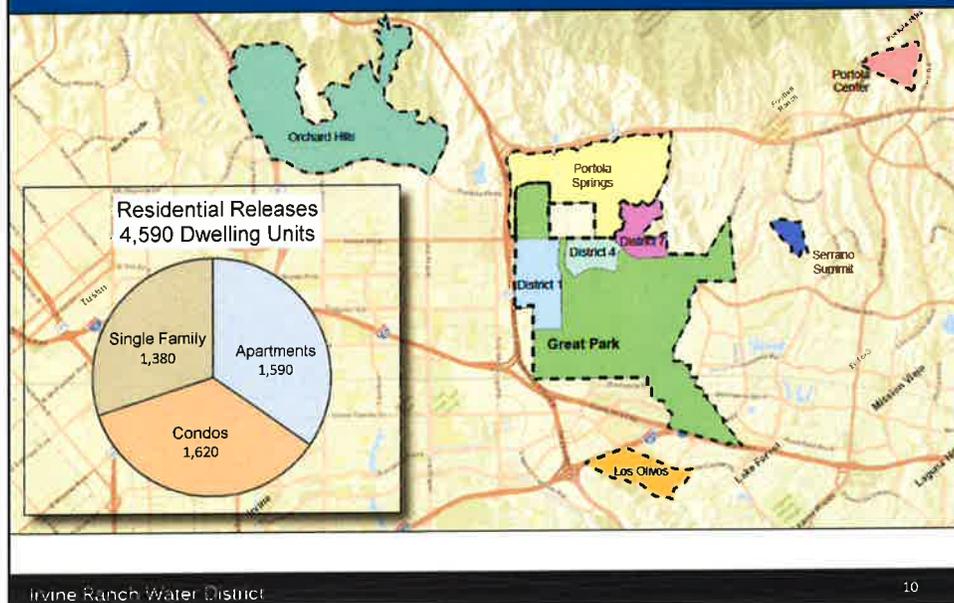
Update on Development



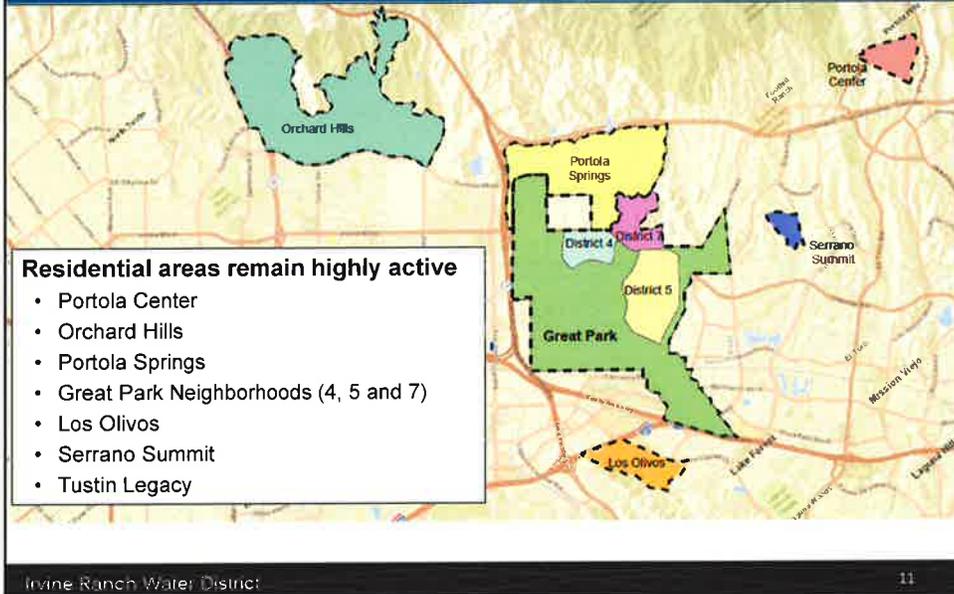
Review Development in FY 2018-19



Review Development in FY 2018-19



Projected Development through FY 2020-21



Preview Two-Year Capital Budget for Fiscal Years 2019-20 and 2020-21



Overview – Expenditures by System



Irvine Ranch Water District

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FY 2019-20 and 2020-21 Categories

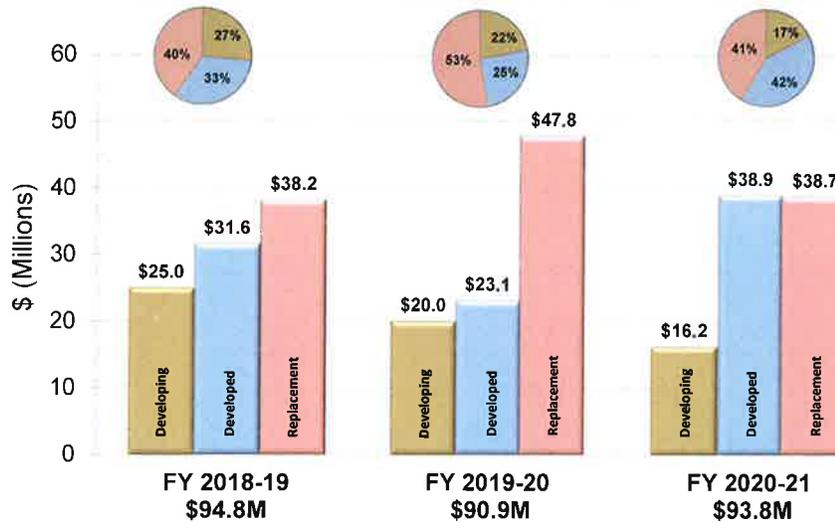
Description	FY 2019-20 Forecasted Expenditures (\$ Millions)	FY 2020-21 Forecasted Expenditures (\$ Millions)
Replacement and Rehabilitation	17.7	24.4
Operational	15.6	14.9
Development	15.4	7.0
Property Management	14.3	0.0
Water Banking	11.7	15.5
Solids Handling	9.8	5.5
Well Rehabilitation	3.1	2.0
Nonpotable Storage	3.1	4.8
Replacement Business Software	2.4	1.8
General Plant	2.3	2.0
Planning	2.0	2.1
Water Resources	1.1	2.3
OCWD Annexation	0.6	0.6
Sewage Treatment	0.5	0.9
OCSD CORF / Equity / Solids Lease	(8.7)	10.0
Total	\$90.9	\$93.8

Irvine Ranch Water District

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Capital Budget - Funding Sources



Irvine Ranch Water District

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FY 2019-20 and 2020-21 Flagged Projects

Flagged projects require additional Board review prior to capital expenditures. Two-Year Capital Budget flagged projects include:

- 06176 – Future Groundwater Supply
- 10854 – Kern Fan Groundwater Storage
- 01100 – Lake Forest Well 1 Drilling
- 03808 – Syphon Reservoir Improvements
- 07140 – Tustin Legacy Red Hill Well Drilling and Equipping

All projects with start dates beyond FY 2020-21 must be presented to the Board prior to any expenditures.

Irvine Ranch Water District

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Long-Term Capital Program



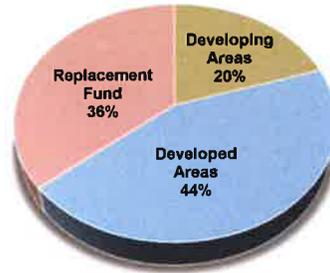
Long Term Capital Program Description

- Identifies all planned capital projects through 2050
- Includes three years of replacement projects
- Excludes Replacement Planning Model 100-year funding requirements
- Provides data to the Financial Enterprise Model for setting Connection Fees, Property Taxes, and User Rates
- Estimates capital cash flow

Overview

Proposed Long Term Capital Program \$753.6 M

Funding Sources



Long Term Capital Program Summary

Component ¹	Budget and Expenditures (\$ Millions)
FY 2018-19 Unexpended LTCP	705.8
Forecasted FY 2018-19 Expenditures	(92.5)
Proposed LTCP Increases	140.3
Total FY 2019-20 / 2020-21 Unexpended LTCP	\$753.6

¹ All costs and expenditures account for applicable offsets

Long Term Capital Program Increases

Project Groups	Increases Including Offsets (\$ Millions)
OCSD – CORF – Solids Lease	59.0
Replacement - Facilities	46.6
Sewage Treatment	17.9
Nonpotable Storage	4.5
Operational	4.4
General Plant	4.4
Planning	2.6
Water Banking	0.7
Water Resources	0.5
Development	(0.3)
Total	\$140.3

Irvine Ranch Water District

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Top LTCP Project Increases

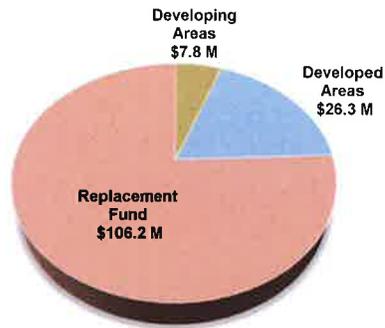
Project Groups	Increases Including Offsets (\$ Millions)
OCSD CORF Long Term Capital Program 2018 to 2050	55.9
LAWRP Treatment Process Modernization	17.9
Zone A to Rattlesnake Reservoir Pump Station	7.5
Sewer Siphon Rehabilitation	6.2
Lake Forest Zone C Recycled Water Pump Station	3.8
OCSD Equity Long Term Capital Program 2018 to 2050	3.1
Rattlesnake Reservoir Filtration	3.1
TCWD El Toro Lift Station	2.6
Cañada Lift Station Improvements	2.1

Irvine Ranch Water District

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Long Term Capital Program Increases

Total By Funding Sources \$140.3 M*



* Excludes Replacement Planning Model expenditures and capital offsets have been subtracted

Recommendation

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2019 –

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY CALIFORNIA, APPROVING THE DISTRICT'S CAPITAL BUDGET FOR FISCAL YEAR 2019-20 and 2020-21

TWO-YEAR CAPITAL BUDGET

FISCAL YEAR 2019-20
and
FISCAL YEAR 2020-21



**Board of Directors
Workshop**

April 22, 2019

DRAFT

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

TWO-YEAR CAPITAL BUDGET

TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>
1.	Project Expenditures by Project Number with Improvement District Allocations
2.	Flagged Projects
3.	Summary of Projected Expenditures by Category
4.	Details of Projected Expenditures by Category
5.	Water Improvement District Map
6.	Sewer Improvement District Map

System	Project Number	Project Title	Start	End	FY19-20 Direct	FY20-21 Direct	Total Direct	Improvement Districts																		
								1100	1110	1120	1130	1250	1530	1540	1850	1880	2100	2120	2130	2220	2250	2400	2530	2560	2850	2880
Potable Capital	11205	GP_Dep 515_FY 20_21	7/1/2020	6/30/2021	\$0	\$104,000	\$104,000	61.2	0.3			0.4	0.1				36.5	0.1	0.1	0.4	0.7	0.1	0.1			
Potable Capital	11200	GP_Dep 600_FY 19_20	7/1/2019	6/30/2020	\$303,000	\$0	\$303,000	28.6	4.0	0.4	0.4	5.9	1.4		0.2	0.1	43.4	1.1	0.6	3.7	7.8	0.6	1.6		0.2	
Potable Capital	11206	GP_Dep 600_FY 20_21	7/1/2020	6/30/2021	\$0	\$264,200	\$264,200	61.2	0.3			0.4	0.1				36.5	0.1	0.1	0.4	0.7	0.1	0.1			
Potable Capital	11202	GP_Dep 710_FY 19_20	7/1/2019	6/30/2020	\$4,000	\$0	\$4,000	28.6	4.0	0.4	0.4	5.9	1.4		0.2	0.1	43.4	1.1	0.6	3.7	7.8	0.6	1.6		0.2	
Potable Capital	11203	GP_Dep 870_FY 19_20	7/1/2019	6/30/2020	\$1,162,500	\$0	\$1,162,500	28.6	4.0	0.4	0.4	5.9	1.4		0.2	0.1	43.4	1.1	0.6	3.7	7.8	0.6	1.6		0.2	
Potable Capital	11208	GP_Dep 870_FY 20_21	7/1/2020	6/30/2021	\$0	\$1,339,500	\$1,339,500	61.2	0.3			0.4	0.1				36.5	0.1	0.1	0.4	0.7	0.1	0.1			
Recycled Capital	06198	IIC EAST ZONE B BPS UPGRADES	1/1/2016	12/31/2019	\$1,295,479	\$0	\$2,128,600										90.0	5.0			2.5		2.5			
Recycled Capital	05407	ILP NORTH CONVERSION-RESERVOIR	3/1/2014	11/30/2019	\$423,341	\$0	\$14,382,500										0.3	40.1	0.1		16.8	0.3	42.3		0.1	
Potable Capital	10525	INDUSTRIAL COATINGS REPLACEMENT 19/20-DW	7/1/2019	6/30/2020	\$220,000	\$0	\$220,000	100.0																		
Recycled Capital	10526	INDUSTRIAL COATINGS REPLACEMENT 19/20-RW	7/1/2019	6/30/2020	\$220,000	\$0	\$220,000											100.0								
Sewer Capital	10527	INDUSTRIAL COATINGS REPLACEMENT 19/20-SS	7/1/2019	6/30/2020	\$110,000	\$0	\$110,000											100.0								
Potable Capital	10528	INDUSTRIAL COATINGS REPLACEMENT 20/21-DW	7/1/2020	6/30/2021	\$0	\$220,000	\$220,000	100.0																		
Recycled Capital	10529	INDUSTRIAL COATINGS REPLACEMENT 20/21-RW	7/1/2020	6/30/2021	\$0	\$220,000	\$220,000											100.0								
Sewer Capital	10531	INDUSTRIAL COATINGS REPLACEMENT 20/21-SS	7/1/2020	6/30/2021	\$0	\$110,000	\$110,000											100.0								
Potable Capital	07887	IRVINE LAKE SERVICE IMPROVEMENT	6/1/2020	6/30/2022	\$80	\$54,960	\$229,000		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Potable Capital	10854	KERN FAN GROUNDWATER STORAGE	2/16/2017	2/28/2025	\$10,856,284	\$13,522,300	\$93,838,000		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Potable Capital	10096	LAKE FOREST NAKASE DW IMPROVEMENTS	1/1/2020	7/31/2022	\$53,129	\$105,475	\$437,000					100.0														
Potable Capital	01100	LAKE FOREST WELL 1 DRILLING	3/1/2021	12/31/2023	\$0	\$44,637	\$1,417,600		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Potable Capital	11218	LAKE FOREST WELL NO. 2 TREATMENT & BYPASS SE	9/1/2019	12/31/2021	\$138,083	\$420,117	\$587,000		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Potable Capital	07907	LAKE FOREST ZONE 5 WEST BPS UPGRADES	6/1/2020	12/31/2022	\$15,578	\$186,935	\$1,302,200		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Recycled Capital	11169	LAKE FOREST ZONE B TO C BOOSTER PUMP STATIO	4/1/2020	12/31/2022	\$85,636	\$342,545	\$1,905,000												10.7	4.1	14.6	51.1	7.7	10.3		1.5
Recycled Capital	11236	LAKE FOREST ZONE C RECYCLED WATER PIPELINE	9/1/2019	2/28/2022	\$148,710	\$419,202	\$950,400												10.7	4.1	14.6	51.1	7.7	10.3		1.5
Recycled Capital	11168	LAKE FOREST ZONE C RECYCLED WATER PUMP STAT	7/1/2019	11/30/2021	\$790,455	\$2,144,338	\$3,801,600												10.7	4.1	14.6	51.1	7.7	10.3		1.5
Sewer Capital	07788	LAWRP SYSTEM REPLACEMENTS 19/20	7/1/2019	6/30/2020	\$138,600	\$0	\$138,600											100.0								
Sewer Capital	10489	LAWRP SYSTEM REPLACEMENTS 20/21	7/1/2020	6/30/2021	\$0	\$138,000	\$138,000											100.0								
Recycled Capital	10646	LAWRP TFC MEDIA REPLACEMENT AND REPAIR	7/1/2019	3/31/2022	\$89,000	\$43,841	\$378,000											100.0								
Sewer Capital	01477	LAWRP TREATMENT PROCESS MODERNIZATION	6/1/2020	6/30/2027	\$7,143	\$734,561	\$20,975,000											100.0								
Potable Capital	10099	LF PORTOLA FROM RANCHO PKWY TO GLEN RANCH	7/1/2020	6/30/2023	\$0	\$100,667	\$972,000		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Recycled Capital	10551	LF ZNB EAST RES FLOATING COVER	2/1/2018	9/30/2019	\$104,203	\$0	\$2,005,000											100.0								
Potable Capital	07896	MARSH O&M PLAN UPDATE	1/1/2018	6/30/2020	\$118,800	\$0	\$297,000		32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5										
Potable Capital	10537	MASON PARK DW PIPE REPLACEMENT	7/1/2020	6/30/2022	\$0	\$106,500	\$531,000	100.0																		
Potable Capital	07789	MECH-ELEC SYS REPLACEMENT 19/20-DW	7/1/2019	6/30/2020	\$950,000	\$0	\$950,000	100.0																		

System	Project Number	Project Title	Start	End	FY19-20 Direct	FY20-21 Direct	Total Direct	Improvement Districts																															
								1100	1110	1120	1130	1250	1530	1540	1850	1880	2100	2120	2130	2220	2250	2400	2530	2560	2850	2880													
Recycled Capital	07791	MECH-ELEC SYS REPLACEMENT 19/20-RW	7/1/2019	6/30/2020	\$660,000	\$0	\$660,000											100.0																					
Sewer Capital	07790	MECH-ELEC SYS REPLACEMENT 19/20-SS	7/1/2019	6/30/2020	\$550,000	\$0	\$550,000											100.0																					
Potable Capital	10462	MECH-ELEC SYS REPLACEMENT 20/21-DW	7/1/2020	6/30/2021	\$0	\$950,000	\$950,000	100.0																															
Recycled Capital	10463	MECH-ELEC SYS REPLACEMENT 20/21-RW	7/1/2020	6/30/2021	\$0	\$660,000	\$660,000											100.0																					
Sewer Capital	10464	MECH-ELEC SYS REPLACEMENT 20/21-SS	7/1/2020	6/30/2021	\$0	\$550,000	\$550,000											100.0																					
Potable Capital	10630	METER REPLACEMENT 19/20-DW	7/1/2019	6/30/2020	\$1,156,000	\$0	\$1,156,000	100.0																															
Recycled Capital	10634	METER REPLACEMENT 19/20-RW	7/1/2019	6/30/2020	\$174,600	\$0	\$174,600											100.0																					
Potable Capital	10632	METER REPLACEMENT 20/21-DW	7/1/2020	6/30/2021	\$0	\$987,000	\$987,000	100.0																															
Recycled Capital	10635	METER REPLACEMENT 20/21-RW	7/1/2020	6/30/2021	\$0	\$276,500	\$276,500											100.0																					
Sewer Capital	07097	MICHELSON FORCE MAIN REHABILITATION	12/1/2016	7/31/2019	\$7,973	\$0	\$2,217,300											100.0																					
Potable Capital	10543	MIGRATE EMAIL TO MS CLOUD DW	5/1/2019	12/31/2020	\$56,100	\$28,050	\$93,500	100.0																															
Sewer Capital	10544	MIGRATE EMAIL TO MS CLOUD SS	5/1/2019	12/31/2020	\$56,100	\$28,050	\$93,500											100.0																					
Sewer Capital	04286	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITI	4/1/2013	6/30/2022	\$9,833,285	\$5,426,030	\$238,542,100											45.5	1.5	1.5	18.9	27.7				4.1	0.1	0.6	0.1										
Sewer Capital	07900	MWRP DUMP STATION IMPROVEMENTS	6/1/2019	12/31/2020	\$138,462	\$141,500	\$291,500													3.4	3.4	33.1	48.5			9.7	0.3	1.3	0.3										
Sewer Capital	07892	MWRP FILTER VALVES AND GATE REPLACEMENT	7/1/2020	10/31/2021	\$0	\$267,078	\$466,000											100.0																					
Sewer Capital	07890	MWRP HEADWORKS PLATFORMS	6/1/2018	7/31/2020	\$155,585	\$922	\$175,000													3.4	3.4	33.1	48.5			9.7	0.3	1.3	0.3										
Sewer Capital	07891	MWRP HEADWORKS SCREENING AREA DIVERTER C	6/1/2018	7/31/2020	\$130,337	\$4,235	\$180,500													3.4	3.4	33.1	48.5			9.7	0.3	1.3	0.3										
Sewer Capital	07792	MWRP SYS REPLACEMENTS 19/20	7/1/2019	6/30/2020	\$450,000	\$0	\$450,000											100.0																					
Sewer Capital	10465	MWRP SYS REPLACEMENTS 20/21	7/1/2020	6/30/2021	\$0	\$450,000	\$450,000											100.0																					
Sewer Capital	10535	MWRP TRANSFORMER T1 REPLACEMENT	9/1/2018	12/31/2020	\$270,362	\$195,138	\$543,000											100.0																					
Recycled Capital	11181	NON-POTABLE WATER STUDIES 19/20	7/1/2019	6/30/2020	\$40,000	\$0	\$40,000													10.7	4.1	14.6	51.1	7.7	10.3									1.5					
Recycled Capital	11183	NON-POTABLE WATER STUDIES 20/21	7/1/2020	6/30/2021	\$0	\$40,000	\$40,000													10.7	4.1	14.6	51.1	7.7	10.3									1.5					
Potable Capital	10554	NTS GENERAL SYSTEM MODIFICATIONS 19/20	7/1/2019	6/30/2020	\$120,000	\$0	\$120,000	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Potable Capital	10557	NTS GENERAL SYSTEM MODIFICATIONS 20/21	7/1/2020	6/30/2021	\$0	\$121,000	\$121,000	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Potable Capital	06212	NTS INFILTRATION STUDY	6/1/2018	6/30/2020	\$31,450	\$0	\$64,900	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Potable Capital	07895	NTS MASTER PLAN UPDATE	6/1/2020	6/30/2021	\$7,692	\$92,308	\$100,000	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Potable Capital	05406	NTS-EL MODENA MODS	6/1/2018	6/30/2022	\$6,518	\$19,360	\$166,200	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Potable Capital	11142	NTS-WOODBRIDGE NTS RELOCATION	9/1/2020	6/30/2022	\$0	\$114,546	\$120,000	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								
Sewer Capital	10502	OCSD CORF LONG TERM CAPITAL PROGRAM 2018 T	7/1/2017	6/30/2050	\$4,515,125	\$6,653,125	\$210,379,000											72.7	0.9	0.9	9.0	13.3			2.6	0.1	0.4	0.1											
Sewer Capital	10500	OCSD EQUITY LONG TERM CAPITAL PROGRAM 2018	7/1/2017	6/30/2050	(\$16,720,375)	\$3,349,625	\$16,742,000													3.4	3.4	33.1	48.6			9.6	0.3	1.3	0.3										
Sewer Capital	10594	OCSD SOLIDS LEASE LONG TERM CAPITAL PROGRA	7/1/2017	6/30/2020	\$3,500,000	\$0	\$9,582,000													3.4	3.4	33.1	48.6			9.6	0.3	1.3	0.3										
Potable Capital	10503	OCWD ANNEXATION LONG TERM CAPITAL PROGRA	7/1/2017	1/30/2050	\$607,100	\$616,200	\$22,861,400	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5																								

System	Project Number	Project Title	Start	End	FY19-20 Direct	FY20-21 Direct	Total Direct	Improvement Districts																						
								1100	1110	1120	1130	1250	1530	1540	1850	1880	2100	2120	2130	2220	2250	2400	2530	2560	2850	2880				
Recycled Capital	01813	SANTIAGO DAM SLOPED OUTLET	7/1/2013	4/30/2024	\$294,411	\$294,411	\$15,417,000												10.7	4.1	14.6	51.0	7.7	10.4	1.5					
Potable Capital	07136	SANTIAGO HILLS II DOMESTIC WATER BPS	6/1/2021	10/31/2024	\$0	\$13,273	\$3,165,900							100.0																
Potable Capital	07138	SANTIAGO HILLS II DOMESTIC WATER RESERVOIR	6/1/2021	10/31/2024	\$0	\$23,294	\$10,263,800							100.0																
Recycled Capital	07139	SANTIAGO HILLS II RECYCLED WATER BPS	6/1/2021	10/31/2024	\$0	\$13,273	\$3,165,900																	100.0						
Potable Capital	10061	SCE-IRWD WATER-ENERGY PILOT PHASE 2	6/1/2019	6/30/2021	\$182,160	\$182,160	\$379,500	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5															
Recycled Capital	10071	SERRANO SUMMIT PHASE 2 RW	4/1/2017	12/31/2020	\$201,277	\$141,135	\$507,000																	100.0						
Potable Capital	07800	SERVICE LINE-VALVE-MAIN REPLACEMENT 19/20-D	7/1/2019	6/30/2020	\$3,153,600	\$0	\$3,153,600	100.0																						
Recycled Capital	07801	SERVICE LINE-VALVE-MAIN REPLACEMENT 19/20-R	7/1/2019	6/30/2020	\$428,300	\$0	\$428,300																	100.0						
Potable Capital	10480	SERVICE LINE-VALVE-MAIN REPLACEMENT 20/21-D	7/1/2020	6/30/2021	\$0	\$3,318,624	\$3,318,624	100.0																						
Recycled Capital	10482	SERVICE LINE-VALVE-MAIN REPLACEMENT 20/21-R	7/1/2020	6/30/2021	\$0	\$511,992	\$511,992																	100.0						
Sewer Capital	07802	SEWER LATERAL-MAIN REPLACEMENT 19/20	7/1/2019	6/30/2020	\$291,200	\$0	\$291,200																	100.0						
Sewer Capital	10483	SEWER LATERAL-MAIN REPLACEMENT 20/21	7/1/2020	6/30/2021	\$0	\$324,208	\$324,208																	100.0						
Sewer Capital	07886	SEWER SIPHON REHABILITATION	1/1/2019	12/31/2021	\$273,333	\$4,860,473	\$6,632,000																	100.0						
Sewer Capital	07452	SHII CANYON VIEW (AT JAMBOREE RD) 15 SS	7/1/2016	7/31/2024	\$3,167	\$3,167	\$259,600																	100.0						
Potable Capital	07376	SHII PH1 D ST (FROM SANTIAGO TO B ST) 12 DW	6/1/2016	7/31/2024	\$2,204	\$2,204	\$176,000							100.0																
Recycled Capital	07377	SHII PH1 D ST (FROM SANTIAGO TO B ST) 6 RW	6/1/2016	7/31/2024	\$2,057	\$2,057	\$162,800																	100.0						
Sewer Capital	07379	SHII PH2 A ST (FROM SANTIAGO TO B ST) 12 SS	4/1/2018	7/31/2024	\$4,131	\$4,131	\$205,000																	100.0						
Recycled Capital	07380	SHII PH2 A/B/F ST (TR 17995) 6 AND 8 RW	4/1/2018	7/31/2024	\$9,443	\$9,443	\$487,000																	100.0						
Potable Capital	07378	SHII PH2 B/F ST (FROM C ST TO Z5 RES) 12 DW	4/1/2018	7/31/2024	\$18,492	\$18,492	\$974,000							100.0																
Potable Capital	07451	SHII SANTIAGO CYN (FROM D ST TO A ST) 12 DW	7/1/2016	7/31/2024	\$7,039	\$7,039	\$1,126,900							100.0																
Recycled Capital	07453	SHII SANTIAGO CYN AND JAMBOREE 6 8 12 16 RW	7/1/2016	7/31/2024	\$13,645	\$13,645	\$2,228,300																	100.0						
Recycled Capital	07486	SHII SOUTH TR 16199 12 8 AND 6 RW	7/1/2016	7/31/2024	\$9,650	\$9,650	\$808,000																	100.0						
Sewer Capital	07484	SHII SOUTH TR 16199 15 AND 12 SS	7/1/2016	7/31/2024	\$7,918	\$7,918	\$668,000																	100.0						
Sewer Capital	10581	SOCWA ALISO CREEK OCEAN OUTFALL SEAL REPLAC	5/1/2018	6/30/2021	\$17,760	\$4,800	\$50,000																	100.0						
Sewer Capital	11189	SOCWA ETM AVAC VALVE REPLACEMENT REACHES	12/1/2019	12/31/2022	\$53,846	\$85,823	\$1,000,000																	100.0						
Sewer Capital	03750	SOCWA ETM PROTECTION-TRAIL BRIDGE CROSSING	8/1/2016	12/31/2022	\$56,559	\$386,706	\$1,065,000																	100.0						
Potable Capital	07897	SOUTH SAN DIEGO CREEK RUNOFF DIVERSION STUD	1/1/2018	6/30/2022	\$36,445	\$4,445	\$100,000	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5															
Sewer Capital	07885	SS REHAB-CALCIUM REMOVAL	7/1/2020	6/30/2022	\$0	\$75,000	\$440,000																	100.0						
Sewer Capital	11121	SS REHAB-PELICAN HILLS GOLF CLUB	3/1/2019	8/31/2020	\$416,844	\$22,623	\$531,300																	100.0						
Potable Capital	05499	STOCKDALE STORAGE FOR RECOVERY CAPACITY	7/1/2020	1/1/2021	\$0	\$1,590,800	\$1,590,800	32.6	3.3	3.0	47.5	11.1	0.4	1.6	0.5															
Recycled Capital	10580	SUNNYHILL RW PIPE REHAB	5/1/2019	11/30/2020	\$346,379	\$19,893	\$392,700																	100.0						
Recycled Capital	03808	SYPHON RESERVOIR IMPROVEMENTS	6/1/2015	1/31/2025	\$1,823,421	\$1,647,267	\$75,000,000																	10.7	4.1	14.6	51.0	7.7	10.4	1.5

Irvine Ranch Water District
Two-Year Capital Budget for Fiscal Year 2019-20 and Fiscal Year 2020-21
Section 2 - Flagged Projects

Project Number	Project Title	Flagged	Status
01100	LAKE FOREST WELL 1 DRILLING	Yes	Board Approved
06176	FUTURE GROUNDWATER SUPPLY	Yes	Unapproved
07140	TUSTIN LEGACY RED HILL WELL DRILLING AND EQUIPPING	Yes	Board Approved
10854	KERN FAN GROUNDWATER STORAGE	Yes	Active
03808	SYPHON RESERVOIR IMPROVEMENTS	Yes	Active

Irvine Ranch Water District
Two-Year Capital Budget for Fiscal Year 2019-20 and 2020-21
Section 3 - Summary of Projected Expenditures by Category

Expenditure Category	FY2019-20 Forecasted Expenditures	FY2020-21 Forecasted Expenditures	Total Direct
Development - Lake Forest	\$509,645	\$391,564	\$2,328,700
Development - Other	\$0	\$79,500	\$732,000
Development - PA1	\$89,687	\$80,026	\$3,405,300
Development - PA39	\$31,545	\$0	\$470,000
Development - PA40	\$0	\$34,800	\$447,700
Development - PA51	\$5,590,352	\$6,240,342	\$51,312,900
Development - PA6	\$609,899	\$0	\$1,820,300
Development - PA9B	\$0	\$51,203	\$506,100
Development - SHII	\$77,746	\$127,585	\$23,691,200
Development - Sub Regional	\$7,376,429	\$0	\$15,598,600
Development - Tustin Legacy	\$1,072,808	\$0	\$4,122,300
General Plant	\$2,269,000	\$2,036,200	\$4,305,200
Nonpotable Storage	\$3,055,781	\$4,755,134	\$82,741,500
OCSD - CORF - Solids Lease	(\$8,705,250)	\$10,002,750	\$236,703,000
OCWD Annexation	\$607,100	\$616,200	\$22,861,400
Operational	\$15,638,748	\$14,891,841	\$82,711,800
Planning	\$2,049,081	\$2,083,808	\$5,295,600
Property Management	\$14,339,659	\$0	\$37,950,630
Replacement - Facilities	\$7,073,532	\$14,656,042	\$47,338,900
Replacement - FY System	\$10,614,900	\$9,776,424	\$20,943,824
Replacement-Business Software	\$2,391,871	\$1,840,920	\$9,202,200
Sewage Treatment	\$495,529	\$856,657	\$22,664,100
Solids Handling	\$9,833,285	\$5,426,030	\$238,542,100
Water Banking	\$11,704,041	\$15,470,600	\$106,456,300
Water Resources	\$1,053,106	\$2,327,571	\$80,885,340
Well Rehabilitation	\$3,078,823	\$2,021,175	\$7,060,000
	\$90,857,316	\$93,766,372	\$1,110,096,994

Irvine Ranch Water District
 Two-Year Capital Budget for Fiscal Year 2019-20 and Fiscal Year 2020-21
 Section 4 - FY 2019-20 Details of Projected Expenditures by Category

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
Development - Lake Forest					
05404 BAKE PARKWAY ZONE 5-ZONE 4 FIRE FLOW PRV AND PIPELINE	\$255,239	\$412,700	\$0	\$0	\$255,239
10071 SERRANO SUMMIT PHASE 2 RW	\$201,277	\$507,000	\$0	\$0	\$201,277
10096 LAKE FOREST NAKASE DW IMPROVEMENTS	\$53,129	\$437,000	\$0	\$53,129	\$0
	\$509,645	\$1,356,700	\$0	\$53,129	\$456,516
Development - PA1					
07012 PA1 NHB3 ORCHARD HILLS 16 DW Z5	\$42,681	\$889,700	\$0	\$0	\$42,681
07013 PA1 NHB3 ORCHARD HILLS 6 8 10 12 RW ZC	\$20,655	\$475,200	\$0	\$0	\$20,655
05919 PA1 NHB1 ORCHARD HILLS 16 ZC 6 ZC+	\$18,007	\$561,400	\$0	\$0	\$18,007
07555 PA1 NHB3 ORCHARD HILLS F ST (RIDGE GATE TO E ST)6 RW	\$8,344	\$167,800	\$0	\$0	\$8,344
	\$89,687	\$2,094,100	\$0	\$0	\$89,687
Development - PA39					
03735 PA39 PH2 FACILITIES-RW	\$31,545	\$470,000	\$0	\$0	\$31,545
	\$31,545	\$470,000	\$0	\$0	\$31,545
Development - PA51					
10068 PA51 GP REACH A SS PHASE 2	\$791,653	\$1,707,100	\$0	\$0	\$791,653
10576 PA51 REACH B EAST 18 SS	\$587,623	\$2,580,000	\$0	\$0	\$587,623
10344 PA51 D5 A ST 12_10 RW	\$483,627	\$1,059,000	\$0	\$0	\$483,627
10343 PA51 D5 A ST 12 DW	\$452,509	\$989,000	\$0	\$0	\$452,509
10023 PA51 D5 CHINON FROM SOUTH CADENCE TO CADENCE 12 SS	\$363,787	\$502,000	\$0	\$0	\$363,787
10024 PA51 D5 CHINON 16 RW, 12 RW and 10 RW ZONE C	\$331,710	\$457,000	\$0	\$0	\$331,710
10022 PA51 D5 CHINON FROM SOUTH CADENCE TO CADENCE, 12 D	\$292,096	\$392,000	\$0	\$0	\$292,096
10574 PA51 MARINE WAY AT OCTA 18 SS	\$235,117	\$970,000	\$0	\$0	\$235,117

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10117 PA51 D5 CADENCE S FROM O TO CHINON 12SS	\$214,298	\$487,000	\$0	\$0	\$214,298
10868 PA51 D6 P ST 18SS	\$134,037	\$542,000	\$0	\$0	\$134,037
10804 PA51 P ST & CADENCE 12_10RW	\$119,602	\$497,000	\$0	\$0	\$119,602
10734 PA51 MARINE WY (BARRANCA TO OCTA) 16 RW	\$113,079	\$512,000	\$0	\$0	\$113,079
04614 PA51 REACH A SEWER IMPROVEMENTS	\$90,301	\$3,956,500	\$0	\$0	\$90,301
11177 PA51 D6 MARINE AND ALTON 16RW	\$89,310	\$758,000	\$0	\$0	\$89,310
10878 PA51 D5 F ST N ST 12_10RW	\$81,915	\$317,000	\$0	\$0	\$81,915
10864 PA51 D5 ASTOR 10RW	\$81,914	\$342,000	\$0	\$0	\$81,914
10862 PA51 D5 BB ST 12 RW	\$81,396	\$297,000	\$0	\$0	\$81,396
10861 PA51 D5 MERIT 12_10_RW	\$80,336	\$312,000	\$0	\$0	\$80,336
11176 PA51 D6 MARINE AND ALTON 12DW	\$59,730	\$468,000	\$0	\$0	\$59,730
10255 PA51 D5 CADENCE S 10RW	\$54,915	\$138,000	\$0	\$0	\$54,915
10865 PA51 D5 E ST 12RW	\$53,780	\$181,000	\$0	\$0	\$53,780
10254 PA51 D5 CADENCE S 12DW	\$52,795	\$138,000	\$0	\$0	\$52,795
10875 PA51 D5 F ST N ST 12DW	\$40,630	\$157,000	\$0	\$0	\$40,630
05817 PA51 ALTON-TECHNOLOGY TO MUIRLANDS SS RELOCATION	\$40,528	\$1,326,300	\$0	\$0	\$40,528
10796 PA51 D5 "P" ST & CHINON 12DW	\$39,874	\$147,000	\$0	\$0	\$39,874
10863 PA51 D5 ASTOR 12DW	\$39,874	\$147,000	\$0	\$0	\$39,874
04147 PA51 MARINE WAY ZNB-RW	\$35,145	\$1,201,200	\$0	\$0	\$35,145
06538 PA51 GP-2 ST (BOSQUE TO GP1 ST) 10 RW	\$33,404	\$1,169,400	\$0	\$0	\$33,404
10447 PA51 MARINE WAY AND BAKE 16RW	\$32,196	\$273,000	\$0	\$0	\$32,196
04267 PA51 RIDGE VALLEY-MARINE WAY TO TRABUCO SS	\$31,056	\$1,493,800	\$0	\$0	\$31,056
05788 PA51 ALTON PKWY SS RELOCATION 12 AND 18	\$30,945	\$1,232,300	\$0	\$0	\$30,945
10867 PA1 OH NB3 FRAMEWORK 6RW	\$29,953	\$126,000	\$0	\$0	\$29,953
05535 PA51 LQ ST FROM BOSQUE TO Z ST 12 -SS	\$29,575	\$1,075,300	\$0	\$0	\$29,575
10426 PA6 NB5BC B ST 6 RW PHASE 2	\$29,489	\$81,000	\$0	\$0	\$29,489
06684 PA51 GP BENCHMARK AND MODJESKA (DISTRICT 4) RW	\$28,632	\$971,300	\$0	\$0	\$28,632
06513 PA51 GP-1 ST (MARINE TO GP-2 ST) 12 SS	\$22,906	\$753,300	\$0	\$0	\$22,906

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
06048 PA51 MARINE WAY-ALTON TO BARRANCA 18 SS	\$20,304	\$874,500	\$0	\$0	\$20,304
10860 PA51 D5 MERIT 12_DW	\$17,607	\$72,000	\$0	\$0	\$17,607
06553 PA51 GP BENCHMARK AND PERSPECTIVE 16 SS	\$16,304	\$484,200	\$0	\$0	\$16,304
06514 PA51 GP GP-1 ST (MARINE TO GP-2 ST) 10 RW	\$15,509	\$536,800	\$0	\$0	\$15,509
07169 PA51 GP DIST 7 Z ST AND A ST RW ZC	\$14,316	\$492,800	\$0	\$0	\$14,316
06087 PA51 MARINE WAY-ALTON TO BARRANCA 16 RW ZN B	\$14,175	\$481,600	\$0	\$0	\$14,175
06536 PA51 GP-2 ST (BOSQUE TO GP1 ST) 12 DW	\$13,362	\$531,300	\$0	\$0	\$13,362
06086 PA51 MARINE WAY FROM ALTON TO BARRANCA 12 DW ZN 3	\$13,177	\$438,700	\$0	\$0	\$13,177
06476 PA51 MARINE WAY. RIDGE VALLEY TO 3000 FT EAST	\$11,830	\$426,800	\$0	\$0	\$11,830
06512 PA51 GP-1 ST (MARINE TO GP-2 ST) 12 DW	\$10,498	\$355,300	\$0	\$0	\$10,498
04278 PA51 RIDGE VALLEY-MARINE WAY TO TRABUCO RW	\$9,948	\$464,200	\$0	\$0	\$9,948
04153 PA51 MARINE WAY ZN3 DW	\$9,783	\$420,200	\$0	\$0	\$9,783
06823 PA51 GP EPISODE (FROM FRAME TO PUSAN) 16 RW ZC	\$9,783	\$323,400	\$0	\$0	\$9,783
04268 PA51 RIDGE VALLEY-MARINE WAY TO TRABUCO DW	\$9,617	\$486,200	\$0	\$0	\$9,617
05536 PA51 LQ ST FROM BOSQUE TO Z ST 12 RW	\$9,583	\$416,900	\$0	\$0	\$9,583
05818 PA51 ALTON-TECHNOLOGY TO MUIRLANDS 16 RW	\$9,184	\$344,300	\$0	\$0	\$9,184
06537 PA51 GP-2 ST (BOSQUE TO GP1 ST) 12 SS	\$8,112	\$333,300	\$0	\$0	\$8,112
05758 PA51 CADENCE-PUSAN TO CHINON 12_16RW	\$6,189	\$271,700	\$0	\$0	\$6,189
05756 PA51 B ST FROM SOCIABLE TO IRVINE BLV 12 ZN 4	\$5,989	\$243,100	\$0	\$0	\$5,989
07022 PA51 GP-2 ST (FROM GP-3 TO BOSQUE) 12 RWZC	\$5,978	\$180,400	\$0	\$0	\$5,978
05757 PA51 B ST FROM SOCIABLE TO IRVINE BLV 16 ZN C	\$5,949	\$240,900	\$0	\$0	\$5,949
06732 PA51 GP MAGNET (FROM RIDGE V. TO BOSQUE) 6 RW ZB	\$5,915	\$206,800	\$0	\$0	\$5,915
06595 PA51 GP TERRAPIN (TRABUCO TO CADENCE) 6 RW ZB	\$5,005	\$180,400	\$0	\$0	\$5,005
06683 PA51 GP BENCHMARK AND MODJEKSA (DISTRICT 4) 12 DW	\$4,533	\$150,700	\$0	\$0	\$4,533
06331 PA51 GP CULTIVATE (BOSQUE TO 500 E/O BOSQUE) 16	\$4,430	\$220,000	\$0	\$0	\$4,430
05816 PA51 ALTON-TECHNOLOGY TO MUIRLANDS 12 DW	\$4,392	\$177,100	\$0	\$0	\$4,392
06552 PA51 GP BENCHMARK AND PERSPECTIVE 12 DW Z4R	\$4,193	\$147,400	\$0	\$0	\$4,193
06554 PA51 GP BENCHMARK AND PERSPECTIVE 6 RW ZC	\$3,727	\$129,800	\$0	\$0	\$3,727

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
06535 PA51 GP PUSAN (EPISODE TO IRVINE BLVD) 12 RW ZC	\$3,028	\$106,700	\$0	\$0	\$3,028
06208 PA51 MARINE WAY: SR133 TO RIDGE VALLEY 12 ZONE 3	\$2,644	\$82,500	\$0	\$0	\$2,644
06209 PA51 MARINE WAY: SR133 TO RIDGE VALLEY 6 ZONE B	\$1,586	\$53,900	\$0	\$0	\$1,586
06304 PA51 BENCHMARK-BOSQUE TO 550-E/O BOSQUE 12 Z4R	\$1,397	\$49,500	\$0	\$0	\$1,397
06306 PA51 BENCHMARK-BOSQUE TO 550-E/O BOSQUE 6 ZC	\$1,397	\$49,500	\$0	\$0	\$1,397
06534 PA51 GP PUSAN (EPISODE TO IRVINE BLVD) 12 DW Z4	\$1,165	\$44,000	\$0	\$0	\$1,165
	\$5,590,352	\$37,772,400	\$0	\$0	\$5,590,352

Development - PA6

10100 PA6 NHB5B5C 12 8 6 RW	\$570,000	\$640,000	\$0	\$0	\$570,000
05243 PA6 NHB4B 6 RW ZONE D	\$15,072	\$526,900	\$0	\$0	\$15,072
06915 PA6 NHB5A 6 AND 8 RECYCLED WATER MAIN ZONE D	\$14,136	\$402,600	\$0	\$0	\$14,136
07017 PA1 NHB3 ORCHARD HILLS 6 8 RW ZC+	\$10,691	\$250,800	\$0	\$0	\$10,691
	\$609,899	\$1,820,300	\$0	\$0	\$609,899

Development - SHII

07378 SHII PH2 B/F ST (FROM C ST TO Z5 RES) 12 DW	\$18,492	\$974,000	\$0	\$0	\$18,492
07453 SHII SANTIAGO CYN AND JAMBOREE 6 8 12 16 RW	\$13,645	\$2,228,300	\$0	\$0	\$13,645
07486 SHII SOUTH TR 16199 12 8 AND 6 RW	\$9,650	\$808,000	\$0	\$0	\$9,650
07380 SHII PH2 A/B/F ST (TR 17995) 6 AND 8 RW	\$9,443	\$487,000	\$0	\$0	\$9,443
07484 SHII SOUTH TR 16199 15 AND 12 SS	\$7,918	\$668,000	\$0	\$0	\$7,918
07451 SHII SANTIAGO CYN (FROM D ST TO A ST) 12 DW	\$7,039	\$1,126,900	\$0	\$0	\$7,039
07379 SHII PH2 A ST (FROM SANTIAGO TO B ST) 12 SS	\$4,131	\$205,000	\$0	\$0	\$4,131
07452 SHII CANYON VIEW (AT JAMBOREE RD) 15 SS	\$3,167	\$259,600	\$0	\$0	\$3,167
07376 SHII PH1 D ST (FROM SANTIAGO TO B ST) 12 DW	\$2,204	\$176,000	\$0	\$0	\$2,204
07377 SHII PH1 D ST (FROM SANTIAGO TO B ST) 6 RW	\$2,057	\$162,800	\$0	\$0	\$2,057
	\$77,746	\$7,095,600	\$0	\$0	\$77,746

Development - Sub Regional

04400 EASTWOOD RW PUMP STATION ZONE A TO C	\$3,426,674	\$7,520,000	\$0	\$0	\$3,426,674
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FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
04457 EASTWOOD RW PUMP STATION ZONE A TO B	\$2,654,276	\$5,950,000	\$363,636	\$0	\$2,290,640
06198 IIC EAST ZONE B BPS UPGRADES	\$1,295,479	\$2,128,600	\$1,165,931	\$32,387	\$97,161
	\$7,376,429	\$15,598,600	\$1,529,567	\$32,387	\$5,814,475
Development - Tustin Legacy					
10260 TUSTIN LEGACY MOFFETT LEGACY 16_12DW	\$507,824	\$803,000	\$0	\$0	\$507,824
10261 TUSTIN LEGACY MOFFETT LEGACY 12RW	\$481,194	\$768,000	\$0	\$0	\$481,194
04984 TUSTIN LEGACY ARMSTRONG ZONE A-WARNER ZONE A RW	\$18,468	\$773,300	\$0	\$0	\$18,468
06766 TUSTIN LEGACY MOFFETT DR (AT PETERS CYN) 16 RW ZA	\$16,770	\$375,000	\$0	\$0	\$16,770
07163 TUSTIN LEGACY BELL AVE (REDHILL TO ARMSTRONG) 6 RW	\$13,123	\$362,800	\$0	\$0	\$13,123
06765 TUSTIN LEGACY MOFFETT DR (AT PETERS CYN) 12 DW Z1	\$12,578	\$287,000	\$0	\$0	\$12,578
07535 TUSTIN LEGACY FLIGHT DR 6 RW	\$10,514	\$270,000	\$0	\$0	\$10,514
04989 TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY RW	\$8,066	\$332,700	\$0	\$0	\$8,066
04988 TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY DW	\$4,272	\$150,500	\$0	\$0	\$4,272
	\$1,072,808	\$4,122,300	\$0	\$0	\$1,072,808
General Plant					
11203 GP_Dep 870_FY 19_20	\$1,162,500	\$1,162,500	\$837,000	\$255,750	\$69,750
11198 GP_Dep 250_FY 19_20	\$721,500	\$721,500	\$519,480	\$158,730	\$43,290
11200 GP_Dep 600_FY 19_20	\$303,000	\$303,000	\$218,160	\$66,660	\$18,180
11199 GP_Dep 515_FY 19_20	\$78,000	\$78,000	\$56,160	\$17,160	\$4,680
11202 GP_Dep 710_FY 19_20	\$4,000	\$4,000	\$2,880	\$880	\$240
	\$2,269,000	\$2,269,000	\$1,633,680	\$499,180	\$136,140
Nonpotable Storage					
03808 SYPHON RESERVOIR IMPROVEMENTS	\$1,823,421	\$75,000,000	\$0	\$1,336,567	\$486,853
11168 LAKE FOREST ZONE C RECYCLED WATER PUMP STATION	\$790,455	\$3,801,600	\$0	\$580,194	\$210,261
04388 EASTWOOD RW PUMP STATION ZONE A TO SYPHON	\$293,195	\$2,989,500	\$0	\$214,912	\$78,283
11236 LAKE FOREST ZONE C RECYCLED WATER PIPELINE	\$148,710	\$950,400	\$0	\$109,153	\$39,557
	\$3,055,781	\$82,741,500	\$0	\$2,240,827	\$814,954

FY Exp Category		FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
OCSD - CORF - Solids Lease						
10502	OCSD CORF LONG TERM CAPITAL PROGRAM 2018 TO 2050	\$4,515,125	\$210,379,000	\$3,282,496	\$1,006,873	\$225,756
10594	OCSD SOLIDS LEASE LONG TERM CAPITAL PROGRAM 2018 to 2	\$3,500,000	\$9,582,000	\$0	\$2,859,500	\$640,500
10500	OCSD EQUITY LONG TERM CAPITAL PROGRAM 2018 TO 2050	(\$16,720,375)	\$16,742,000	\$0	(\$13,660,546)	(\$3,059,829)
		(\$8,705,250)	\$236,703,000	\$3,282,496	(\$9,794,173)	(\$2,193,572)
OCWD Annexation						
10503	OCWD ANNEXATION LONG TERM CAPITAL PROGRAM 2018 TO	\$607,100	\$22,861,400	\$0	\$486,287	\$120,813
		\$607,100	\$22,861,400	\$0	\$486,287	\$120,813
Operational						
06401	3.7 MG ZONE 1 RESERVOIR	\$5,234,675	\$12,626,300	\$0	\$4,192,975	\$1,041,700
06214	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	\$1,886,063	\$2,976,900	\$0	\$1,510,736	\$375,327
10559	BAKER WTP FENCING & ACCESS IMPROVEMENTS & OUTFALL R	\$1,273,182	\$1,422,500	\$0	\$1,019,819	\$253,363
01398	SANTIAGO CYN AREA PS IMPROVMENTS	\$1,204,942	\$6,613,000	\$0	\$965,158	\$239,783
10379	SAN JOAQUIN RESERVOIR FILTRATION FACILITY	\$965,042	\$3,654,000	\$0	\$708,341	\$256,701
10101	SANTIAGO CANYON FLEMING STORAGE AND PUMP STATION I	\$726,297	\$9,001,000	\$0	\$726,297	\$0
05407	ILP NORTH CONVERSION-RESERVOIR	\$423,341	\$14,382,500	\$1,270	\$72,391	\$349,680
11170	RATTLESNAKE RESERVOIR FILTRATION	\$384,000	\$3,055,000	\$0	\$281,856	\$102,144
10093	EMERGENCY MWRP RW DIVERSION TO SAN DIEGO CREEK	\$361,465	\$1,905,000	\$0	\$295,317	\$66,148
07783	GEN SYS MODS 19/20-SS	\$330,000	\$330,000	\$330,000	\$0	\$0
07883	CNG FILLING STATION-RW	\$306,815	\$748,000	\$0	\$224,896	\$81,920
07882	CNG FILLING STATION-SS	\$306,815	\$748,000	\$0	\$250,361	\$56,454
07881	CNG FILLING STATION-DW	\$306,815	\$748,000	\$0	\$245,759	\$61,056
01813	SANTIAGO DAM SLOPED OUTLET	\$294,411	\$15,417,000	\$0	\$215,803	\$78,608
07782	GEN SYS MODS 19/20-DW	\$254,300	\$254,300	\$0	\$203,694	\$50,606
07096	OSO RES STRAINER AND METER	\$238,381	\$375,100	\$0	\$174,733	\$63,648
11172	CANADA LIFT STATION IMPROVEMENTS	\$173,571	\$2,060,000	\$0	\$141,808	\$31,764
07890	MWRP HEADWORKS PLATFORMS	\$155,585	\$175,000	\$0	\$126,957	\$28,628

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
07900 MWRP DUMP STATION IMPROVEMENTS	\$138,462	\$291,500	\$0	\$112,985	\$25,477
07891 MWRP HEADWORKS SCREENING AREA DIVERTER CHUTE	\$130,337	\$180,500	\$0	\$106,355	\$23,982
10554 NTS GENERAL SYSTEM MODIFICATIONS 19/20	\$120,000	\$120,000	\$0	\$96,120	\$23,880
07784 GEN SYS MODS 19/20-RW	\$117,000	\$117,000	\$0	\$85,761	\$31,239
11151 PETERS CANYON WATER CAPTURE AND REUSE PIPELINE IMRO	\$105,217	\$220,000	\$0	\$84,279	\$20,938
11123 EROSION OVR SS NEAR SERRANO CK	\$94,000	\$323,000	\$94,000	\$0	\$0
11146 SAN JOAQUIN MARSH POLYPHAGOUS SHOTHOLE BORER MITI	\$47,826	\$100,000	\$0	\$38,309	\$9,517
06212 NTS INFILTRATION STUDY	\$31,450	\$64,900	\$0	\$25,191	\$6,259
07907 LAKE FOREST ZONE 5 WEST BPS UPGRADES	\$15,578	\$1,302,200	\$0	\$12,478	\$3,100
05406 NTS-EL MODENA MODS	\$6,518	\$166,200	\$0	\$5,221	\$1,297
11194 SAFETY- MWRP MBR FALL PROTECTION IMP	\$1,923	\$262,000	\$1,923	\$0	\$0
11209 BAKER WTP HCI SCRUBBER	\$1,154	\$218,000	\$0	\$924	\$230
06162 CP IMP-CRYSTAL COVE RECT-DW	\$1,002	\$138,800	\$1,002	\$0	\$0
06161 CENTRALIZED CONTROL ROOM AT MWRP-SS	\$962	\$170,000	\$0	\$785	\$177
06160 CENTRALIZED CONTROL ROOM AT MWRP-DW	\$962	\$170,000	\$0	\$770	\$191
06163 CP IMP-CRYSTAL COVE RECT-RW	\$577	\$133,300	\$577	\$0	\$0
07887 IRVINE LAKE SERVICE IMPROVEMENT	\$80	\$229,000	\$0	\$64	\$16
	\$15,638,748	\$80,698,000	\$428,772	\$11,926,144	\$3,283,832
Planning					
07779 CAPITAL PLANNING SUPPORT 19/20 RW	\$400,000	\$400,000	\$0	\$293,200	\$106,800
07777 CAPITAL PLANNING SUPPORT 19/20 DW	\$400,000	\$400,000	\$0	\$320,400	\$79,600
07778 CAPITAL PLANNING SUPPORT 19/20 SS	\$400,000	\$400,000	\$0	\$326,400	\$73,600
11135 SALT MANAGEMENT MODEL AND PLAN UPDATE	\$187,500	\$187,500	\$0	\$137,625	\$49,875
07084 REPLACEMENT PLANNING DW	\$120,000	\$440,000	\$120,000	\$0	\$0
07085 REPLACEMENT PLANNING RW	\$120,000	\$440,000	\$120,000	\$0	\$0
07896 MARSH O&M PLAN UPDATE	\$118,800	\$297,000	\$0	\$95,159	\$23,641
11171 TREATMENT EVALUATION FOR WELLS OPA-1 AND ET-1 AND S	\$71,500	\$143,000	\$0	\$57,271	\$14,228

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
07083 POTABLE REUSE ALTERNATIVES ANALYSIS SS	\$55,556	\$250,000	\$0	\$45,333	\$10,222
07082 POTABLE REUSE ALTERNATIVES ANALYSIS DW	\$55,556	\$250,000	\$0	\$44,500	\$11,056
11181 NON-POTABLE WATER STUDIES 19/20	\$40,000	\$40,000	\$0	\$29,360	\$10,640
07897 SOUTH SAN DIEGO CREEK RUNOFF DIVERSION STUDY	\$36,445	\$100,000	\$0	\$29,192	\$7,252
10063 SALT MANAGEMENT MODELING ON RECYCLED WATER QUALI	\$36,033	\$108,100	\$0	\$26,448	\$9,585
07895 NTS MASTER PLAN UPDATE	\$7,692	\$100,000	\$0	\$6,162	\$1,531
	\$2,049,081	\$3,555,600	\$240,000	\$1,411,051	\$398,031
Property Management					
06210 ASSET OPTIMIZATION-SAND CANYON PROFESSIONAL CTR	\$12,645,911	\$20,605,630	\$12,645,911	\$0	\$0
01264 ASSET OPTIMIZATION-LAKE FOREST DEVELOPMENT	\$1,693,748	\$17,345,000	\$1,693,748	\$0	\$0
	\$14,339,659	\$37,950,630	\$14,339,659	\$0	\$0
Replacement - Facilities					
05476 ZONE A TO RATTLESNAKE RESERVOIR PUMP STATION	\$1,375,706	\$11,481,750	\$1,375,706	\$0	\$0
10102 SANTIAGO CYN PIPE REPLACEMENT-LADD CYN RD DW	\$1,137,674	\$1,293,000	\$1,137,674	\$0	\$0
10542 VAULT LID REPLACEMENT-IRV BLVD	\$833,055	\$1,078,350	\$833,055	\$0	\$0
11121 SS REHAB-PELICAN HILLS GOLF CLUB	\$416,844	\$531,300	\$416,844	\$0	\$0
10580 SUNNYHILL RW PIPE REHAB	\$346,379	\$392,700	\$346,379	\$0	\$0
07886 SEWER SIPHON REHABILITATION	\$273,333	\$6,632,000	\$273,333	\$0	\$0
10535 MWRP TRANSFORMER T1 REPLACEMENT	\$270,362	\$543,000	\$270,362	\$0	\$0
10999 BONITA CANYON ZONE D to B PRS SUPPLY LINE REPLACEMENT	\$215,413	\$325,000	\$215,413	\$0	\$0
07889 TURTLE RIDGE PIPE REHAB-RW	\$207,818	\$309,000	\$207,818	\$0	\$0
07888 TURTLE RIDGE PIPE REHAB-DW	\$207,818	\$309,000	\$207,818	\$0	\$0
05761 15 MG ZONE 1 RESERVOIR INTERIOR COATING	\$189,431	\$2,748,500	\$189,431	\$0	\$0
11218 LAKE FOREST WELL NO. 2 TREATMENT & BYPASS SEWER CON	\$138,083	\$587,000	\$0	\$110,605	\$27,479
07898 PLC REPLACEMENT-DW	\$133,468	\$440,000	\$133,468	\$0	\$0
07899 PLC REPLACEMENT-RW	\$133,468	\$440,000	\$133,468	\$0	\$0
10551 LF ZNB EAST RES FLOATING COVER	\$104,203	\$2,005,000	\$104,203	\$0	\$0

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10646 LAWRP TFC MEDIA REPLACEMENT AND REPAIR	\$89,000	\$378,000	\$89,000	\$0	\$0
11174 PLC REPLACEMENT-SS	\$87,152	\$220,000	\$87,152	\$0	\$0
11169 LAKE FOREST ZONE B TO C BOOSTER PUMP STATION IMPROVE	\$85,636	\$1,905,000	\$0	\$62,857	\$22,779
11164 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$82,500	\$110,000	\$0	\$66,083	\$16,418
11139 VAULT LID REPLACEMENT-PH2 DW	\$81,600	\$402,200	\$81,600	\$0	\$0
11118 VALVE REPLACE-DW	\$57,100	\$354,200	\$57,100	\$0	\$0
11120 VALVE REPLACE-RW	\$57,100	\$354,200	\$57,100	\$0	\$0
03750 SOCWA ETM PROTECTION-TRAIL BRIDGE CROSSING (PC 21)	\$56,559	\$1,065,000	\$56,559	\$0	\$0
11166 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$56,250	\$75,000	\$0	\$41,288	\$14,963
11167 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$56,250	\$75,000	\$0	\$45,956	\$10,294
11189 SOCWA ETM AVAC VALVE REPLACEMENT REACHES D AND E (P	\$53,846	\$1,000,000	\$53,846	\$0	\$0
07172 UNIVERSITY DR WIDENING APPURTENANCE RELOC-RW	\$50,521	\$248,000	\$12,630	\$37,891	\$0
07171 UNIVERSITY DR WIDENING APPURTENANCE RELOC-SS	\$50,521	\$248,000	\$25,260	\$25,260	\$0
07170 UNIVERSITY DR WIDENING APPURTENANCE RELOC-DW	\$50,521	\$248,000	\$37,891	\$12,630	\$0
11145 VAULT LID REPLACEMENT-PH2 RW	\$49,000	\$234,000	\$49,000	\$0	\$0
11227 TCWD EL TORO LIFT STATION PUMP & MOTOR REPLACEMENT	\$48,485	\$2,630,000	\$48,485	\$0	\$0
11147 VAULT LID REPLACEMENT-PH2 SS	\$37,000	\$234,000	\$37,000	\$0	\$0
10581 SOCWA ALISO CREEK OCEAN OUTFALL SEAL REPLACEMENT AN	\$17,760	\$50,000	\$17,760	\$0	\$0
03780 SAN JOAQUIN RESERVOIR LINER REPLACEMENT	\$12,623	\$2,807,900	\$12,623	\$0	\$0
07097 MICHELSON FORCE MAIN REHABILITATION	\$7,973	\$2,217,300	\$7,973	\$0	\$0
06164 CP IMP-CULVER CP5 RECT AND ANODE BED REPLACEMENT	\$1,538	\$244,200	\$1,538	\$0	\$0
06159 CP IMP-CANADA RD JOINT BONDING	\$1,538	\$233,200	\$1,538	\$0	\$0
	\$7,073,532	\$44,448,800	\$6,579,031	\$402,569	\$91,932

Replacement - FY System

07800 SERVICE LINE-VALVE-MAIN REPLACEMENT 19/20-DW	\$3,153,600	\$3,153,600	\$3,153,600	\$0	\$0
10630 METER REPLACEMENT 19/20-DW	\$1,156,000	\$1,156,000	\$1,156,000	\$0	\$0
07789 MECH-ELEC SYS REPLACEMENT 19/20-DW	\$950,000	\$950,000	\$950,000	\$0	\$0

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
07791 MECH-ELEC SYS REPLACEMENT 19/20-RW	\$660,000	\$660,000	\$660,000	\$0	\$0
07796 RAISE SYSTEM VALVES 19/20 UNDER RA-DW	\$577,500	\$577,500	\$577,500	\$0	\$0
07790 MECH-ELEC SYS REPLACEMENT 19/20-SS	\$550,000	\$550,000	\$550,000	\$0	\$0
07792 MWRP SYS REPLACEMENTS 19/20	\$450,000	\$450,000	\$450,000	\$0	\$0
07801 SERVICE LINE-VALVE-MAIN REPLACEMENT 19/20-RW	\$428,300	\$428,300	\$428,300	\$0	\$0
07795 RAISE MANHOLES TO GRADE 19/20 UNDER RA	\$346,500	\$346,500	\$346,500	\$0	\$0
07802 SEWER LATERAL-MAIN REPLACEMENT 19/20	\$291,200	\$291,200	\$291,200	\$0	\$0
10515 ASPHALT REPLACEMENT 19/20-DW	\$220,000	\$220,000	\$220,000	\$0	\$0
10516 ASPHALT REPLACEMENT 19/20-RW	\$220,000	\$220,000	\$220,000	\$0	\$0
10525 INDUSTRIAL COATINGS REPLACEMENT 19/20-DW	\$220,000	\$220,000	\$220,000	\$0	\$0
10526 INDUSTRIAL COATINGS REPLACEMENT 19/20-RW	\$220,000	\$220,000	\$220,000	\$0	\$0
11161 FACILITIES SYSTEM REPLACEMENTS 19/20-RW	\$200,000	\$200,000	\$0	\$146,800	\$53,200
11160 FACILITIES SYSTEM REPLACEMENTS 19/20-DW	\$200,000	\$200,000	\$0	\$160,200	\$39,800
10634 METER REPLACEMENT 19/20-RW	\$174,600	\$174,600	\$174,600	\$0	\$0
07797 RAISE SYSTEM VALVES 19/20 UNDER RA-RW	\$138,600	\$138,600	\$138,600	\$0	\$0
07788 LAWRP SYSTEM REPLACEMENTS 19/20	\$138,600	\$138,600	\$138,600	\$0	\$0
10518 ASPHALT REPLACEMENT 19/20-SS	\$110,000	\$110,000	\$110,000	\$0	\$0
10527 INDUSTRIAL COATINGS REPLACEMENT 19/20-SS	\$110,000	\$110,000	\$110,000	\$0	\$0
11163 FACILITIES SYSTEM REPLACEMENTS 19/20-SS	\$100,000	\$100,000	\$0	\$81,700	\$18,300
	\$10,614,900	\$10,614,900	\$10,114,900	\$388,700	\$111,300
Replacement-Business Software					
10547 CC&B SOFTWARE UPGRADE SS	\$657,462	\$1,424,500	\$657,462	\$0	\$0
10546 CC&B SOFTWARE UPGRADE DW	\$657,462	\$1,424,500	\$657,462	\$0	\$0
03566 ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENT-DW	\$396,446	\$2,682,100	\$0	\$317,553	\$78,893
03567 ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENT-SS	\$396,446	\$2,682,100	\$0	\$323,500	\$72,946
10345 BUSINESS INTELLIGENCE (BI)DISASTER RECOVERY (DR) CLOUD	\$85,929	\$401,000	\$85,929	\$0	\$0
10347 BUSINESS INTELLIGENCE (BI) DISASTER RECOVERY (DR) CLOUD	\$85,928	\$401,000	\$85,928	\$0	\$0

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10543 MIGRATE EMAIL TO MS CLOUD DW	\$56,100	\$93,500	\$56,100	\$0	\$0
10544 MIGRATE EMAIL TO MS CLOUD SS	\$56,100	\$93,500	\$56,100	\$0	\$0
	\$2,391,871	\$9,202,200	\$1,598,980	\$641,053	\$151,839
Sewage Treatment					
05427 WATER RECYCLING TRT PLANT MSTR PLAN UPDATE-SS	\$322,943	\$1,130,300	\$0	\$263,521	\$59,421
07141 WATER RECYCLING TRT PLANT MSTR PLAN UPDATE-RW	\$165,443	\$558,800	\$0	\$121,270	\$44,173
01477 LAWRP TREATMENT PROCESS MODERNIZATION	\$7,143	\$20,975,000	\$7,143	\$0	\$0
	\$495,529	\$22,664,100	\$7,143	\$384,791	\$103,595
Solids Handling					
04286 MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	\$9,833,285	\$238,542,100	\$4,474,145	\$4,582,311	\$776,830
	\$9,833,285	\$238,542,100	\$4,474,145	\$4,582,311	\$776,830
Water Banking					
10854 KERN FAN GROUNDWATER STORAGE	\$10,856,284	\$93,838,000	\$0	\$8,695,883	\$2,160,400
06023 ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	\$490,257	\$9,872,500	\$0	\$392,696	\$97,561
07160 WATER SUPPLY RELIABILITY AGREEMENTS 18/20	\$220,000	\$440,000	\$0	\$176,220	\$43,780
07804 WATER RELIABILITY PLANNING 19/20	\$137,500	\$137,500	\$0	\$110,138	\$27,363
	\$11,704,041	\$104,288,000	\$0	\$9,374,936	\$2,329,104
Water Resources					
11185 RW CONVERSION IMPROVEMENTS FOR OFF-SITE 19/20	\$503,500	\$503,500	\$503,500	\$0	\$0
10061 SCE-IRWD WATER-ENERGY PILOT PHASE 2	\$182,160	\$379,500	\$0	\$145,910	\$36,250
10558 BAKER PIPELINE CAPACITY PURCHASE	\$171,600	\$357,500	\$0	\$137,452	\$34,148
07803 WATER AND ENERGY PLANNING STUDIES DW 19/20	\$126,500	\$126,500	\$0	\$101,327	\$25,174
01402 WELLS 51/52/TUSTIN LEGACY TREATMENT ALTERNATIVES STU	\$69,346	\$133,100	\$0	\$55,546	\$13,800
	\$1,053,106	\$1,500,100	\$503,500	\$440,235	\$109,372
Well Rehabilitation					
07088 WELL REHAB-DRWF 11	\$670,923	\$770,000	\$670,923	\$0	\$0

FY Exp Category	FY 19-20 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10098 WELL REHAB-DRWF 12	\$628,071	\$770,000	\$628,071	\$0	\$0
07091 WELL REHAB-DRWF 16	\$507,999	\$770,000	\$507,999	\$0	\$0
07089 WELL REHAB-DRWF 14	\$504,782	\$770,000	\$504,782	\$0	\$0
07805 WELL MAINTENANCE AND REHABILITATION 19/20-DW	\$360,000	\$360,000	\$360,000	\$0	\$0
10914 WELL REHAB-DRWF 5	\$179,009	\$770,000	\$179,009	\$0	\$0
11124 WELL MAINTENANCE AND REHABILITATION 19/20-RW	\$90,000	\$90,000	\$90,000	\$0	\$0
11137 WELL REHAB-IDP 76	\$74,308	\$770,000	\$74,308	\$0	\$0
07087 WELL REHAB-DRWF 10	\$63,731	\$770,000	\$63,731	\$0	\$0
	\$3,078,823	\$5,840,000	\$3,078,823	\$0	\$0
	\$90,857,316	\$974,209,330	\$47,810,695	\$23,069,426	\$19,977,195

Irvine Ranch Water District
Two-Year Capital Budget for Fiscal Year 2019-20 and Fiscal Year 2020-21
Section 4 - FY 2020-21 Details of Projected Expenditures by Category

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
Development - Lake Forest					
05404 BAKE PARKWAY ZONE 5-ZONE 4 FIRE FLOW PRV AND PIPELINE	\$44,286	\$412,700	\$0	\$0	\$44,286
10071 SERRANO SUMMIT PHASE 2 RW	\$141,135	\$507,000	\$0	\$0	\$141,135
10096 LAKE FOREST NAKASE DW IMPROVEMENTS	\$105,475	\$437,000	\$0	\$105,475	\$0
10099 LF PORTOLA FROM RANCHO PKWY TO GLEN RANCH RD DW I	\$100,667	\$972,000	\$0	\$80,634	\$20,033
	\$391,564	\$2,328,700	\$0	\$186,110	\$205,454
Development - Other					
07086 CALIFORNIA AVE RW PIPELINE-ACADEMY TO THEORY	\$79,500	\$732,000	\$79,500	\$0	\$0
	\$79,500	\$732,000	\$79,500	\$0	\$0
Development - PA1					
01722 PA1 NHB4 ORCHARD HILLS RW	\$27,915	\$566,500	\$0	\$0	\$27,915
07173 PA1 PORTOLA PKWY SEWER REPLACEMENT	\$52,112	\$744,700	\$0	\$0	\$52,112
	\$80,026	\$1,311,200	\$0	\$0	\$80,026
Development - PA40					
03734 PA40 TRAVELAND FACILITIES-RW	\$34,800	\$447,700	\$0	\$0	\$34,800
	\$34,800	\$447,700	\$0	\$0	\$34,800
Development - PA51					
01103 PA51 MASTER FACILITIES-RW	\$392,459	\$4,345,000	\$0	\$0	\$392,459
01466 PA51 MASTER FACILITIES-DW	\$353,100	\$4,290,500	\$0	\$0	\$353,100
01642 PA51 MASTER FACILITIES-SS	\$201,000	\$2,405,000	\$0	\$0	\$201,000
10107 PA51 REACH B SOUTH 12" SEWER FROM BARRANCA TO 5-FWY	\$230,769	\$2,500,000	\$0	\$0	\$230,769
10426 PA6 NB5BC B ST 6 RW PHASE 2	\$15,541	\$81,000	\$0	\$0	\$15,541
10574 PA51 MARINE WAY AT OCTA 18 SS	\$637,848	\$970,000	\$0	\$0	\$637,848

FY Exp Category		FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10576	PA51 REACH B EAST 18 SS	\$1,740,778	\$2,580,000	\$0	\$0	\$1,740,778
10734	PA51 MARINE WY (BARRANCA TO OCTA) 16 RW	\$383,368	\$512,000	\$0	\$0	\$383,368
10796	PA51 D5 "P" ST & CHINON 12DW	\$92,718	\$147,000	\$0	\$0	\$92,718
10804	PA51 P ST & CADENCE 12_10RW	\$328,755	\$497,000	\$0	\$0	\$328,755
10860	PA51 D5 MERIT 12_DW	\$47,595	\$72,000	\$0	\$0	\$47,595
10861	PA51 D5 MERIT 12_10_RW	\$200,942	\$312,000	\$0	\$0	\$200,942
10862	PA51 D5 BB ST 12 RW	\$184,883	\$297,000	\$0	\$0	\$184,883
10863	PA51 D5 ASTOR 12DW	\$92,718	\$147,000	\$0	\$0	\$92,718
10864	PA51 D5 ASTOR 10RW	\$248,238	\$342,000	\$0	\$0	\$248,238
10865	PA51 D5 E ST 12RW	\$108,686	\$181,000	\$0	\$0	\$108,686
10867	PA1 OH NB3 FRAMEWORK 6RW	\$64,165	\$126,000	\$0	\$0	\$64,165
10868	PA51 D6 P ST 18SS	\$354,929	\$542,000	\$0	\$0	\$354,929
10875	PA51 D5 F ST N ST 12DW	\$100,933	\$157,000	\$0	\$0	\$100,933
10878	PA51 D5 F ST N ST 12_10RW	\$204,100	\$317,000	\$0	\$0	\$204,100
11176	PA51 D6 MARINE AND ALTON 12DW	\$98,244	\$468,000	\$0	\$0	\$98,244
11177	PA51 D6 MARINE AND ALTON 16RW	\$158,572	\$758,000	\$0	\$0	\$158,572
		\$6,240,342	\$22,046,500	\$0	\$0	\$6,240,342
Development - PA9B						
01762	PA9B PHASE 5 GATEWAY PARK RW PIPES	\$51,203	\$506,100	\$0	\$0	\$51,203
		\$51,203	\$506,100	\$0	\$0	\$51,203
Development - SHII						
07136	SANTIAGO HILLS II DOMESTIC WATER BPS	\$13,273	\$3,165,900	\$0	\$0	\$13,273
07138	SANTIAGO HILLS II DOMESTIC WATER RESERVOIR	\$23,294	\$10,263,800	\$0	\$0	\$23,294
07139	SANTIAGO HILLS II RECYCLED WATER BPS	\$13,273	\$3,165,900	\$0	\$0	\$13,273
07376	SHII PH1 D ST (FROM SANTIAGO TO B ST) 12 DW	\$2,204	\$176,000	\$0	\$0	\$2,204
07377	SHII PH1 D ST (FROM SANTIAGO TO B ST) 6 RW	\$2,057	\$162,800	\$0	\$0	\$2,057
07378	SHII PH2 B/F ST (FROM C ST TO Z5 RES) 12 DW	\$18,492	\$974,000	\$0	\$0	\$18,492

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
07379 SHII PH2 A ST (FROM SANTIAGO TO B ST) 12 SS	\$4,131	\$205,000	\$0	\$0	\$4,131
07380 SHII PH2 A/B/F ST (TR 17995) 6 AND 8 RW	\$9,443	\$487,000	\$0	\$0	\$9,443
07451 SHII SANTIAGO CYN (FROM D ST TO A ST) 12 DW	\$7,039	\$1,126,900	\$0	\$0	\$7,039
07452 SHII CANYON VIEW (AT JAMBOREE RD) 15 SS	\$3,167	\$259,600	\$0	\$0	\$3,167
07453 SHII SANTIAGO CYN AND JAMBOREE 6 8 12 16 RW	\$13,645	\$2,228,300	\$0	\$0	\$13,645
07484 SHII SOUTH TR 16199 15 AND 12 SS	\$7,918	\$668,000	\$0	\$0	\$7,918
07486 SHII SOUTH TR 16199 12 8 AND 6 RW	\$9,650	\$808,000	\$0	\$0	\$9,650
	\$127,585	\$23,691,200	\$0	\$0	\$127,585
General Plant					
11204 GP_Dep 250_FY 20_21	\$328,500	\$328,500	\$320,945	\$6,242	\$1,314
11205 GP_Dep 515_FY 20_21	\$104,000	\$104,000	\$101,608	\$1,976	\$416
11206 GP_Dep 600_FY 20_21	\$264,200	\$264,200	\$258,123	\$5,020	\$1,057
11208 GP_Dep 870_FY 20_21	\$1,339,500	\$1,339,500	\$1,308,692	\$25,451	\$5,358
	\$2,036,200	\$2,036,200	\$1,989,367	\$38,688	\$8,145
Nonpotable Storage					
03808 SYPHON RESERVOIR IMPROVEMENTS	\$1,647,267	\$75,000,000	\$0	\$1,207,447	\$439,820
04388 EASTWOOD RW PUMP STATION ZONE A TO SYPHON	\$544,327	\$2,989,500	\$0	\$398,992	\$145,335
11168 LAKE FOREST ZONE C RECYCLED WATER PUMP STATION	\$2,144,338	\$3,801,600	\$0	\$1,573,944	\$570,394
11236 LAKE FOREST ZONE C RECYCLED WATER PIPELINE	\$419,202	\$950,400	\$0	\$307,694	\$111,508
	\$4,755,134	\$82,741,500	\$0	\$3,488,077	\$1,267,057
OCSD - CORF - Solids Lease					
10500 OCSD EQUITY LONG TERM CAPITAL PROGRAM 2018 TO 2050	\$3,349,625	\$16,742,000	\$0	\$2,736,644	\$612,981
10502 OCSD CORF LONG TERM CAPITAL PROGRAM 2018 TO 2050	\$6,653,125	\$210,379,000	\$4,836,822	\$1,483,647	\$332,656
	\$10,002,750	\$227,121,000	\$4,836,822	\$4,220,291	\$945,638
OCWD Annexation					
10503 OCWD ANNEXATION LONG TERM CAPITAL PROGRAM 2018 TO	\$616,200	\$22,861,400	\$0	\$493,576	\$122,624
	\$616,200	\$22,861,400	\$0	\$493,576	\$122,624

FY Exp Category		FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
Operational						
01398	SANTIAGO CYN AREA PS IMPROVMENTS	\$5,110,039	\$6,613,000	\$0	\$4,093,141	\$1,016,898
01813	SANTIAGO DAM SLOPED OUTLET	\$294,411	\$15,417,000	\$0	\$215,803	\$78,608
05406	NTS-EL MODENA MODS	\$19,360	\$166,200	\$0	\$15,507	\$3,853
05520	ACCESS FOR 4 SS REACHES	\$42,200	\$368,000	\$42,200	\$0	\$0
06160	CENTRALIZED CONTROL ROOM AT MWRP-DW	\$52,498	\$170,000	\$0	\$42,051	\$10,447
06161	CENTRALIZED CONTROL ROOM AT MWRP-SS	\$53,731	\$170,000	\$0	\$43,844	\$9,886
06162	CP IMP-CRYSTAL COVE RECT-DW	\$34,518	\$138,800	\$34,518	\$0	\$0
06163	CP IMP-CRYSTAL COVE RECT-RW	\$29,923	\$133,300	\$29,923	\$0	\$0
06214	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	\$691,448	\$2,976,900	\$0	\$553,850	\$137,598
07096	OSO RES STRAINER AND METER	\$124,872	\$375,100	\$0	\$91,531	\$33,341
07887	IRVINE LAKE SERVICE IMPROVEMENT	\$54,960	\$229,000	\$0	\$44,023	\$10,937
07890	MWRP HEADWORKS PLATFORMS	\$922	\$175,000	\$0	\$752	\$170
07891	MWRP HEADWORKS SCREENING AREA DIVERTER CHUTE	\$4,235	\$180,500	\$0	\$3,455	\$779
07900	MWRP DUMP STATION IMPROVEMENTS	\$141,500	\$291,500	\$0	\$115,464	\$26,036
07907	LAKE FOREST ZONE 5 WEST BPS UPGRADES	\$186,935	\$1,302,200	\$0	\$149,735	\$37,200
10101	SANTIAGO CANYON FLEMING STORAGE AND PUMP STATION I	\$2,318,834	\$9,001,000	\$0	\$2,318,834	\$0
10379	SAN JOAQUIN RESERVOIR FILTRATION FACILITY	\$2,098,688	\$3,654,000	\$0	\$1,540,437	\$558,251
10477	GEN SYS MODS 20/21-DW	\$251,800	\$251,800	\$0	\$201,692	\$50,108
10478	GEN SYS MODS 20/21-RW	\$118,000	\$118,000	\$0	\$86,612	\$31,388
10488	GEN SYS MODS 20/21-SS	\$330,000	\$330,000	\$330,000	\$0	\$0
10557	NTS GENERAL SYSTEM MODIFICATIONS 20/21	\$121,000	\$121,000	\$0	\$96,921	\$24,079
10559	BAKER WTP FENCING & ACCESS IMPROVEMENTS & OUTFALL R	\$84,318	\$1,422,500	\$0	\$67,539	\$16,779
11123	EROSION OVR SS NEAR SERRANO CK	\$229,000	\$323,000	\$229,000	\$0	\$0
11146	SAN JOAQUIN MARSH POLYPHAGOUS SHOTHOLE BORER MITI	\$52,174	\$100,000	\$0	\$41,791	\$10,383
11151	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE IMRO	\$114,783	\$220,000	\$0	\$91,941	\$22,842
11154	RADIO TOWER IMP-DW	\$43,500	\$187,000	\$43,500	\$0	\$0
11156	RADIO TOWER IMP-SS	\$43,500	\$192,000	\$43,500	\$0	\$0

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
11157 RADIO TOWER IMP-RW	\$43,500	\$192,000	\$43,500	\$0	\$0
11170 RATTLESNAKE RESERVOIR FILTRATION	\$1,058,098	\$3,055,000	\$0	\$776,644	\$281,454
11172 CANADA LIFT STATION IMPROVEMENTS	\$733,172	\$2,060,000	\$0	\$599,002	\$134,171
11193 SAFETY- DISTRICT-WIDE FALL PROTECTION ASSESSMENT-DW	\$117,000	\$127,000	\$117,000	\$0	\$0
11194 SAFETY- MWRP MBR FALL PROTECTION IMP	\$99,077	\$262,000	\$99,077	\$0	\$0
11195 SAFETY- DISTRICT-WIDE FALL PROTECTION ASSESSMENT-SS	\$116,000	\$127,000	\$116,000	\$0	\$0
11209 BAKER WTP HCI SCRUBBER	\$77,846	\$218,000	\$0	\$62,355	\$15,491
	\$14,891,841	\$50,667,800	\$1,128,218	\$11,252,924	\$2,510,698

Planning

07082 POTABLE REUSE ALTERNATIVES ANALYSIS DW	\$27,778	\$250,000	\$0	\$22,250	\$5,528
07083 POTABLE REUSE ALTERNATIVES ANALYSIS SS	\$27,778	\$250,000	\$0	\$22,667	\$5,111
07084 REPLACEMENT PLANNING DW	\$60,000	\$440,000	\$60,000	\$0	\$0
07085 REPLACEMENT PLANNING RW	\$60,000	\$440,000	\$60,000	\$0	\$0
07895 NTS MASTER PLAN UPDATE	\$92,308	\$100,000	\$0	\$73,938	\$18,369
07897 SOUTH SAN DIEGO CREEK RUNOFF DIVERSION STUDY	\$4,445	\$100,000	\$0	\$3,560	\$884
10452 CAPITAL PLANNING SUPPORT 20/21 DW	\$400,000	\$400,000	\$0	\$320,400	\$79,600
10454 CAPITAL PLANNING SUPPORT 20/21 RW	\$400,000	\$400,000	\$0	\$293,600	\$106,400
10456 CAPITAL PLANNING SUPPORT 20/21 SS	\$400,000	\$400,000	\$0	\$326,800	\$73,200
11171 TREATMENT EVALUATION FOR WELLS OPA-1 AND ET-1 AND S	\$71,500	\$143,000	\$0	\$57,272	\$14,229
11178 ASSET MANAGEMENT PLAN DW	\$250,000	\$250,000	\$0	\$200,250	\$49,750
11179 ASSET MANAGEMENT PLAN SS	\$250,000	\$250,000	\$0	\$204,250	\$45,750
11183 NON-POTABLE WATER STUDIES 20/21	\$40,000	\$40,000	\$0	\$29,360	\$10,640
	\$2,083,808	\$3,463,000	\$120,000	\$1,554,347	\$409,461

Replacement - Facilities

01257 OFFICE SPACE IMPROVEMENTS-RW	\$31,250	\$177,500	\$31,250	\$0	\$0
01336 OFFICE SPACE IMPROVEMENTS-DW	\$100,500	\$471,000	\$100,500	\$0	\$0
01414 CP IMP-SAND CYN 16" DW ANODE REPLACE	\$45,500	\$243,100	\$45,500	\$0	\$0

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
01549 OFFICE SPACE IMPROVEMENTS-SS	\$45,750	\$441,500	\$45,750	\$0	\$0
03750 SOCWA ETM PROTECTION-TRAIL BRIDGE CROSSING (PC 21)	\$386,706	\$1,065,000	\$386,706	\$0	\$0
03780 SAN JOAQUIN RESERVOIR LINER REPLACEMENT	\$151,470	\$2,807,900	\$151,470	\$0	\$0
05476 ZONE A TO RATTLESNAKE RESERVOIR PUMP STATION	\$4,181,229	\$11,481,750	\$4,181,229	\$0	\$0
05761 15 MG ZONE 1 RESERVOIR INTERIOR COATING	\$1,147,496	\$2,748,500	\$1,147,496	\$0	\$0
06159 CP IMP-CANADA RD JOINT BONDING	\$59,462	\$233,200	\$59,462	\$0	\$0
06164 CP IMP-CULVER CP5 RECT AND ANODE BED REPLACEMENT	\$59,462	\$244,200	\$59,462	\$0	\$0
07170 UNIVERSITY DR WIDENING APPURTENANCE RELOC-DW	\$5,254	\$248,000	\$3,940	\$1,313	\$0
07171 UNIVERSITY DR WIDENING APPURTENANCE RELOC-SS	\$5,254	\$248,000	\$2,627	\$2,627	\$0
07172 UNIVERSITY DR WIDENING APPURTENANCE RELOC-RW	\$5,254	\$248,000	\$1,313	\$3,940	\$0
07885 SS REHAB-CALCIUM REMOVAL	\$75,000	\$440,000	\$75,000	\$0	\$0
07886 SEWER SIPHON REHABILITATION	\$4,860,473	\$6,632,000	\$4,860,473	\$0	\$0
07892 MWRP FILTER VALVES AND GATE REPLACEMENT	\$267,078	\$466,000	\$267,078	\$0	\$0
07898 PLC REPLACEMENT-DW	\$75,556	\$440,000	\$75,556	\$0	\$0
07899 PLC REPLACEMENT-RW	\$75,556	\$440,000	\$75,556	\$0	\$0
10535 MWRP TRANSFORMER T1 REPLACEMENT	\$195,138	\$543,000	\$195,138	\$0	\$0
10537 MASON PARK DW PIPE REPLACEMENT	\$106,500	\$531,000	\$106,500	\$0	\$0
10542 VAULT LID REPLACEMENT-IRV BLVD	\$204,339	\$1,078,350	\$204,339	\$0	\$0
10580 SUNNYHILL RW PIPE REHAB	\$19,893	\$392,700	\$19,893	\$0	\$0
10581 SOCWA ALISO CREEK OCEAN OUTFALL SEAL REPLACEMENT AN	\$4,800	\$50,000	\$4,800	\$0	\$0
10646 LAWRP TFC MEDIA REPLACEMENT AND REPAIR	\$43,841	\$378,000	\$43,841	\$0	\$0
10999 BONITA CANYON ZONE D to B PRS SUPPLY LINE REPLACEMENT	\$7,466	\$325,000	\$7,466	\$0	\$0
11118 VALVE REPLACE-DW	\$297,100	\$354,200	\$297,100	\$0	\$0
11120 VALVE REPLACE-RW	\$297,100	\$354,200	\$297,100	\$0	\$0
11121 SS REHAB-PELICAN HILLS GOLF CLUB	\$22,623	\$531,300	\$22,623	\$0	\$0
11139 VAULT LID REPLACEMENT-PH2 DW	\$320,600	\$402,200	\$320,600	\$0	\$0
11142 NTS-WOODBRIDGE NTS RELOCATION	\$114,546	\$120,000	\$0	\$91,751	\$22,795
11145 VAULT LID REPLACEMENT-PH2 RW	\$185,000	\$234,000	\$185,000	\$0	\$0

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
11147 VAULT LID REPLACEMENT-PH2 SS	\$197,000	\$234,000	\$197,000	\$0	\$0
11164 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$27,500	\$110,000	\$0	\$22,028	\$5,473
11166 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$18,750	\$75,000	\$0	\$13,763	\$4,988
11167 SAND CANYON SERVER ROOM AIR CONDITIONING REPLACEM	\$18,750	\$75,000	\$0	\$15,319	\$3,431
11169 LAKE FOREST ZONE B TO C BOOSTER PUMP STATION IMPROVE	\$342,545	\$1,905,000	\$0	\$251,428	\$91,117
11174 PLC REPLACEMENT-SS	\$116,848	\$220,000	\$116,848	\$0	\$0
11189 SOCWA ETM AVAC VALVE REPLACEMENT REACHES D AND E (P	\$85,823	\$1,000,000	\$85,823	\$0	\$0
11218 LAKE FOREST WELL NO. 2 TREATMENT & BYPASS SEWER CON	\$420,117	\$587,000	\$0	\$336,514	\$83,603
11227 TCWD EL TORO LIFT STATION PUMP & MOTOR REPLACEMENT	\$31,515	\$2,630,000	\$31,515	\$0	\$0
	\$14,656,042	\$41,205,600	\$13,705,953	\$738,682	\$211,406

Replacement - FY System

10462 MECH-ELEC SYS REPLACEMENT 20/21-DW	\$950,000	\$950,000	\$950,000	\$0	\$0
10463 MECH-ELEC SYS REPLACEMENT 20/21-RW	\$660,000	\$660,000	\$660,000	\$0	\$0
10464 MECH-ELEC SYS REPLACEMENT 20/21-SS	\$550,000	\$550,000	\$550,000	\$0	\$0
10465 MWRP SYS REPLACEMENTS 20/21	\$450,000	\$450,000	\$450,000	\$0	\$0
10473 RAISE SYSTEM VALVES 20/21 UNDER RA-DW	\$25,000	\$577,500	\$25,000	\$0	\$0
10474 RAISE SYSTEM VALVES 20/21 UNDER RA-RW	\$138,600	\$138,600	\$138,600	\$0	\$0
10480 SERVICE LINE-VALVE-MAIN REPLACEMENT 20/21-DW	\$3,318,624	\$3,318,624	\$3,318,624	\$0	\$0
10482 SERVICE LINE-VALVE-MAIN REPLACEMENT 20/21-RW	\$511,992	\$511,992	\$511,992	\$0	\$0
10483 SEWER LATERAL-MAIN REPLACEMENT 20/21	\$324,208	\$324,208	\$324,208	\$0	\$0
10489 LAWRP SYSTEM REPLACEMENTS 20/21	\$138,000	\$138,000	\$138,000	\$0	\$0
10519 ASPHALT REPLACEMENT 20/21-DW	\$220,000	\$220,000	\$220,000	\$0	\$0
10520 ASPHALT REPLACEMENT 20/21-RW	\$220,000	\$220,000	\$220,000	\$0	\$0
10521 ASPHALT REPLACEMENT 20/21-SS	\$110,000	\$110,000	\$110,000	\$0	\$0
10528 INDUSTRIAL COATINGS REPLACEMENT 20/21-DW	\$220,000	\$220,000	\$220,000	\$0	\$0
10529 INDUSTRIAL COATINGS REPLACEMENT 20/21-RW	\$220,000	\$220,000	\$220,000	\$0	\$0
10531 INDUSTRIAL COATINGS REPLACEMENT 20/21-SS	\$110,000	\$110,000	\$110,000	\$0	\$0
10632 METER REPLACEMENT 20/21-DW	\$987,000	\$987,000	\$987,000	\$0	\$0

FY Exp Category		FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
10635	METER REPLACEMENT 20/21-RW	\$276,500	\$276,500	\$276,500	\$0	\$0
11109	RAISE MANHOLES TO GRADE 20/21 UNDER RA	\$346,500	\$346,500	\$346,500	\$0	\$0
		\$9,776,424	\$10,328,924	\$9,776,424	\$0	\$0
Replacement-Business Software						
03566	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENT-DW	\$234,949	\$2,682,100	\$0	\$188,194	\$46,755
03567	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENT-SS	\$234,949	\$2,682,100	\$0	\$191,718	\$43,231
10543	MIGRATE EMAIL TO MS CLOUD DW	\$28,050	\$93,500	\$28,050	\$0	\$0
10544	MIGRATE EMAIL TO MS CLOUD SS	\$28,050	\$93,500	\$28,050	\$0	\$0
10546	CC&B SOFTWARE UPGRADE DW	\$657,461	\$1,424,500	\$657,461	\$0	\$0
10547	CC&B SOFTWARE UPGRADE SS	\$657,461	\$1,424,500	\$657,461	\$0	\$0
		\$1,840,920	\$8,400,200	\$1,371,023	\$379,912	\$89,985
Sewage Treatment						
01477	LAWRP TREATMENT PROCESS MODERNIZATION	\$734,561	\$20,975,000	\$734,561	\$0	\$0
05427	WATER RECYCLING TRT PLANT MSTR PLAN UPDATE-SS	\$80,736	\$1,130,300	\$0	\$65,880	\$14,855
07141	WATER RECYCLING TRT PLANT MSTR PLAN UPDATE-RW	\$41,361	\$558,800	\$0	\$30,318	\$11,043
		\$856,657	\$22,664,100	\$734,561	\$96,198	\$25,899
Solids Handling						
04286	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	\$5,426,030	\$238,542,100	\$2,468,844	\$2,528,530	\$428,656
		\$5,426,030	\$238,542,100	\$2,468,844	\$2,528,530	\$428,656
Water Banking						
05499	STOCKDALE STORAGE FOR RECOVERY CAPACITY	\$1,590,800	\$1,590,800	\$0	\$1,274,231	\$316,569
10484	WATER RELIABILITY PLANNING 20/21	\$137,500	\$137,500	\$0	\$110,138	\$27,363
10854	KERN FAN GROUNDWATER STORAGE	\$13,522,300	\$93,838,000	\$0	\$10,831,362	\$2,690,938
11132	WATER SUPPLY RELIABILITY AGREEMENTS 20/22	\$220,000	\$440,000	\$0	\$176,220	\$43,780
		\$15,470,600	\$96,006,300	\$0	\$12,391,951	\$3,078,649
Water Resources						
01100	LAKE FOREST WELL 1 DRILLING	\$44,637	\$1,417,600	\$0	\$35,755	\$8,883

FY Exp Category	FY 20-21 Direct	Total Direct	FY Replacement	FY Developed	FY Developing
01402 WELLS 51/52/TUSTIN LEGACY TREATMENT ALTERNATIVES STU	\$34,673	\$133,100	\$0	\$27,773	\$6,900
06176 FUTURE GROUNDWATER SUPPLY	\$255,362	\$71,377,500	\$0	\$204,545	\$50,817
07140 TUSTIN LEGACY RED HILL WELL DRILLING AND EQUIPPING	\$38,939	\$4,832,640	\$0	\$31,190	\$7,749
07682 PILOT SOUTH BASIN GROUNDWATER CLEANUP	\$1,127,500	\$1,127,500	\$0	\$903,128	\$224,373
10061 SCE-IRWD WATER-ENERGY PILOT PHASE 2	\$182,160	\$379,500	\$0	\$145,910	\$36,250
10479 WATER AND ENERGY PLANNING STUDIES DW 20/21	\$126,500	\$126,500	\$0	\$101,327	\$25,174
10558 BAKER PIPELINE CAPACITY PURCHASE	\$14,300	\$357,500	\$0	\$11,454	\$2,846
11186 RW CONVERSION IMPROVEMENTS FOR OFF-SITE 20/21	\$503,500	\$503,500	\$503,500	\$0	\$0
	\$2,327,571	\$80,255,340	\$503,500	\$1,461,081	\$362,990
Well Rehabilitation					
07087 WELL REHAB-DRWF 10	\$613,236	\$770,000	\$613,236	\$0	\$0
07092 WELL REHAB-DRWF 4	\$120,318	\$770,000	\$120,318	\$0	\$0
10098 WELL REHAB-DRWF 12	\$141,929	\$770,000	\$141,929	\$0	\$0
10466 WELL MAINTENANCE AND REHABILITATION 20/21-DW	\$360,000	\$360,000	\$360,000	\$0	\$0
11126 WELL MAINTENANCE AND REHABILITATION 20/21-RW	\$90,000	\$90,000	\$90,000	\$0	\$0
11137 WELL REHAB-IDP 76	\$695,692	\$770,000	\$695,692	\$0	\$0
	\$2,021,175	\$3,530,000	\$2,021,175	\$0	\$0
	\$93,766,372	\$940,886,864	\$38,735,387	\$38,830,366	\$16,200,619

EXHIBIT "C"

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA, APPROVING DISTRICT'S CAPITAL BUDGET FOR FISCAL YEARS 2019-20 AND 2020-21

WHEREAS, the Board of Directors of the Irvine Ranch Water District (IRWD) has considered the capital project needs of IRWD for Fiscal Years 2019-20 and 2020-21; and

WHEREAS, a Capital Budget, which includes both the capital expenditures projected for Fiscal Year 2019-20 and 2020-21 and entire project budgets for the listed projects, as set forth in the attached Exhibit "A" has been prepared and reviewed by this Board of Directors; and

WHEREAS, during the review of the Capital Budget by the Board of Directors, the Board "flagged" certain capital expenditures for projects for further review by the Board; and

WHEREAS, 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; and

WHEREAS, Section 8 of Article XIII B excludes from its limitations user charges and fees and regulatory fees, to the extent such fees and charges do not produce revenue exceeding the costs reasonably borne in providing the regulation, product or service, and Section 9 of Article XIII B excludes from the appropriations subject to limitation an appropriation for a qualified capital outlay project, 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); and

WHEREAS, the expenditures identified in the Capital Budget are to be funded entirely from user fees and charges excluded by Article XIII B, Section 8, and other monies that are not proceeds of taxes, such as proceeds of bonds or other indebtedness, and/or are expenditures for debt service or qualified capital outlay projects pursuant to Article XIII B, Section 9.

NOW, THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. The revenues which have been collected from connection fees and have been deposited in the capital funds of the Improvement Districts, to the extent not previously or hereafter committed or appropriated to pay reimbursement, bonding and other financing or fund-management related costs for capital facilities, are hereby appropriated to pay costs of the projects shown in the Capital Budget.

Section 2. That relative to appropriations subject to limitation under Article XIII B of the Constitution of the State of California, it is hereby determined that IRWD's Capital Budget for Fiscal Years 2019-20 and 2020-21 is to be funded totally by revenues other than the proceeds of taxes, and/or that the expenditures identified in such Capital Budget are for debt service or qualified capital outlay projects, and that the documentation used in making such determination has been on file in the offices 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 3. Subject in all respects to prior pledges for debt service requirements, including those contained in Resolution No. 2002-10, the Treasurer is hereby authorized and directed to allocate to the Replacement Fund, 29% of the general 1% ad valorem property tax revenues for the 2019-20 and 2020-21 fiscal years, to be expended for qualified capital outlay projects.

Section 4. That IRWD's Capital Budget for Fiscal Years 2019-20 and 2020-21 is in compliance with the provisions of Article XIII B of the Constitution of the State of California.

Section 5. That IRWD's Capital Budget for Fiscal Years 2019-20 and 2020-21, shown in the attached Exhibit "A" and by this reference incorporated herein, be and the same is hereby approved.

Section 6. That the capital expenditures for projects set forth in the attached Exhibit "A" identified with "Yes" in the Flagged report section are "flagged" for further review by the Board of Directors prior to implementation, pursuant to the Policy Regarding Authorization of Expenditures.

ADOPTED, SIGNED and APPROVED this 22nd day of April, 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
Legal Counsel - IRWD

By _____

April 22, 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

April 16 Meeting with Senator Thomas Umberg
April 17 ACWA Meeting regarding Sacramento Headwaters

Mary Aileen Matheis

April 11 State of South County Address & Dinner featuring Chairwoman Bartlett
April 17 Orange County Water Association's Monthly Meeting, Irvine
May 29 OCBC Economic Development Forum, Anaheim
May 31 12th Annual OC Water Summit, Anaheim

Douglas Reinhart

May 31 12th Annual OC Water Summit, Anaheim

Peer Swan

April 11 Sustain SoCal 10th Annual Conference & Expo: Energy Infrastructure:
Innovating Toward Sustainability, Irvine
April 12 Water UCI: Transitioning to Integrated Water Management
April 17 Orange County Water Association's Monthly Meeting, Irvine
April 26 Southern California Water Coalition Quarterly Meeting, Carson
May 31 12th Annual OC Water Summit, Anaheim

John Withers

March 27 Swearing In Ceremony for Supervisor Wagner
April 11 State of South County Address & Dinner featuring Chairwoman Bartlett
April 12 Water UCI: Transitioning to Integrated Water Management
April 17 Orange County Water Association's Monthly Meeting, Irvine
April 26 Southern California Water Coalition Quarterly Meeting, Carson
May 29 OCBC Economic Development Forum, Anaheim
May 31 12th Annual OC Water Summit, Anaheim

RECOMMENDATION:

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

LIST OF EXHIBITS:

None.

April 22, 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 April 8, 2019 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE APRIL 8, 2019 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – April 8, 2019 Minutes of Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING – APRIL 8, 2019

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:05 p.m. by President LaMar on April 8, 2019 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Engineering and Water Quality Burton, Executive Director of Water Policy Weghorst, Executive Director of Operations Chambers, Executive Director of Finance and Administration Clary, Director of Water Recycling Operations Zepeda, Director of Water Resources Sanchez, Director of Public Affairs Beeman, Director of Treasury and Risk Management Jacobson, Legal Counsel Collins, Legal Counsel DeMayo, Secretary Bonkowski, Assistant Secretary Swan, Government Relations Officer/Deputy General Counsel Compton, Director of Water Quality & Regulatory Compliance Colston, Director of Water Operations Roberts, Director of Maintenance Mykitta, Director of Human Resources Roney, Ms. Deborah Diep, Mr. Bruce Newell, Mr. Joe Adams, and Tony Solorzano from Discovery Cube, staff, and members of the public.

WRITTEN COMMUNICATIONS: None.

ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

PUBLIC HEARING

EVALUATING A CHANGE IN THE ELECTIONS PROCESS FOR THE IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS AND ESTABLISHING DIVISION BOUNDARIES

Pursuant to Elections Code section 10010, an additional public hearing, the fourth public hearing since the drafting and publication of draft maps, was held on April 8, 2019, after the redrawing of draft maps. The first hearing after the drawing of draft maps was held on December 10, 2018. The second hearing after the drawing of draft maps was held on January 14, 2019, while a third hearing after the drawing of draft maps was held on March 11, 2019. The purpose of these hearings, was to invite and solicit public comments on the draft division maps, which have been published by the District on its website, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office.

President LaMar declared the Board meeting of April 8, 2019 to be the time and place for a hearing on evaluating a change in the elections process for the Irvine Ranch Water District Board of Directors and establishing division boundaries, and asked the Board Secretary to announce how the hearing was noticed.

Secretary Bonkowski said that the hearing was noticed by publication in the *Orange County Register* on Sunday, March 24, 2019; by publication in Spanish in the *Excelsior Unidos* on Friday, March 29, 2019; by publication in Korean in the *Korea Times* on Saturday, March 23, 2019; by publication in English and Traditional Chinese in the *World Journal* on Saturday, March 23, 2019, and Sunday, March 24, 2019; by publication in Farsi in *Hafteh Bazaar* on Friday, March 29, 2019; by electronic posting in English, Farsi, Korean, Traditional Chinese, and Spanish on the IRWD website, which can be translated into approximately 20 languages; and by physical posting at IRWD's headquarters. She announced that two additional draft maps — Map E-1 and Map E-2 — were published on IRWD's website on March 26, 2019. The Board Secretary presented affidavits of posting and proof of publication to the Board related to the hearing. On MOTION by Swan, seconded by Matheis, and unanimously carried, **THE BOARD OF DIRECTORS RECEIVED AND FILED THE AFFIDAVITS OF POSTING AND PROOF OF PUBLICATION AS PRESENTED BY THE BOARD SECRETARY.**

President LaMar asked legal counsel to describe the nature of the proceedings, and to explain the purpose of the hearing.

Legal Counsel DeMayo said that the purpose of the hearing as being an opportunity to invite and solicit public comment on the draft division maps which have been published by the District on its website at least seven days prior to the hearing, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office.

On MOTION by Matheis, seconded by Swan and unanimously carried, **THE PUBLIC HEARING WAS OPENED TO SOLICIT AND ACCEPT COMMENTS ON THE PROPOSED MOVE TO BY-DIVISION ELECTIONS, THE COMPOSITION OF DIVISIONS, THE DRAFT DIVISION MAPS, AND SEQUENCE OF ELECTIONS.**

President LaMar requested that the Government Relations Officer/Deputy General Counsel provide a report to the Board regarding the draft division maps, and on any written comments received.

Government Relations Officer/Deputy General Counsel Compton summarized the map revisions requested at the last public hearing. Specifically, the revisions requested were to use the Interstate 5 freeway as a division boundary and to adjust boundary lines to ensure as many community villages were kept wholly within only one division. She stated that Maps E-1 and E-2 reflect these changes. She noted that map overlays of the community villages were being provided. Additionally, she said that the District received two inquiries, one from a California State Fullerton University student, and the other from a law firm inquiring on the Board action made at the March 11, 2019 Board meeting. Using a PowerPoint presentation, Consultant Deborah Diep reviewed the maps and provided the percentage population spreads between each proposed division. In response to Director Reinhart's inquiry, Ms. Diep reviewed the map overlay showing the communities within the various proposed divisions.

President LaMar inquired whether there is any person present who wishes to provide comments on the proposed move to by-division elections, the composition of divisions, the draft maps, and the sequence of elections. There was no who wished to be heard.

President LaMar inquired whether there are any further comments or questions from members of the Board of Directors. Following discussion on potential sequencing of elections for staggered terms of office, on MOTION by Matheis, seconded by Swan, and carried (Matheis, Swan, Withers, LaMar voting aye and Reinhart voting no (4-1), THE BOARD SELECTED MAP E-2 to move forward for final consideration. On MOTION by Withers, seconded by Swan, and unanimously carried, THE HEARING WAS CLOSED, AND THE BOARD AUTHORIZED STAFF TO AGENDIZE AN ADDITIONAL PUBLIC HEARING FOR MAY 13, 2019, FOR THE BOARD OF DIRECTORS TO CONSIDER FINAL ACTION ON A TRANSITION TO BY-DIVISION ELECTIONS, AND TO CONSIDER ADOPTION OF A FINAL MAP OF DIVISION BOUNDARIES BASED ON MAP E-2, AND A SEQUENCE OF ELECTIONS WITH THE ELECTION FOR DIVISION NUMBERS OPTIONS FOR TWO ELECTIONS TO BE HELD IN 2020 AND THREE ELECTIONS TO BE HELD IN 2022.

BOARD WORKSHOP

FISCAL YEARS 2019-20 AND 2020-21 OPERATING BUDGETS AND PROPOSED RATES AND CHARGES

General Manager Cook reported that the proposed Fiscal Year (FY) 2019-20 Operating Budget for IRWD is \$167.0 million, representing an increase of \$9.9 million, or 6.3%, when compared to the Operating Budget for FY 2018-19. The proposed FY 2020-21 Operating Budget for IRWD is \$174.0 million, representing an increase of \$7.0 million, or 4.2%, when compared to the proposed Operating Budget for FY 2019-20.

Using a PowerPoint presentation, Executive Director of Finance and Administration Clary said that the assumptions driving the proposed budgets and associated rates include both uncontrollable and controllable increases and reviewed the cost escalators in both areas. Using charts, Ms. Clary reviewed the projected water sales for potable and non-potable budgets. She reviewed the key drivers of the budgets including salaries and benefits, purchased water, repairs and maintenance, and electricity. She reviewed a comparison of the key drivers with the prior year's budget; reviewed tables describing sources of revenue and expenses; proposed rates for a typical residential customer; replacement fund payback over 25 years included in FY 2020-21 rates; current replacement fund balance; proposed pumping surcharges; a comparison of proposed rates with neighboring agencies; a history of rate increases, and non-operating budget for FY 2019-20 and FY 2020-21 which are not part of user rates. She said that based on the recommendation, a typical residential customer will experience an increase of \$1.42 or 2.6%, from \$53.78 to \$55.20, per month for FY 2019-20, and for 2020-21, \$1.56 or 2.8% from \$55.20 to \$56.76 per month. She further reviewed the schedule with the second workshop scheduled for April 22, 2019, mailing of the Proposition 218 notices on or about May 3, 2019, and a public hearing on June 24, 2019. Following discussion, Director Swan reported that this item was reviewed by the Finance and Personnel Committee on several occasions, and made a motion which was seconded by Matheis to direct staff to finalize for board approval a two-year budget consistent with Executive Director Clary's presentation, that would call for a rate increase of 2.6 percent for FY 2019-20 and 2.8 percent for FY 2020-21. Prior to voting, Director Reinhart said he recommended the proposed two-year budget be adjusted so that the proposed user rates for FY 2020-21 would not be increased by an additional \$0.01 in each tier in order to pay back the replacement fund, but instead retain the PERS contribution at 25% so that the proposed budget would instead require a 2.6% rate increase for both fiscal years, and made a substitute motion to that effect to Director Swan's previous

motion. On MOTION by Reinhart, seconded and carried (Reinhart, LaMar, and Withers voting aye and Swan and Matheis voting no) (3-2) THE BOARD RECOMMENDED THAT THE PROPOSED BUDGET AND PROPOSED RATES AND CHARGES TO BE PRESENTED AT THE SECOND WORKSHOP ON APRIL 22, 2019 REFLECT A 2.6% RATE INCREASE FOR EACH OF THE FISCAL YEARS 2019-20 AND 2020-21, AND THAT THE FINAL APPROVAL OF THE BUDGET FOR FISCAL YEARS 2019-20 AND 2020-21 TOGETHER WITH THE APPROVAL OF THE ASSOCIATED PROPOSITION 218 NOTICES ARE AGENDIZED FOR THE APRIL 22, 2019 BOARD MEETING.

CONSENT CALENDAR

In response to Director Reinhart's inquiry relative to Item No. 8, 2018 IRWD SALARY SURVEY RESULTS, Director of Human Resources Roney provided a summary noting that job descriptions of other entities are compared against IRWD job descriptions, not job titles, to obtain accurate comparisons between salaries of employees performing the same types of jobs. There being no further comments, on MOTION by Matheis, seconded by Withers, and unanimously carried, CONSENT CALENDAR ITEMS 5 THROUGH 10 WERE APPROVED AS FOLLOWS:

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

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

6. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the March 25, 2019 Regular Board meeting be approved as presented.

7. IRWD APARTMENT CONSULTANT CONTRACT RENEWAL

Recommendation: That the Board authorize the General Manager to execute a two-year contract with Market-THINK as IRWD's apartment consultant at a total fee not to exceed \$55,000 for 2019-2020 and \$56,500 in 2020-2021, which includes monthly out-of-pocket expenses estimated at \$50 per month.

8. 2018 IRWD SALARY SURVEY RESULTS

Recommendation: That the Board approve the salary grade changes recommended and authorize the General Manager to implement the competitive wage adjustments based on the 2018 IRWD salary survey results.

9. MEMORANDUM OF UNDERSTANDING BETWEEN THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL #47 NON-EXEMPT SUPERVISOR UNIT EMPLOYEES AND IRWD – JULY 1, 2018 – JUNE 30, 2021

Recommendation: That the Board authorize the General Manager to execute a Memorandum of Understanding between IRWD and the International Brotherhood of

Electrical Workers Local #47 Non-exempt Supervisor Unit Employees effective July 1, 2018 through June 30, 2021, subject to non-substantive changes.

10. ADOPTION OF REVISED IRWD SCHEDULE OF POSITIONS AND SALARY RATE CHANGES

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

RESOLUTION NO. 2019 -9

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT SUPERSEDING
RESOLUTION NO. 2019-5 AND ADOPTING A REVISED
SCHEDULE OF POSITIONS AND SALARY RATE RANGES

ACTION CALENDAR

EDUCATIONAL PROGRAM AGREEMENT WITH DISCOVERY CUBE ORANGE COUNTY

General Manager Cook reported that since 2007, IRWD has collaborated with Discovery Cube Orange County to create and implement meaningful water education programming for schoolchildren throughout the District's service area. Over the course of this 12-year partnership, District-sponsored elementary school assemblies, presentations and field trips to the San Joaquin Marsh have educated approximately 112,000 students about the importance of water and water use efficiency in our lives, communities and environment. Ms. Deniene Rivenburg reported on the successful relationship with Discovery Cube. Using a PowerPoint presentation, Mr. Joe Adams of Discovery Cube provided an overview of its current educational programs. In response to Director Swan's suggestion to add a segment in the classes relative to trash reduction and showing the impacts of the trash on the watershed, Mr. Adams said that this could be included. Director Swan further said that in two years, the District's Biosolids facility will be operational, and suggested that this treatment process of nutrient load reduction is an important concept to teach students. Director Withers said that Board membership with Discovery Cube should be considered in the future. There being no further comments, on MOTION by Matheis, seconded and unanimously carried, **THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH DISCOVERY CUBE ORANGE COUNTY TO IMPLEMENT EDUCATIONAL PROGRAMS IN THE AMOUNT OF \$191,542 PER YEAR FOR A TOTAL COST OF \$383,084 FOR A TWO-YEAR PERIOD COVERING FISCAL YEARS 2019-20 AND 2020-21.**

AUTHORIZATION TO PURCHASE WATER FROM BUENA VISTA WATER STORAGE DISTRICT

Using a PowerPoint presentation, Water Resources Manager Welch said that in 2010, IRWD and Buena Vista Water Storage District (BVWSD) entered into a long-term Agreement for Water Acquisition by Irvine Ranch Water District from Buena Vista Water Management Program (Exchange Agreement), which established an exchange program at the Strand Ranch Integrated Banking Project. Ms. Welch said that that Exchange Agreement allows BVWSD to recharge up to 17,500 acre-feet (AF) of high-flow Kern River water per year at the Strand Ranch on an unbalanced exchange basis, with IRWD receiving 50% of the water, less a proportional share of losses. The agreement specifies

that high-flow Kern River water supplies may be available from BVWSD when the Kern River runoff index for April to July is at 125% of normal or higher. In March 2019, the Board approved a one-year program with BVWSD, whereby BVWSD could augment its recharge under the Exchange Agreement with a second priority use of the Stockdale West recharge facilities (the One-Year Agreement).

Ms. Welch said that the current forecast for the Kern River runoff index is at a low level of 135%. BVWSD has higher priority options available to it that make deliveries to IRWD's Water Banks this year unlikely under the existing Exchange Agreement. In comparison, BVWSD last delivered high-flow Kern River water to IRWD in 2017 when the Kern River runoff index was 260% of normal. This year to date, BVWSD has been able to store its Kern River water supplies at its new recharge facilities and also in Lake Isabella, which BVWSD uses to regulate its Kern River supplies. In March 2019, the BVWSD Board directed its staff to sell up to 100,000 AF of excess water. As a result of these actions, BVWSD has indicated that until such time as significant high-flow conditions occur, it does not anticipate storing water at the IRWD Water Banks.

Ms. Welch said that under current Kern River water supply conditions, BVWSD has indicated that it is marketing its water for more than \$250 per AF, which is substantially higher than the \$25 per AF sales price reported for 2017 when substantial amounts of high-flow water were available. To maximize IRWD's ability to secure water during the spring runoff season, staff has successfully negotiated the purchase of Kern River water from BVWSD until high-flow conditions occur. The water would be recharged at IRWD's Water Banks consistent with the terms of the One-Year Agreement, as well as the long-term Exchange Agreement. Through a purchase order, IRWD would pay BVWSD for only IRWD's share of the water delivered into storage.

Ms. Welch said that under the purchasing authority of the General Manager, staff has initiated the purchase of a limited amount of water from BVWSD. Staff has also submitted a Transaction Request Form to the Kern County Water Agency to begin deliveries of the water to the IRWD Water Banks on April 6, 2019. To maximize IRWD's opportunity to secure water supplies this year, staff recommends continuing to purchase Kern River water from BVWSD under the negotiated price terms until such time as high-flow Kern River water is available. Accordingly, staff recommends that the Board authorize the General Manager to enter into an agreement with BVWSD to purchase water supplies in an amount not to exceed \$1,650,000.

Ms. Welch said that IRWD recently executed a long-term unbalanced exchange agreement with Antelope Valley-East Kern Water Agency (AVEK) that provides AVEK with first priority rights to the use of the recharge facilities at the Stockdale West Project. To avoid impacts to the program with AVEK, staff will limit recharge of Kern River water using the Stockdale West facilities until AVEK has confirmed whether or not it will be delivering its Table A into storage at the same facilities before the end of the year.

Director Swan reported that this item was reviewed in concept with the Supply Reliability Programs Committee on March 21, 2019. On **MOTION** by Swan, seconded and unanimously carried, **THE BOARD AUTHORIZED THE GENERAL MANAGER TO ENTER INTO AN AGREEMENT TO PURCHASE WATER SUPPLIES FROM BUENA VISTA WATER STORAGE DISTRICT IN AN AMOUNT NOT TO EXCEED \$1,650,000 FOR STORAGE AT THE STRAND RANCH AND STOCKDALE WEST INTEGRATED BANKING PROJECTS.**

GENERAL MANAGER'S REPORT

General Manager Cook reported on the award the District received from the California Municipal Utilities Association for its recent video which featured IRWD employees illustrating on how the District safeguards our drinking water, and thanked staff for their efforts.

DIRECTORS' COMMENTS

Director Reinhart reported on his attendance at a South Orange County Agencies Group Joint meeting, an IRWD-OCWD Coordination meeting, a SOCWA Board Meeting, and a WACO monthly meeting.

Director Withers reported on his attendance at an ISDOC Executive Committee Meeting, and an OCSD meeting in Sacramento. He said tomorrow he will be attending a swearing-in event for the City of Irvine's Mayor Christina Shea.

Director Swan reported on his attendance at a two-day WaterNow Alliance Annual Summit in Austin, Texas, a Water Education Foundation lecture series event, a Santa Ana Watershed Project Authority One Water One Watershed meeting, a MWDOC elected officials meeting, and a WACO meeting.

Director Matheis reported on her attendance at an ISDOC Executive Committee meeting, a Water Education Foundation conference in Fullerton, and a two-day Water Policy meeting.

Director LaMar reported on his attendance at an ACWA Board and Executive Committee meeting and noted that Ms. Cheryl Clary is the new Chair of ACWA's Finance Committee, a WACO monthly meeting, and an ACWA meeting with the Department of California Water Resources in Sacramento today.

COMMUNITY UPDATES

Director LaMar read Mr. Bruce Newell's written update as he had to leave the Board meeting due to another commitment. He noted that there was no news from the canyon areas tonight and that the creek levels were going down quickly; that the Inter Canyon League is following County development of on-site wastewater treatment systems, and that Orange County will be adopting a Local Area Management plan recognizing existing septic systems.

ADJOURNMENT

At 7:21 p.m., President LaMar said that he was honored to adjourn the meeting in memory of the District's Secretary father, Mr. Jack Tognetti, who recently passed after 95 years of life.

APPROVED and SIGNED this 22nd day of April, 2019.

President, IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Claire Hervey Collins, Legal Counsel
– Lewis Brisbois

April 22, 2019

Prepared and

submitted by: C. Compton 

Approved by: Paul A. Cook 

CONSENT CALENDAR

2019 LEGISLATIVE AND REGULATORY UPDATE

SUMMARY:

This report provides an update on the 2019-2020 legislative session and IRWD priorities. As legislation and regulations develop, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board consider the following action/position:

- *AB 1672 (Bloom) — Flushable Products — “SUPPORT”.*

BACKGROUND:

Over the past few weeks, many of the spot bills which were introduced have been or are in the process of being amended as their authors seek to have the bills referred to and heard in the appropriate policy committee. This year, the last day for policy committees to hear fiscal bills is April 26, while May 3 is the policy committee deadline for non-fiscal bills. The last day for fiscal committees to meet and act on bills introduced in their house is May 17.

As authors move their bills forward, they will need to keep in mind the Legislative Spring Recess. This year, the Legislature recessed for the spring break on April 11. It will reconvene on April 22.

A copy of the 2019 Legislative Matrix is attached as Exhibit “A”. Exhibit “B” is the 2019 “Legislative Update Report Links to Bill Texts,” which contains links to the bills discussed below, unless a separate exhibit is noted.

State Budget Update:

February Revenue Numbers:

On March 11, 2019, State Controller Betty Yee released her monthly report on the State’s finances. She announced that the State took in \$5.51 billion during the month of February. This was \$1.34 billion, or 19.5 percent, less than estimates contained in the Governor’s Fiscal Year (FY) 2019-2020 budget proposal, and \$2.01 billion, or 26.97 percent, lower than estimates contained in FY 2018-2019 enacted budget. According to the State Controller, “Two-thirds of the way through FY 2018-19, total revenues of \$79.93 billion were lower than expected in the proposed and enacted budgets by \$4.20 billion and \$3.33 billion, respectively. For the fiscal year to date, state revenues are 1.4 percent lower than the same time last year.”

2019 State Legislative Update:

Water Tax and Other Safe Drinking Water Proposals:

Since the end of the 2017-2018 legislative session, work on a solution for safe drinking water in California has continued to be a topic of considerable conversation at the State level. Governor Newsom included support for a funding solution in his inaugural address and State of the State, and included a funding proposal in his proposed budget.

On February 1, 2019, his administration released budget trailer bill language detailing his funding proposal in the Safe and Affordable Drinking Water and Exide Cleanup Budget Trailer Bill. The Safe and Affordable Drinking Water and Exide Cleanup Budget Trailer Bill follows the provisions of SB 623 (Dodd, D-Napa) from 2017-2018 closely and includes a statewide water tax and a tax on fertilizer, confined animals facilities and dairy operations. The budget trailer bill also includes the liability relief previously included in SB 623 for agricultural operations.

With regard to the water tax, the budget trailer bill proposes a monthly water tax on the following:

- \$0.95 per month for meters less than or equal to 1-inch;
- \$4.00 per month for meters less than or equal to 2-inch;
- \$6.00 per month for meters less than or equal to 4-inch;
- \$10.00 per month for meters greater than 4-inch; and
- Customers without a meter would be taxed at a rate of \$0.95.

IRWD currently has an “oppose” position on the budget trailer bill. In addition to the budget trailer bill, there are currently five bills this legislative session that relate to safe drinking water:

- *AB 134 (Bloom, D-Santa Monica) – Safe, Clean, Affordable, and Accessible Drinking Water:* As amended, the bill includes findings and declarations related to the intent of the Legislature to address safe, clean, affordable, and accessible drinking water. It also provides that if a Safe Drinking Water Fund or Safe and Affordable Drinking Water Fund is established, the funding to be displayed in the annual Governor’s budget, as prescribed, and, at least every five years, would require the Legislative Analyst’s Office to provide an assessment of the effectiveness of expenditures from the fund. IRWD currently has a “watch” position on AB 134;
- *AB 217 (Garcia, D-Coachella) – Safe and Affordable Drinking Water Fund:* The bill, as amended, would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are available, upon appropriation by the Legislature, to the State Board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure. The bill includes a hybrid approach to funding safe drinking water which includes a water tax, an agricultural tax and development of a trust fund. The water tax included in the bill is a \$0.50 per service connection tax on all public water systems, which was intended to be a monthly tax. The

bill would require each public water system to remit to the State Board the amount of the fee for their public water system on July 1, 2020, and each July 1 thereafter. IRWD currently has a “watch” position on AB 217, but strongly opposes a water tax;

- SB 200 (Monning, D-Santa Cruz) – Safe and Affordable Drinking Water Fund: The bill, as amended on March 11, 2019, would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are continuously appropriated to the State Board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure. As amended, the bill does not include a funding mechanism. IRWD currently has a “watch” position on SB 200;
- SB 669 (Caballero, D-Salinas) – Water Quality: Safe Drinking Water Fund: SB 669 is the proposal sponsored by the Association of California Water Agencies (ACWA) and the California Municipal Utilities Association (CMUA). It proposed an alternative mechanism to fund safe drinking water. The proposal would create a Safe Drinking Water Trust to provide a perpetual funding source to address safe drinking water in disadvantaged communities. IRWD currently has a “support” position on SB 669; and
- ACA 3 (Mathis (R-Visalia)/Garcia) – Water: Minimum Funding Guarantee: ACA 3, while not directly related to safe and affordable drinking water, relates to providing a durable funding source for water in the state which could be used to address safe and affordable drinking water in California. The proposed constitutional amendment proposes that commencing with the 2021–2022 fiscal year, not less than two percent of State revenues are to be set apart for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014; water supply, delivery, and quality projects administered by the department; and water quality projects administered by the State Board. IRWD currently has a “watch” position on ACA 3.

Additionally, CMUA, in coordination with the Eastern Municipal Water District, is sponsoring SB 414 (Caballero). SB 414, which is similar to AB 2050 (2018), proposes to enact the Small System Water Authority Act of 2019. The proposal seeks to address the governance issues causing unsafe drinking water in a number of communities in California. IRWD currently has a “support” position on the proposal.

Staff continues to work with the water coalition on addressing safe drinking water in California without a water tax, and will provide an oral update on any new developments. Staff would propose adjusting the District’s position on the safe drinking water funding bills should the bills be amended to propose a water tax that is consistent with the Board-adopted position on a public good charge on water, or be amended in a way that presents other policy concerns for the District.

AB 510 (Cooley, D-Rancho Cordova) – Local Records: Destruction of Records:

Since 1998, the Government Code has required that public agencies retain any routine video monitoring recordings for a period of one year, and keep radio and telephone recordings for 100 days. Over the past 20 years, video monitoring technology has changed drastically. When the original one-year recording provision was enacted, the legislative history shows that the original intent was to store videotapes. However, since that time, technology has advanced while the law has remained unchanged. The vast majority of video monitoring today is now done using digital cameras that record onto DVRs, agency servers, and cloud-based servers.

With the ease of digital storage and decreased cost of digital cameras, public agencies are installing an ever-increasing number of cameras and the cameras are recording in significantly higher resolution. While this has made video monitoring records more useful and effective, the increased number of cameras and picture quality means that the amount of data that must be stored to comply with the current statutory retention requirements is exceptionally high. Additionally, public agencies are more frequently using more cameras for routine video monitoring that is of no value to the public because it is footage of no activity. For example, 24-hour footage from a camera facing the back entrance to an office building where zero incidents have occurred must still be maintained for one year.

In order to address the storage requirements of increased volumes of routine video recordings and in order to modernize the Government Code, Assemblymember Ken Cooley authored AB 510, which is sponsored by the California Special Districts Association (CSDA). The bill seeks to modernize the Government Code to allow local public agencies to adopt records retention policies designed for modern digital recording technologies, while ensuring the proper retention of any records in which an incident may have occurred. Specifically, the bill allows public agencies to set their own records retention policies for routine digital (video, radio and telephone) recordings, provided they maintain routine monitoring records where incidents may have occurred until the incident is fully resolved. Additionally, the bill specifies that in the absence of agencies adopting their own records retention policy, the current one-year (video recordings) and 100-day (radio and telephone recordings) retention policies would remain in effect.

While the bill would benefit local agencies, the author recently decided to make the bill a two-year bill due to opposition from consumer attorneys. CSDA continues to work to develop a strategy on how to move the bill forward next year. IRWD had adopted a “support” position on AB 510 given the benefit the bill would provide the District. Staff will provide an oral update on the next steps on the bill.

AB 1672 (Bloom, D-Santa Monica) – Flushable Products:

AB 1672 is a proposal sponsored by the California Association of Sanitation Agencies (CASA). The bill would prohibit the labeling of consumer products as “flushable” or safe for sewer systems or septic systems, unless the product is a flushable wipe that meets certain performance standards. Additionally, the bill would require nonflushable products to be labeled clearly and conspicuously to communicate that they should not be flushed.

In recent years, wipes labeled as flushable have gained popularity, which encourages residents to dispose of wipes products generally in their toilets instead of in the trashcans. This can result in the wipes being caught in pipes and can cause problems for wastewater infrastructure and treatment facilities. These products often combine with fats, oils, and grease and become larger obstructions within sewer systems, which can result in costly sewer overflows.

The approach proposed by CASA seeks to ensure manufactures properly label their products so that consumers do not think they can flush the wipes. This approach balances consumer demands for the products with the need to prevent the consequences of instructing consumers to flush these products. Staff recommends that the Board adopt a “support” position on the bill.

SB 332 (Hertzberg/Wiener, D-San Francisco) – Wastewater Treatment: Recycled Water:

Senator Bob Hertzberg and Senator Scott Wiener (D, San Francisco) introduced SB 332. SB 332 would declare that the discharge of treated wastewater from ocean outfalls is a waste and unreasonable use of water, and would mandate that agencies reduce their ocean discharges by 50 percent by 2030 and by 95 percent by 2040, as compared to average annual wastewater discharges between 2010 and 2020. As currently written, the bill fails to recognize the water use efficiency and high levels of water reuse by agencies like IRWD.

The bill was considered and passed, as a work in progress, by the Senate Environmental Quality Committee on April 3, 2019. IRWD currently has an “oppose unless amended” position on the bill. Staff continues to work with a coalition of industry associations and reuse agencies to oppose the bill, as currently drafted, and to develop amendments acceptable to the industry. Staff will provide an oral update on any new developments regarding the bill or these discussions.

SB 732 (Allen) – South Coast Air Quality Management District Taxing Authority:

Senate Ben Allen (D, Redondo Beach) has amended SB 732 to propose providing the South Coast Air Quality Management District (AQMD) the authority to impose a sales tax within its district boundaries. Specifically, the bill authorizes AQMD to seek voter approval for a sale tax of between 0.25 and 1 percent.

If a sale tax is sought and approved, the bill authorizes AQMD to send the revenue from the tax on the financial incentives and programs to implement the AQMD-adopted plans to achieve state and federal ambient air quality standards and to accelerate the deployment of all of the following:

- Zero-emission, near-zero-emission, or cleanest commercially available mobile and stationary equipment, and
- Alternative fueling and charging infrastructure.

SB 732 is currently in the Senate Governance and Finance Committee. It is scheduled to be heard by that committee on April 24.

2019 State Regulatory Update:

Staff continues to track, monitor and engage in a number of regulations of interest to IRWD. The following is a list of some of the state regulations and agency reports staff is monitoring, tracking or planning to engage in over the next 12 months. As the next drafts of the regulations or report are released for public review and comment, staff will engage, as appropriate. The pending regulations and reports actively being tracked include the:

- Building Standards Commission’s “2019 California Plumbing Code;”
- Department of Water Resources (DWR) and the State Board’s implementation of the “Making Water Conservation a California Way of Life” legislation;
- DWR’s “The Open and Transparent Water Data Act (AB 1755, Dodd) Implementation Plan;”
- State Board Electronic Annual Report;
- State Board’s AB 401 Implementation/Low Income Rate Assistance Report and the Office of Environmental Health Hazard Assessment’s “A Framework and Tool for Evaluating California’s Progress in Achieving the Human Right to Water;”
- State Board’s development of a “Cross Connection Policy Handbook;”
- State Board’s proposed “Environmental Laboratory Accreditation Program Regulations;”
- State Board’s proposed “Mercury TMDL and Statewide Mercury Control Program for Reservoirs” regulations;
- State Board’s proposed regulations on “Prohibiting Wasteful Water Use Practices;”
- State Board’s “State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State” regulations;
- State Board’s Toxicity Provisions;
- State Board’s “Water Loss Performance Standards Regulations;”
- State Board’s Water Rights Enforcement Policy; and
- State Board’s “Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California” and draft “Toxicity Provisions.”

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on April 10, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT A “SUPPORT” POSITION ON AB 1672 (BLOOM).

LIST OF EXHIBITS:

Exhibit “A” – IRWD Legislative Matrix

Exhibit “B” – 2019 Legislative Update Report Links to Bill Texts

EXHIBIT "A"
IRWD 2019 LEGISLATIVE MATRIX
Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 5</u> Gonzalez (D)	Independent Contractors		States the intent of the Legislature to codify the decision in the case of Dynamex Operations West, Inc. v. Superior Court of Los Angeles and clarify its application. Provides that the factors of the "ABC" test be applied in order to determine the status of a worker as an employee or independent contractor for all provisions of the Labor Code, unless another definition or specification of "employee" is provided.	03/26/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;03/26/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 11</u> Chiu (D)	Community Redevelopment Law		Authorizes a city or county or two or more cities acting jointly, to propose the formation of an affordable housing and infrastructure agency by adoption of a resolution of intention. Provides for a governing board of the agency. Requires the agency to submit an annual report, and final report of any audit undertaken to its governing body. Requires the governing board of an agency to designate an appropriate official to prepare a proposed redevelopment project plan.	01/17/2019 - To ASSEMBLY Committees on HOUSING AND COMMUNITY DEVELOPMENT and LOCAL GOVERNMENT.
<u>AB 38</u> Wood (D)	Fire Safety: State Wildfire Preparedness Board: Fund		Requires a person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest covered lands, brush covered lands, grass covered lands, or land that is covered with flammable material to maintain defensible space around the building or structure and to maintain vegetation and other fuel loads. Divides the state's very high fire hazard severity zones into regional wildfire prevention districts.	03/21/2019 - From ASSEMBLY Committee on GOVERNMENTAL ORGANIZATION with author's amendments.;03/21/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on GOVERNMENTAL ORGANIZATION.
<u>AB 59</u> Kalra (D)	Elections: Polling Places: University Campuses		Requires that a local elections official designate at least one location on each California State University campus within the official's jurisdiction as a vote center or satellite office.	03/20/2019 - In ASSEMBLY. Coauthors revised.
<u>AB 60</u> Friedman (D)	Water Conservation: Water Meters: Accuracy Standards		Requires the State Energy Resources Conservation and Development Commission to adopt regulations setting standards for the accuracy of water meters. Prohibits any water meter	03/25/2019 - Re-referred to ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			manufactured on or after the effective date of those regulations from being sold or offered for sale in the state, or installed by a water purveyor, unless it is certified by the manufacturer to be in compliance with those standards.	
AB 64 Fong (R)	State Project Audits		Expresses the intent of the Legislature to require an independent audit of all state projects whose estimated cost exceeds a given threshold.	12/03/2018 - INTRODUCED.
AB 68 Ting (D)	Land Use: Accessory Dwelling Units	WATCH	Deletes the provision authorizing the imposition of standards on lot coverage and would prohibit an ordinance from imposing requirements on minimum lot size. Prohibits the imposition of those limitations if they do not permit at least an 800 square foot accessory dwelling unit that is at least 16 feet in height with 4-foot side and rear yard setbacks.	03/27/2019 - From ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT with author's amendments.;03/27/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on HOUSING AND COMMUNITY DEVELOPMENT.
AB 69 Ting (D)	Land Use: Accessory Dwelling Units	WATCH	Requires the department to propose small home building standards governing accessory dwelling units and homes smaller than 800 square feet. Requires the small home building standards to be submitted to the California Building Standards Commission for adoption.	03/27/2019 - From ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT with author's amendments.;03/27/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on HOUSING AND COMMUNITY DEVELOPMENT.
AB 71 Melendez (R)	Independent Contractors and Employees		Requires a determination of whether a person is an employee or an independent contractor to be based on a specific multifactor test, including whether the person to whom the service is rendered has the right to control the manner and means of accomplishing the result desired.	02/25/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;02/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 134</u> Bloom (D)	Safe, Clean, Affordable, and Accessible Drinking Water	WATCH	States findings and declarations relating to the intent of the Legislature to adopt policies to insure that every Californian has the right to safe, clean, affordable, and accessible drinking water. Requires funding from the Safe Drinking Water Fund or Safe and Affordable Drinking Water Fund to be displayed in the annual budget if the funds are established.	03/26/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<u>AB 196</u> Gonzalez (D)	Paid Family Leave		Revises the formula for determining benefits available pursuant to the family temporary disability insurance program for periods of disability by redefining the weekly benefit amount.	03/26/2019 - From ASSEMBLY Committee on INSURANCE with author's amendments.;03/26/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on INSURANCE.
<u>AB 202</u> Mathis (R)	Endangered Species: Conservation: Safe Harbor Program		Extends the operation of the California State Safe Harbor Agreement Program Act indefinitely, which encourages landowners to manage their lands voluntarily, by means of state safe harbor agreements approved by the Department of Fish and Wildlife, to benefit endangered, threatened, or candidate species.	03/25/2019 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 217</u> Garcia E (D)	Safe Drinking Water for All Act	WATCH	Enacts the Safe Drinking Water for All Act. Establishes the Safe and Affordable Drinking Water Fund to provide a source of funding to secure access to safe drinking water for all state residents, while also ensuring the long term sustainability of drinking water service and infrastructure. Establishes a safe and affordable drinking water fee per service connection on all public water systems.	03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 223</u> Stone (D)	California Safe Drinking Water Act: Microplastics		Requires the State Water Resources Control Board, to the extent possible, and where feasible and cost effective, to work with the State Department of Public Health in complying with requirements to adopt a standard methodology to be used in the testing of drinking water for microplastics and requirements for 4 years of testing and reporting of microplastics in drinking water.	02/04/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
AB 233 Cooley (D)	Insurance: Independent Contractors		Relates to existing case law that creates a presumption that a worker who performs services for a hirer is an employee, and requires a 3-part test to establish that a worker is an independent contractor. Clarifies the application of the case law to persons licensed by the Department of Insurance to transact insurance in specified capacities by providing that those persons are not employees when they have entered into a written agreement with an insurer or organizational licensee.	03/25/2019 - To ASSEMBLY Committees on INSURANCE and LABOR AND EMPLOYMENT.
AB 254 Quirk-Silva (D)	Warewashing Machines: Water Reuse		Authorizes water from a warewashing machine at a retail food business to be reused on the same warewashing machine if an attendant is on site to control the reuse of the water and a written disclosure notice is posted.	03/25/2019 - Re-referred to ASSEMBLY Committee on HEALTH.
AB 274 Mathis (R)	Water Treatment Facility: Grant		Appropriates a specified sum to the state Water Resources Board for the purpose of water treatment. Requires the Board to grant a specified sum to a specified joint powers authority for a water treatment facility to be operated by a joint powers authority.	03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
AB 292 Quirk (D)	Recycled Water: Raw Water and Groundwater Augmentation	SUPPORT	Eliminates the definition of direct potable reuse and instead substitutes the term groundwater augmentation for indirect potable reuse for groundwater recharge in definitions. Requires the State Water Resources Control Board to adopt uniform water recycling criteria for raw water augmentation.	03/12/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on WATER, PARKS AND WILDLIFE.
AB 305 Nazarian (D)	Public Facilities: Water Agencies: Rate Reduction Bonds		Expands the definition of a publicly owned utility to include certain utilities furnishing wastewater service to a certain number of customers. Authorizes an authority to issue rate reduction bonds to finance or refinance water or wastewater utility projects. Eliminates specified duties of the Pollution Control Financing Authority under certain circumstances.	03/12/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;03/12/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 314</u> Bonta (D)	Public Employment: Labor Relations: Release Time		Prescribes requirements relating to release time that would apply to all of the public employers and employees subject to specified labor relations laws. Repeals the provisions relating to release time in those acts. Requires these public employers to grant a reasonable number of employee representatives of the exclusive representative reasonable time off without loss of compensation or other benefits for specified activities.	02/11/2019 - To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT.
<u>AB 322</u> Gallagher (R)	Political Reform Act: Online Filing System		Requires a local government agency to post on its internet website a copy of any specified statement, report, or other document filed with that agency in paper format. Requires that the statement, report, or other document be made available for four years from the date of the election associated with the filing.	03/20/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 333</u> Eggman (D)	Whistleblower Protection: Independent Contractors		Extends whistleblower protections afforded to employees to independent contractors and contracted entities working for state and local government who are tasked with receiving and investigating complaints from facilities, services, and programs operated by state and local government. Provides that prohibitions against retaliation by an employer apply to the state or local contracting agency under these provisions.	03/20/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 382</u> Mathis (R)	Integrated Regional Water Management Plans: Grants		Requires the Department of Water Resources to include in any criteria, used to select a project or program for grant funding, a criterion that provides a preference for a regional water management group undertaking a project improving upper watershed health upstream and outside of the defined geographical area covered by the group's plan.	03/20/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 400</u> Lackey (R)	State Mandates		Amends existing law which authorizes a local agency or school district, by February 15, to file an annual reimbursement claim detailing state-mandated costs. Extends that date to March 1.	02/28/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 402</u> Quirk (D)	Water Resources Control Board: Local Primacy Delegation		Includes enforcement costs as costs covered by the annual Drinking Water Surveillance Program grant. Authorizes any local primacy agency, with the approval of the State Water Resources Control Board, to elect to participate in a funding stabilization program. Requires the State Board, during any fiscal year for which a local primacy agency participates in the program, to establish and collect all fees payable by public water systems for the local primacy agency activities.	03/20/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>AB 405</u> Rubio (D)	Sales and Use Taxes: Exemption: Water Treatment		Exempts from the Sales and Use Tax Law the gross receipts from the sale in this state of, and the storage, use, or other consumption in this state of, chemicals used to treat water, recycled water, or wastewater regardless of whether those chemicals or other agents become a component part thereof and regardless of whether the treatment takes place before or after the delivery to consumers.	03/11/2019 - In ASSEMBLY Committee on REVENUE AND TAXATION: Heard, remains in Committee.
<u>AB 418</u> Kalra (D)	Evidentiary Privileges: Union Agent-Worker Privilege		Establishes a privilege between a union agent and a represented employee or represented former employee to refuse to disclose any confidential communication between the employee or former employee and the union agent made while the union agent was acting in the union agent's representative capacity, except as specified.	03/13/2019 - In ASSEMBLY. Read second time. To third reading.
<u>AB 435</u> Fong (R)	High-speed Rail Bonds: Water		Provides that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase I blended system.	03/19/2019 - From ASSEMBLY Committee on TRANSPORTATION with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on TRANSPORTATION.
<u>AB 441</u> Eggman (D)	Water: Underground Storage		Provides that any diversion of water to underground storage constitutes a diversion of water for beneficial use for which an appropriation may be made if the diverted water is put to beneficial use. Provides that the forfeiture periods of a water right do not	03/27/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			include any period when the water is being used in the aquifer or storage area or is being held in underground storage for later application to beneficial use.	
AB 448 Garcia E (D)	Water Rights: Stockponds		Provides that the owner of a stockpond built prior to a specified date, that does not have a capacity greater than ten acre feet, has a valid water right for the principal purpose of watering livestock if that person files a claim for a water right with the State Water Resources Control Board accompanied by a fee not later than a certain date.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
AB 454 Kalra (D)	Migratory Birds: Migratory Bird Treaty Act		Makes unlawful the taking or possession of any migratory nongame bird designated in the Migratory Bird Treaty Act as of January 1, 2017, any additional migratory nongame bird that may be designated in the federal act after that date, or any part of those migratory nongame birds, except as provided by any provision of the Fish and Game Code, or any rule, regulation, or order made or adopted pursuant to the code.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
AB 456 Chiu (D)	Public Contracts: Claim Resolution		Removes the repeal date of a claim resolution process applicable to any claim by a contractor in connection with a public works project against a public entity, thereby making this claim resolution process operative indefinitely.	03/27/2019 - From ASSEMBLY Committee on ACCOUNTABILITY AND ADMINISTRATIVE REVIEW: Do pass to Committee on APPROPRIATIONS.
AB 487 Gallagher (R)	Department of Water Resources: Dams and Reservoirs		Requires notice for the construction, enlargement, alteration, repair, maintenance, operation, and removal of dams and reservoirs be given to the Department of Water Resources at least one month before construction is to be commenced.	02/21/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
AB 508 Chu (D)	Drinking Water: Consolidation of Service: Wells		Authorizes consolidation or extension of service by a water system if a disadvantaged community has one or more residences that are reliant on a domestic well. Requires notification of owners if a domestic well does not provide an adequate supply of safe drinking water. Specifies consequences for not consenting to consolidation,	03/25/2019 - To ASSEMBLY Committees on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS and LOCAL GOVERNMENT.;03/25/2019 - From

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			extension of service, or for construction of a lateral to serve the dwelling unit.	ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
AB 510 Cooley (D)	Local Government Records: Destruction of Records	SUPPORT	Exempts the head of a department of a county or city, or the head of a special district from recording retention requirements if the county, city, or special district adopts a records retention policy governing recordings of routine video monitoring and recordings of telephone and radio communications.	02/21/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
AB 520 Kalra (D)	Public Works: Public Subsidy		Amends existing law relating to prevailing wages for workers employed on public works. Provides that a public subsidy is de minimis if it is both less than a specified amount and less than certain percentage of the total project cost. Specifies that these provisions do not apply to a project that was advertised for bid, or a contract that was awarded before a specified date.	03/20/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT: Do pass to Committee on APPROPRIATIONS.
AB 533 Holden (D)	Income Tax: Exclusion; Water Conservation: Runoff	SUPPORT	Provides an exclusion from gross income for any amount received as a rebate, voucher, or other financial incentive issued by a water service provider for any water conservation or efficiency program or water runoff management improvement program.	03/19/2019 - From ASSEMBLY Committee on REVENUE AND TAXATION with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on REVENUE AND TAXATION.
AB 557 Wood (D)	Atmospheric Rivers: Research and Forecasting Program		Appropriates \$9,250,000 from the General Fund to the Department of Water Resources in the 2019-20 fiscal year to operate the Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
AB 587 Friedman (D)	Accessory Dwelling Units: Sale or Separate Conveyance		Authorizes an accessory dwelling unit that was ministerially approved to be sold or conveyed separately from the primary residence to a qualified buyer if certain conditions are met. Provides that those conditions include that the property was built or developed by a qualified nonprofit corporation that is receiving the welfare exemption, and a recorded contract exists between the qualified buyer and the qualified nonprofit corporation.	03/27/2019 - From ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT: Do pass to Committee on LOCAL GOVERNMENT.;03/27/2019 - In ASSEMBLY. Coauthors revised.
AB 600 Chu (D)	Local Government: Disadvantaged Communities		Requires municipalities to submit an accessibility plan to secure safe drinking water, wastewater services, stormwater protection, and structural fire protection in unincorporated island, fringe, or legacy communities identified in an updated land use element.	03/25/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.;03/25/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
AB 616 Patterson (R)	California Forest Carbon Plan: Report		Requires the Department of Forestry and Fire Protection, in collaboration with the Natural Resources Agency and California Environmental Protection Agency, to prepare and submit to the Legislature and appropriate legislative policy and budget committees, on or before January 1, 2021, and by January 1 of each year thereafter, until January 1, 2025, a report on the progress made and policies and resources needed to achieve specified wildland fire prevention goals for fuel treatment and vegetation management.	03/25/2019 - From ASSEMBLY Committee on NATURAL RESOURCES: Do pass as amended to Committee on APPROPRIATIONS.
AB 626 Quirk-Silva (D)	Conflicts of Interest		Prohibits an officer or employee from being deemed interested in a contract, as described above, if the interest is that of an engineer, geologist, architect, land surveyor, or planner, performing specified services on a project, including preliminary design and preconstruction services, when proposing to perform services on a subsequent portion or phase of the project.	03/21/2019 - To ASSEMBLY Committee on ELECTIONS AND REDISTRICTING.;03/21/2019 - From ASSEMBLY Committee on ELECTIONS AND REDISTRICTING with author's amendments.;03/21/2019 - In ASSEMBLY. Read second time and

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
				amended. Re-referred to Committee on ELECTIONS AND REDISTRICTING.
AB 636 Gray (D)	State Water Resources Control Board: Objectives		Prohibits the State Water Resources Control Board from implementing water quality objectives for which the state board makes a certain finding relating to environmental quality until it has submitted the water quality objectives and a statement of that finding to the appropriate policy committees of the Legislature and each committee has held a hearing on these matters.	03/14/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
AB 637 Gray (D)	State Water Resources Control Board: Drinking Water		Requires the state board, before taking actions that impact drinking water, to identify potential adverse human health effects that the proposed action may have on minority and low-income populations and to seek to reduce those effects to the greatest extent practicable.	03/19/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
AB 638 Gray (D)	Dept. of Water Resources: Water Storage Capacity		Requires the Department of water Resources, with updates every 2 years, to identify the statewide water storage capacity, the adverse impacts to the capacity from the effects of climate change, and the mitigation strategies for anticipated adverse impacts. Requires the department to publish this information on the department's publicly available internet website.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
AB 654 Rubio (D)	Public Records: Utility Customers: Personal Information		Authorizes a local agency to disclose the name, utility usage data, and home address of utility customers to an officer or employee of another governmental agency when the disclosure is not necessary for the performance of the other governmental agency's official duties but is to be used for scientific, educational, or research purposes, and the requesting agency receiving the disclosed material agrees to maintain it as confidential in accordance with specified criteria.	02/28/2019 - To ASSEMBLY Committee on JUDICIARY.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 658</u> Garcia E (D)	Water Rights: Water Management		Authorizes a groundwater sustainability agency or local agency to apply for, and the State water Resources Control Board to issue, a conditional temporary permit for diversion of surface water to underground storage for beneficial use that advances the sustainability goal of a groundwater basin.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 756</u> Garcia (D)	Public Water Systems: Contaminants		Requires a public water system to monitor for perfluoroalkyl and polyfluoroalkyl substances. Requires a public water system to publish and keep current on its internet website water quality information relating to regulated contaminants and to notify each customer on the customer's next water bill and through email of confirmed detections of specified excess contaminants.	03/26/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<u>AB 782</u> Berman (D)	Environmental Quality Act: Exemption: Agencies		Exempts from California Environmental Quality Act (CEQA) the acquisition, sale, or other transfer of property by a public agency for certain purposes, or the funding of that acquisition, sale, or other transfer by a public agency conditions those transactions on compliance with CEQA before making physical changes to the transferred property.	03/25/2019 - From ASSEMBLY Committee on NATURAL RESOURCES: Do pass as amended to Committee on APPROPRIATIONS.
<u>AB 834</u> Quirk (D)	Freshwater and Estuarine Harmful Algal Bloom Program		Requires the state Water Resources Control Board to establish a Freshwater and Estuarine Harmful Algal Bloom Program to protect water quality and public health from algal blooms. Requires the board in consultation with specified entities to coordinate immediate and long-term algal bloom even incident response and conduct and support algal bloom field assessment and ambient monitoring at the state, regional, watershed, and site-specific waterbody scales.	03/26/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 835</u> Quirk (D)	Safe Recreational Water Use: Harmful Algal Blooms		Requires the Department of Public Health by regulation and in consultation with the Water Resources Control Board, local health officers, and the public, to establish, maintain, and amend as necessary, minimum standards for the safety of freshwater recreational bodies as related to harmful algal blooms, as it	03/04/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			determines are reasonably necessary for the protection of the public health and safety.	
<u>AB 841</u> Ting (D)	Drinking Water: Contaminants		Requires the Office of Environmental Health Hazard Assessment to adopt and complete a work plan within prescribed timeframes to assess which substances in the class of perfluoroalkyl and polyfluoroalkyl substances should be identified as a potential risk to human health.	03/26/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<u>AB 849</u> Bonta (D)	Elections: Local Redistricting		Requires the governing body of each local jurisdiction to adopt new district, division, or trustee area boundaries after each federal decennial census, with exceptions. Specifies redistricting criteria and deadlines pursuant to which the governing body shall adopt new boundaries. Specifies hearing procedures that would allow the public to provide input on the placement of boundaries and on proposed boundary maps.	03/14/2019 - From ASSEMBLY Committee on ELECTIONS AND REDISTRICTING with author's amendments.;03/14/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ELECTIONS AND REDISTRICTING.
<u>AB 868</u> Bigelow (R)	Electric Utilities: Wildfire Mitigation Plans		Requires public electrical utilities that deenergize portions of of the electrical grid as a wildfire mitigation measure to adopt protocols for when deenergization will be undertaken, protocols for providing notice and other steps to be taken to minimize any adverse effects from deenergization, and protocols for restoring electrical service following a deenergization. Requires such utilities to maintain a web site devoted to public safety as it relates to the utility services provided by the utility.	03/25/2019 - From ASSEMBLY Committee on UTILITIES AND ENERGY with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on UTILITIES AND ENERGY.
<u>AB 881</u> Bloom (D)	Accessory Dwelling Units		Requires a local agency to designate areas where accessory dwelling units may be permitted based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. Deletes the provision authorizing a local agency to require owner-occupancy as a condition of issuing a permit.	03/04/2019 - To ASSEMBLY Committees on HOUSING AND COMMUNITY DEVELOPMENT and LOCAL GOVERNMENT.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 931</u> Boerner Horvath (D)	State and Local Boards and Commission		Requires the composition of each state and local board and commission with appointed members to have a specified minimum number of women board members or commissioners based on the total number of board members or commissioners on that board.	03/07/2019 - To ASSEMBLY Committees on LOCAL GOVERNMENT and ACCOUNTABILITY AND ADMINISTRATIVE REVIEW.
<u>AB 937</u> Rivas R (D)	Waste Discharge Requirements: Produced Water		Authorizes a regional board to approve a waste discharge requirement for the use or reuse of produced water from an oil and gas operation for agricultural purpose or for groundwater recharge, only if, after a public hearing, it finds that the California Council on Science and Technology has reviewed the best available independent scientific evidence and has found the use will not pose a significant risk to the public from contaminants in the produced water.	03/04/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 945</u> McCarty (D)	Local Government: Financial Affairs: Surplus Funds		Authorizes a local agency to invest and deposit the agency's surplus funds in deposits at specified types of financial institutions whether those investments are certificates of deposit or another form, and increases the percentage of the local agency's funds that can be invested to a certain percentage.	03/04/2019 - To ASSEMBLY Committees on LOCAL GOVERNMENT and BANKING AND FINANCE.
<u>AB 961</u> Reyes (D)	Energy Programs and Projects: Nonenergy Benefits		Requires the Public Utilities Commission to establish common definitions of nonenergy benefits and attempt to determine consistent values for use in all clean energy and energy efficiency programs, meaningfully consider and prioritize producing nonenergy benefits in clean energy and energy efficiency programs and projects, give preference to producing nonenergy benefits in clean energy and energy efficiency programs and projects in low-income and disadvantaged communities.	03/25/2019 - From ASSEMBLY Committee on UTILITIES AND ENERGY with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on UTILITIES AND ENERGY.
<u>AB 992</u> Mullin (D)	Open Meetings: Local Agencies: Social Media		Provides that the Ralph M. Brown Act does not apply to the posting, commenting, liking, interaction with, or participation in, internet-based social media platforms that are ephemeral, live, or static, by a majority of the members of a legislative body, provides that a majority of the members do not discuss among themselves	03/07/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.

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			the business o a specific nature that is within subject matter jurisdiction of the legislative body.	
<u>AB 1013</u> Oberholte (R)	State Agencies: Grant Applications		Prohibits any state agency from selecting as an evaluator of a grant application a representative, former member, or former staff member of an organization or person that is applying to receiver grant funding from that state agency.	03/28/2019 - In ASSEMBLY. Read second time. To third reading.
<u>AB 1035</u> Mayes (R)	Personal Information: Data Breaches		Requires a person or business, as defined, that owns or licenses computerized data that includes personal information to disclose any breach of the security of the system within 72 hours following discovery or notification of the breach, subject to legitimate needs of law enforcement.	03/07/2019 - To ASSEMBLY Committee on PRIVACY AND CONSUMER PROTECTION.
<u>AB 1038</u> Muratsuchi (D)	Air Quality Management Districts Review		Authorizes an air district to impose a charge equal to the costs the air district expends in contracting with a third party to review the scientific or engineering information provided to the air district at the air district's request by a facility regulated pursuant to specified provisions in order to verify the information provided is accurate.	03/07/2019 - To ASSEMBLY Committee on NATURAL RESOURCES.
<u>AB 1045</u> Chen (R)	Public Works: Prevailing Wages		Increase the threshold to require the payment of a prevailing rate of per diem wages.	03/19/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 1093</u> Rubio (D)	Municipal Separate Storm Sewer Systems		Requires the State Water Resources Control Board by July 1, 2020, to establish financial capability assessment guidelines for municipal separate storm sewer system permittees that are adequate and consistent when considering the costs to local jurisdictions.	03/07/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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<u>AB 1130</u> Levine (D)	Personal Information: Data Breaches		Revises the definition of personal information to add specified unique biometric data and government issued identification numbers in addition to those for driver's licenses and California identification.	03/26/2019 - From ASSEMBLY Committee on PRIVACY AND CONSUMER PROTECTION: Do pass to Assembly Committee on APPROPRIATIONS.
<u>AB 1151</u> Daly (D)	Fire Damages: Civil Actions: Pecuniary Damages		Provides that in a civil action seeking damages caused by a fire, pecuniary damages must be quantifiable and not unreasonable in relation to the prefire fair market value of the damaged property or the prefire market value of similar property. Provides that these provisions are not intended to limit or change the ability of a public agency to recover costs arising from a fire, as provided in other specified provisions of law.	03/28/2019 - To ASSEMBLY Committees on JUDICIARY and NATURAL RESOURCES.;03/28/2019 - From ASSEMBLY Committee on JUDICIARY with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on JUDICIARY.
<u>AB 1180</u> Friedman (D)	Water: Recycled Water	SUPPORT	Requires the State Water Resources Control Board to administer provisions under the California Safe Drinking Water Act relating to the regulation of drinking water to protect the public health. Requires the state board to adopt standards for the backflow protection and cross-connection control through the adoption of a policy handbook.	03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 1194</u> Frazier (D)	Sacramento-San Joaquin Delta		Increases the membership of the Delta Stewardship Council to 13 members, including 11 voting members and 2 nonvoting members.	03/11/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
<u>AB 1204</u> Rubio (D)	Public Water Systems: Primary Water Standards	SUPPORT	Relates to the California Safe Drinking Water Act. Requires the adoption or amendment of a primary drinking water standard for a contaminant in drinking water not regulated by a federal primary drinking water standard or that is more stringent than a federal primary drinking water standard to take effect 3 years after the date on which the state board adopts or amends the primary drinking water standard.	03/11/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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<u>AB 1212</u> Levine (D)	Public Employees' Retirement: Pension Fund		Requires a state agency that is responsible for infrastructure projects to produce a list of priority infrastructure projects for funding consideration by the retirement boards, as described, and to provide it to them. Requires a state agency also to provide further project information to a board upon request.	03/11/2019 - To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT.
<u>AB 1220</u> Garcia (D)	Metropolitan Water Districts		Relates to the Metropolitan Water Districts Act. Prohibits a member public agency from having fewer than the number of representatives it had as of a certain date.	03/28/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
<u>AB 1224</u> Gray (D)	Employee Leave: Limitations		Creates an employee leave program and makes it an unlawful business practice to refuse a request for an employee to take up to 12 weeks of leave without a determination by their physician that they are disabled, so long as that employee has worked for 900 or more hours for any employer in the prior 12 months and all other conditions for taking leave are satisfied.	03/25/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 1241</u> Quirk-Silva (D)	Contracts Between Public and Private Entities		Requires an agency that contracts with a person or private entity that owns or licenses an electronic database that contains the personal information of individuals for the purpose of hiring and training specified individuals, to do so only if the contract requires the person or private entity to comply with the requirements for disclosure and maintenance of personal information that are applicable to an agency pursuant to the Information Practices Act.	03/11/2019 - To ASSEMBLY Committee on PRIVACY AND CONSUMER PROTECTION.
<u>AB 1323</u> Stone (D)	Public Utilities Information: Confidentiality		Relates to the Public Utilities Act. Requires the information to be open to the public inspection unless federal or state law or an order of the commission based on a specified finding requires the information to be closed to inspection, or the withholding of that information is ordered by the commission, a commissioner, or an administrative law judge in the course of a hearing or proceeding..	03/11/2019 - To ASSEMBLY Committee on UTILITIES AND ENERGY.

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<u>AB 1347</u> Boerner Horvath (D)	Electricity: Renewable Energy		Establishes the policy of the state that eligible renewable energy resources and zero carbon resources supply a percentage of all retail sales of electricity to state and local government buildings by a certain date, and to all the State end use customers by a certain date.	03/11/2019 - To ASSEMBLY Committees on UTILITIES AND ENERGY and NATURAL RESOURCES.
<u>AB 1375</u> Bigelow (R)	Disaster Relief: Dead and Dying Tree Removal		Provides that the state share for removal of dead and dying trees in connection with the Governor's Proclamation of a State of Emergency issued on October 30, 2015, is not more than a certain percentage of total eligible costs.	03/14/2019 - To ASSEMBLY Committee on GOVERNMENTAL ORGANIZATION.
<u>AB 1381</u> Salas (D)	Safe Drinking Water Plan		Requires the State Water Resources Control Board, in its Safe Drinking Water Plan, to identify public water systems that fail to deliver water that meets all applicable standards under the Safe Drinking Water Act, specified areas in which persons have limited access to, or ability to pay for, safe and affordable drinking water, and strategies to address the changing needs of current and future populations. Requires the plan to include a publicly accessible map that identifies such areas.	03/18/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.;03/18/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/18/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 1389</u> Eggman (D)	Special Districts: Organization: Revenue Loss		Authorizes the local agency formation commission to propose, as part of the review and approval of a proposal for the establishment of new or different functions or class of services, or the divestiture of the power to provide particular functions or class of services, that the special district, to mitigate any loss of property taxes, franchise fees, and other revenues to any other affected local agency, provide payments to the affected local agency.	03/14/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.

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AB 1414 Friedman (D)	Urban Retail Water Suppliers: Reporting		Requires each urban retail water supplier on or before a certain day of each year until a certain date, to submit a completed and validated water loss audit report as prescribed by the Department of Water Resources. Requires on or before a certain date, and on or before a certain day of each year thereafter, each urban retail water supplier to submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year.	03/14/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
AB 1415 Friedman (D)	Department of Water Resources: Reporting		Requires the Department of Water Resources to impose a civil penalty on any person or entity who fails to file with the Department a specified report or plan by the deadline required for that particular report or plan, as provided. Authorizes the department to reduce or waive the civil penalty under certain circumstances.	04/01/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's amendments.;04/01/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
AB 1432 Dahle (R)	Water Shortage Emergencies: Declarations: Wildfires		Authorizes a public water supplier to declare a water shortage emergency condition without holding a public hearing in the event of a wildfire.	03/25/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.;03/25/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's amendments.;03/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
AB 1439 Melendez (R)	Policy for Water Quality Control		Makes nonsubstantive changes to the Porter-Cologne Water Quality Control Act.	02/22/2019 - INTRODUCED.
AB 1445 Gloria (D)	Climate Change: Emergency Declaration and Policy		Declares that it is the policy of the State of California to restore an optimal safe climate and to provide maximum protection from climate change to all people and species, globally, including the most vulnerable.	02/22/2019 - INTRODUCED.
AB 1484 Grayson (D)	Mitigation Fee Act: Housing Developments		Prohibits a local agency from imposing a fee on a housing development project unless the type and amount of the exaction is	03/26/2019 - From ASSEMBLY Committee on HOUSING AND

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			specifically identified on the local agency's website at time of the application for the development project is submitted to the local agency. Requires a local agency to include the location on its website of all the fees imposed upon a housing development project in the list of information provided to a development project.	COMMUNITY DEVELOPMENT with author's amendments.;03/26/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on HOUSING AND COMMUNITY DEVELOPMENT.
AB 1486 Ting (D)	Local Agencies: Surplus Land	OPPOSE UNLESS AMENDED	Expands the definition of local agency to include sewer, water, utility, and local and regional park districts, joint powers authorities, successor agencies to former redevelopment agencies, housing authorities, and other political subdivisions of this state, and any instrumentality thereof, that is empowered to acquire and hold real property, thereby requiring these entities to comply with requirements for the disposal of surplus land.	03/28/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
AB 1503 Burke (D)	Distributed Energy and Microgrids: Policies: Report		Requires the Public Utilities Commission to examine the existing deployment of distributed energy resources and microgrids, and to outline recommendations on policies to support local energy, resiliency, and electrification needs, foster the integration of a reliable and resilient carbon neutral electrical grid, and expand workforce opportunities in emerging energy jobs and professions, including, but not limited to, for hard to employ persons.	03/28/2019 - To ASSEMBLY Committees on UTILITIES AND ENERGY and NATURAL RESOURCES.;03/28/2019 - From ASSEMBLY Committee on UTILITIES AND ENERGY with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on UTILITIES AND ENERGY.
AB 1574 Mullin (D)	Lobbying Expenditures		Requires reports regarding lobbying expenditures to be filed on a monthly basis.	03/14/2019 - To ASSEMBLY Committee on ELECTIONS AND REDISTRICTING.
AB 1588 Gloria (D)	Drinking Water and Wastewater Operator Certification	SUPPORT	Requires operators of complex industrial facilities, including members of the military and military service veterans, to receive full equivalent experience credit and education credit for work and tasks performed that are directly related to the operation of water or wastewater facilities. Relates to water treatment operator certification.	03/14/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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<u>AB 1640</u> Boerner Horvath (D)	Local Government Finance: Budget Reserves.		Requires a local government by September 1, 2020, and annually thereafter, to submit a written report to the State Controller's office on how it plans to spend any of its budget reserves, as defined, on specified priorities over a 5-year fiscal period, including, among others, mental and behavioral health services and affordable housing.	03/18/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 1672</u> Bloom (D)	Solid Waste: Flushable Products		Prohibits a covered entity, as defined, from labeling a covered product as safe to flush, safe for sewer systems, or safe for septic systems, unless the product is a flushable wipe that meets certain performance standards.	03/28/2019 - To ASSEMBLY Committees on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS and JUDICIARY.;03/28/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 1768</u> Carrillo (D)	Prevailing Wage: Public Works		Expands the definition of public works to include work conducted during site assessment or feasibility studies. Specifies that preconstruction work, including design, site assessment, feasibility studies, and land surveying, is deemed to be part of a public work, regardless of whether any further construction work is conducted.	03/21/2019 - To ASSEMBLY Committee on LABOR AND EMPLOYMENT.;03/21/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;03/21/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 1819</u> Judiciary Cmt	Public Records Inspection: Use of Requester's Equipment		Grants a requester of a public record the right to use the requester's equipment, without being charged any fees or costs, to photograph or otherwise copy or reproduce any physical record upon inspection and on the premises of the agency, unless the means of copy or reproduction would result in damage to the record, or	03/28/2019 - To ASSEMBLY Committee on JUDICIARY.;03/28/2019 - From ASSEMBLY Committee on JUDICIARY with author's

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			unauthorized access to a computer system or secured network of the agency.	amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on JUDICIARY.
ACA 3 Mathis (R)	Clean Water for All Act	WATCH	Requires not less than a certain percent of specified state revenues to be set apart for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act. Relates to water supply, delivery, and quality projects administered by the Department of Water Resources and water quality projects administered by the State Water Resources Control Board.	03/20/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's amendments.;03/20/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
SB 1 Atkins (D)	Environmental, Public Health, and Workers Defense Act		Enacts the California Environmental, Public Health, and Workers Defense Act, which prohibits a state or local agency from amending or revising its rules to be less stringent than the federal baseline standards pertaining to environmental protection.	03/20/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on NATURAL RESOURCES AND WATER.
SB 13 Wieckowski (D)	Accessory Dwelling Units	WATCH	Amends the Planning and Zoning Law. Authorizes the creation of accessory dwelling units in areas zoned to allow single family or multifamily dwelling use. Prohibits a local agency from requiring the replacement of parking spaces if a garage, carport, or covered parking is demolished to construct an accessory dwelling unit. Prohibits a local agency from requiring occupancy of either the primary or the accessory dwelling unit.	03/20/2019 - Re-referred to SENATE Committees on HOUSING and GOVERNANCE AND FINANCE.
SB 15 Portantino (D)	Property Tax Revenue Allocations: Successor Agencies		Requires the county auditor of a county in which a successor agency, as defined, is located to decrease the amount of ad valorem property tax revenue that is otherwise required to be allocated to the county Educational Revenue Augmentation Fund by the countywide local-state sustainable investment amount and to allocate a commensurate amount to the successor agencies that are located within the county.	03/28/2019 - Re-referred to SENATE Committees on GOVERNANCE AND FINANCE and HOUSING.

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SB 19 Dodd (D)	Water Resources: Stream Gages		Requires the Department of Water Resources and the State Water Resources Control Board, upon an appropriation of funds by the Legislature, to develop a plan to deploy a network of stream gages that includes a determination of funding needs and opportunities for modernizing and reactivating existing gages and deploying new gages.	03/12/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER: Do pass to Committee on APPROPRIATIONS.
SB 43 Allen (D)	Carbon Taxes		Requires the State Air Resources Board in consultation with the Department of Tax and Fee Administration, to submit a report to the Legislature on the results of a study to propose and determine the feasibility and practicality of a system to replace the tax imposed pursuant to the Sales and Use Tax Law with an assessment on retail products sold or used in the state based on the carbon intensity of the product to encourage the use of less carbon-intensive products.	03/20/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on GOVERNANCE AND FINANCE.
SB 44 Skinner (D)	Medium and Heavy Duty Vehicles: Comprehensive Strategy		Requires the State Air Resources Board to develop a comprehensive strategy for the deployment of medium and heavy duty vehicles in the state that results in bringing the state into compliance with federal ambient air quality standards and a reduction of motor vehicle greenhouse gas emissions. States that a portion of the annual proceeds of the Greenhouse Gas Reduction Fund will be appropriated to support the California Clean Truck, Bus, and Off Road Vehicle and Equipment Technology Program.	03/21/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY with author's amendments.;03/21/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL QUALITY.
SB 45 Allen (D)	Wildfire, Drought, and Flood Protection Bond Act 2020		Enacts the Wildfire, Drought, and Flood Protection Bond Act of 2020, which, if approved by voters, authorizes the issuance of bonds to finance projects to restore fire damaged areas, reduce wildfire risk, create healthy forests and watersheds, reduce climate impacts on urban areas and vulnerable populations, protect water supply and water quality, protect rivers, lakes, and streams, reduce flood risk, protect fish and wildlife from climate impacts, and protect coastal lands and resources.	03/26/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER: Do pass to Committee on ENVIRONMENTAL QUALITY.

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SB 46 Jackson (D)	Emergency Services: Telecommunications		Expands the types of public utilities that can enter into agreements to access accountholder information by defining public utility to include, a local publicly owned electric utility, wireless telephony services, a public water agency, and an agency responsible for solid waste or recycling services. Authorizes a local government to establish a public warning system. Requires the Public Utilities Commission to collect specified information from telecommunications service providers.	03/20/2019 - Re-referred to SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
SB 69 Wiener (D)	Ocean Resiliency Act		Requires the Department of Fish and Wildlife to undertake projects to improve hatchery management. Names certain streams and watercourses as the state Endangered Rivers List. Requires reporting on coastal and harbor management programs to address the effects of climate change. Imposes certain requirements for timber harvesting plans relating to discharge of waste into water.	04/01/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;04/01/2019 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
SB 128 Beall (D)	Enhanced Infrastructure Financing Districts: Bonds		Authorizes the Public Financing Authority to issue bonds for purposes of enhanced infrastructure financing districts without submitting a proposal to the voters. Requires specified information related to the issuance of the bonds to be contained in the resolution. Requires the Authority to hold three public hearings on an enhanced infrastructure financing plan.	03/28/2019 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
SB 133 Galgiani (D)	Wildfires: Detection		States the intent of the Legislature to enact legislation to create and fund a program for installing remote infrared cameras that can help in detecting wildfires.	01/24/2019 - To SENATE Committee on RULES.
SB 134 Hertzberg (D)	Water Conservation: Water Loss Performance Standards	SUPPORT	Prohibits the State water Resources Control Board from imposing liability for a violation of the performance standards for the volume of water losses except as part of the enforcement of an urban water use objective.	01/24/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.

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SB 139 Allen (D)	Independent Redistricting Commissions		Requires certain counties to establish an independent redistricting commission to adopt the county's supervisorial districts after each federal decennial census. If a county subject to this requirement does not establish an independent redistricting commission, that county is required to establish a nine member independent redistricting commission pursuant to a specified procedure. Requires such counties to provide for reasonable funding and staffing of the commission.	03/07/2019 - From SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS with author's amendments.;03/07/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS.
SB 166 Wiener (D)	Water Treatment Systems: Breweries and Wineries: Study		Requires the State Water Resources Control Board to convene a prescribed study group to advise the Legislature on policies regarding the onsite reuse of process water in breweries and wineries.	03/21/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY with author's amendments.;03/21/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL QUALITY.
SB 190 Dodd (D)	Fire Safety: Building Standards		Requires the Office of the State Fire Marshal to develop, in consultation with representatives from local, state, and federal fire services, local government, building officials, utility companies, the building industry, and the environmental community, a model defensible space program. Requires the Office to make available on their website a Wildland Urban Interface Fire Safety Building Standards Compliance training manual for the training of local building officials, builders, and firefighters.	04/01/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;04/01/2019 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
SB 200 Monning (D)	Safe and Affordable Drinking Water Fund	WATCH	Establishes the Safe and Affordable Drinking Water Fund. Provides that moneys in the Fund are continuously appropriated to the State Water Resources Control Board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long term sustainability of drinking water service and infrastructure. Authorizes the Board to provide for the deposit into the Fund of federal contributions, voluntary contributions, gifts, grants, and bequests.	03/20/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on NATURAL RESOURCES AND WATER.

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SB 204 Dodd (D)	State Water Project: Contracts	OPPOSE UNLESS AMENDED	Requires the Department of Water Resources to provide at least 10 days' notice to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature before holding public sessions to negotiate any potential amendment of a long-term water supply contract that is of projectwide significance with substantially similar terms intended to be offered to all contractors, or that would permanently transfer a contractual water amount between contractors.	03/18/2019 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 209 Dodd (D)	California Wildfire Warning Center: Weather Monitoring		Establishes the California Wildfire Warning Center, a statewide network of automated weather and environmental monitoring stations conducting fire weather forecasting and threat assessment to aid in wildfire prevention and response. Comprises the center of representatives from the Public Utilities Commission, the Office of Emergency Services, and the Department of Forestry and Fire Protection.	03/26/2019 - From SENATE Committee on GOVERNMENTAL ORGANIZATION: Do pass to Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
SB 210 Leyva (D)	Heavy-Duty Vehicle Inspection and Maintenance Program		Authorizes the State Air Resources Board to develop and implement a Heavy-Duty Vehicle Inspection and Maintenance Program for nongasoline heavy-duty onroad motor vehicles. Authorizes fee assessment and penalties as part of the program. Creates the Truck Emission Check Fund, with all the moneys deposited in the fund to be available upon appropriation.	03/25/2019 - In SENATE. Read second time and amended. Re-referred to Committee on TRANSPORTATION.
SB 212 Allen (D)	Elections: Local Voting Methods		Authorizes a city, county, or local educational agency to conduct an election using ranked choice voting, in which voters rank the candidates for office in order of preference. Specifies the procedures for conducting an election using ranked choice voting as it applies to both a single seat election and a multiseat election.	03/21/2019 - From SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS with author's amendments.;03/21/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS.
SB 226 Nielsen (R)	Watershed Restoration: Wildfires: Grant Program		Requires the Natural Resources Agency to develop and implement a watershed restoration grant program for purposes of awarding	03/18/2019 - From SENATE Committee on NATURAL

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			grants to private property land owners to assist them with watershed restoration on watersheds that have been affected by wildfire. Requires the agency to provide technical resources to the private property land owners seeking assistance with watershed restoration.	RESOURCES AND WATER with author's amendments.;03/18/2019 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
SB 241 Moorlach (R)	Public Agencies: Joint Powers Authorities: Contracts		Relates to the Joint Powers Act. Requires the governing body of each member agency of an agency established pursuant to a joint powers agreement to approve and ratify each memorandum of understanding negotiated between the joint powers agency and its employees. Requires each member agency to approve and ratify each contract for municipal services or functions, as defined, negotiated between the joint powers agency and the entity providing the services or functions.	02/21/2019 - To SENATE Committees on GOVERNANCE AND FINANCE and LABOR, PUBLIC EMPLOYMENT AND RETIREMENT.
SB 287 Nielsen (R)	Commission on State Mandates: Test Claims: Filing Date		Relates to the filing date on test claims for the Commission on State Mandates. Specifies that for purposes of filing a test claim based on the date of incurring increased costs, "within 12 months" means by June 30 of the fiscal year following the fiscal year in which increased costs were first incurred by the test claimant.	03/27/2019 - From SENATE Committee on GOVERNANCE AND FINANCE: Do pass to Committee on APPROPRIATIONS.
SB 288 Wiener (D)	Electricity: Self-Generation and Storage		Requires the PUC and the governing board of each local publicly owned electric utility to create one or more tariffs that offer fair compensation for customer-sited energy storage systems that export electricity to the electrical grid and to consider one or more tariffs for customer-sited energy storage and renewable energy systems to support grid reliability and community resiliency in the event of emergencies or grid outages.	03/28/2019 - From SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS with author's amendments.;03/28/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
SB 307 Roth (D)	Water Conveyance: Use of Facility with Unused Capacity	WATCH	Prohibits a transferor of water from using a water conveyance facility that has unused capacity to transfer water from a groundwater basin underlying desert lands that is in the vicinity of specified federal lands or state lands to outside of the groundwater basin unless the State Lands Commission, in consultation with the	02/28/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.

IRWD 2019 LEGISLATIVE MATRIX
Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			Department of Fish and Wildlife, finds that the transfer of the water will not adversely affect the natural or cultural resources of those federal and state lands.	
SB 332 Hertzberg (D)	Wastewater Treatment: Recycled Water	OPPOSE UNLESS AMENDED	Declares, except in compliance with the bill's provisions, that the discharge of treated wastewater from ocean outfalls is a waste and unreasonable use of water. Requires each wastewater treatment facility that discharges through an ocean outfall and affiliated water suppliers to reduce the facility's annual flow as compared to the average annual wastewater discharge baseline volume, as prescribed, by at least 50% on or before January 1, 2030, by at least 95% on or before January 1, 2040.	02/28/2019 - To SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
SB 335 Hurtado (D)	Provision of Sewer Service: Onsite Treatment System		Authorizes the property owner of an affected residence to opt out of the provision of sewer service for a maximum of 5 years if the adequate onsite sewage treatment system was installed no more than 5 years prior to the issuance of the order.	02/28/2019 - To SENATE Committees on ENVIRONMENTAL QUALITY and GOVERNANCE AND FINANCE.
SB 341 Morrell (R)	Public Employment and Retirement		Requires the Board of Administration of the Public Employees' Retirement System to report a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. Requires the Teacher's Retirement Board to provide a description of the discount rate the board uses for reporting liabilities, a calculation of liabilities based on a discount rate that is 2% below the long-term rate of return.	03/27/2019 - In ASSEMBLY Committee on LABOR AND EMPLOYMENT: Failed passage.;03/27/2019 - In SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Reconsideration granted.
SB 355 Portantino (D)	Joint Powers Agencies: Meetings		Relates to The Joint Exercise of Powers Act. Relates to The Ralph M. Brown Act. Eliminates the requirement that the designated alternate member of the legislative body of the joint powers agency also be a member of the legislative body of a member local agency.	02/28/2019 - To SENATE Committee on GOVERNANCE AND FINANCE.
SB 414 Caballero (D)	Small System Water Authority Act of 2019	SUPPORT	Creates the Small System Water Authority Act of 2019 and states legislative findings and declarations relating to authorizing the	03/27/2019 - From SENATE Committee on GOVERNANCE AND

IRWD 2019 LEGISLATIVE MATRIX
Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			creation of small system water authorities that will have powers to absorb, improve, and competently operate noncompliant public water systems.	FINANCE: Do pass to Committee on ENVIRONMENTAL QUALITY.
SB 454 Caballero (D)	Water Resources Control Board: Administrative Hearing		Authorizes the State Water Resources Control Board an Administrative hearings Office to be supported in full or in part by fees assessed against parties that participate in a hearing conducted by the office and prohibits the fees from being in an amount more than necessary to cover the reasonable costs of the burden imposed on the office by the individual fee payor.	03/07/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
SB 474 Stern (D)	Department Of Water Resources: Appropriations Of Water		Eliminates the exemption from application of water diligence provisions under the State Water Resources Control Board.	03/07/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
SB 487 Caballero (D)	Department Of Water Resources: Aerial Snow Survey		Requires the Department of Water Resources California snow survey program to conduct aerial surveys of the snowpack in the Trinity Alps and Sierra Nevada Mountains, including hydrologic areas that drain or supply water to certain major reservoirs and lakes. Requires the department to collect the aerial survey data up to 10 times per year in each hydrologic area and to summarize and make publicly available the data obtained.	03/26/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER: Do pass to Committee on APPROPRIATIONS.
SB 518 Wieckowski (D)	Public Records: Disclosure: Court Costs and Attorney		Relates to court costs and attorney's fees disclosure for purposes of the award of those costs specifically notwithstanding a provision of existing law that prescribes the withholding or augmentation of costs if an offer is made before judgment or award in a trial or arbitration.	03/07/2019 - To SENATE Committees on JUDICIARY and APPROPRIATIONS.
SB 535 Moorlach (R)	Global Warming Solutions Act: Scoping Plan		Requires the State Air Resources Board to prepare and approve a scoping plan for achieving the maximum technologically feasible and and cost-effective reductions in greenhouse gas emissions and to update the scoping plan at least once every five years. Requires the state board to include greenhouse gas emissions from wildfires and forest fires in the scoping plan.	03/07/2019 - To SENATE Committee on ENVIRONMENTAL QUALITY.

IRWD 2019 LEGISLATIVE MATRIX

Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 559</u> Hurtado (D)	Department of Water Resources Grant		Appropriates funds to the Department of Water Resources for the purposes of restoring the Friant Kern Canal to its full capacity.	03/07/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>SB 608</u> Glazer (D)	Architects: Contracts		Relates to existing law requiring an architect to use a written contract when contracting to provide professional services. Requires the written contract to include a description of the project, a description of the procedure that will be used to accommodate contract changes, the project address, a statement identifying the ownership and use of instruments of service prepared by the architect.	03/14/2019 - To SENATE Committee on BUSINESS, PROFESSIONS AND ECONOMIC DEVELOPMENT.
<u>SB 615</u> Hueso (D)	Public Records: Disclosure		Permits any person to institute proceedings for injunctive or declarative relief or a writ of mandate in any court of competent jurisdiction to enforce their right to inspect or to receive a copy of any public record or class of public records covered by the California Public Records Act. Requires a person to meet and confer in good faith with the agency in an attempt to informally resolve each issue.	03/14/2019 - To SENATE Committee on JUDICIARY.
<u>SB 629</u> McGuire (D)	Air Districts: Hearing Boards: Notice Requirements		Relates to the Ralph M. Brown Act. Requires a hearing board to send a notice of hearing not less than a specified number of hours before the hearing to any person who requests the notice.	03/14/2019 - To SENATE Committee on GOVERNANCE AND FINANCE.
<u>SB 641</u> Allen (D)	Special Elections: Ranked Choice Voting		Authorizes the Governor to require that a special election to fill a vacancy in a congressional or legislative office be conducted by ranked choice voting, as defined, if the affected jurisdiction is capable of using this voting method and the Secretary of State has approved the specific ranked choice voting method to be used.	03/28/2019 - To SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS.
<u>SB 646</u> Morrell (R)	Local Agency Utility Services: Service Extensions		Requires a local agency formation commission to authorize a city or district to extend a service outside its jurisdiction boundary, but within its sphere of influence, if no city, district, or privately	03/14/2019 - To SENATE Committee on GOVERNANCE AND FINANCE.

IRWD 2019 LEGISLATIVE MATRIX
Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			owned public utility provides that service, irrespective of whether a change of organization is anticipated.	
<u>SB 668</u> Rubio (D)	Fire Hydrants: Water Suppliers: Regulations		Requires the State Water Resources Control Board, by December 1, 2021, to develop and adopt regulations for reporting and inspections regarding public water suppliers. Requires that the regulations adopted by the board ensure water suppliers' compliance with local standards for fire safety.	03/14/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>SB 669</u> Caballero (D)	Water Quality: Safe Drinking Water Fund	SUPPORT	Establishes the Safe Drinking Water Fund in the State Treasury. Provides that moneys in the fund are continuously appropriated to the state board. Requires the state board to administer the fund to assist community water systems in disadvantaged communities that are chronically noncompliant relative to the federal and state drinking water standards and do not have the financial capacity to pay for operation and maintenance costs comply with those standards.	03/14/2019 - To SENATE Committees on ENVIRONMENTAL QUALITY and GOVERNMENTAL ORGANIZATION.
<u>SB 732</u> Allen (D)	South Coast Air Quality Management District		Authorizes the south coast district board to impose a transactions and use tax within the boundaries of the south coast district.	03/27/2019 - From SENATE Committee on RULES with author's amendments.;03/27/2019 - In SENATE. Read second time and amended. Re-referred to Committee on RULES.
<u>SB 762</u> Jones (R)	Groundwater Storage		Makes a nonsubstantive change in provisions relating to groundwater storage.	03/14/2019 - To SENATE Committee on RULES.
<u>SB 779</u> Nat Resour & Water Cmt	Appropriation of Water: Change of Point of Diversion		Authorizes an applicant, permittee, or licensee, for purposes of appropriating water, to change any other provision or condition from that specified in the application, permit, or license upon permission of the State Water Resources Control Board. Authorizes the board to make a minor change to an application, permit, or license without requiring the filing of a petition for change if it makes specified findings.	03/14/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.

IRWD 2019 LEGISLATIVE MATRIX
Updated 04/02/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 780</u> Governance and Finance Cmt	Local Government Omnibus Act		Requires the Secretary of State and each county clerk to establish and maintain an indexed Registry of Public Agencies containing a specified statement of facts about the agency.	03/14/2019 - To SENATE Committee on GOVERNANCE AND FINANCE.
<u>H.R. 1764</u> Garamendi	Extended Permit Terms	SUPPORT	To amend the Federal Water Pollution Control Act with respect to permitting terms, and for other purposes.	House - 03/15/2019 Referred to the Subcommittee on Water Resources and Environment.

Exhibit "B"

2019 Legislative Update Report:
Links to Bill & Regulatory Texts
(as of April 4, 2019)

Bill Number/Version Date	Link to Bill Text
Safe and Affordable Drinking Water Budget Trailer Bill	http://www.dof.ca.gov/Budget/Trailer_Bill_Language/documents/SafeandAffordableDrinkingWaterandExideCleanup.pdf
AB 134 (Bloom), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB134
AB 217 (Garcia), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB217
AB 510 (Cooley), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB510
AB 1672 (Bloom) as amended	https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1672
ACA 3 (Mathis/Garcia), as amended	https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB3
SB 200 (Monning), as amended	https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB200
SB 332 (Hertzberg/Wiener), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB332
SB 414 (Caballero), as amended	https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB414

SB 669 (Caballero), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB669
SB 732 (Allen), as amended	https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB732

April 22, 2019

Prepared by: J. Davis/T. Fournier

Submitted by: R. Jacobson/C. Clary

Approved by: Paul A. Cook 

CONSENT CALENDAR

MARCH 2019 TREASURY REPORTS

SUMMARY:

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

- A. The Investment Summary Report for March 2019. This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A";
- B. The Summary of Fixed and Variable Debt as of March 31, 2019, as outlined in Exhibit "B";
- C. The Monthly Interest Rate Swap Summary as of March 31, 2019, as outlined in Exhibit "C";
- D. The March 31, 2019 Disbursement Summary of warrants 396572 through 397437, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$15,169,316 as outlined in Exhibit "D";
- E. The Summary of Payroll ACH payments in the total amount of \$3,310,358 as outlined in Exhibit "E"; and
- F. The Disclosure Report of Reimbursements to Board Members and staff for March 2019, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

FISCAL IMPACTS:

As of March 31, 2019, the book value of the investment portfolio was \$371,877,650, with a 2.00% rate of return and a market value of \$371,539,795. Based on the District's March 31, 2019 quarterly real estate investment rate of return of 9.42%, the weighted average return for the fixed income and real estate investments was 4.18%.

As of March 31, 2019, the outstanding principal amount of fixed and variable rate debt was \$670,425,000. The monthly weighted average all-in variable rate was 1.73%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.48%.

Payroll ACH payments totaled \$3,310,358, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for March totaled \$15,169,316.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE MARCH 2019 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$3,310,358 AND APPROVE THE MARCH 2019 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 396572 THROUGH 397437, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$15,169,316.

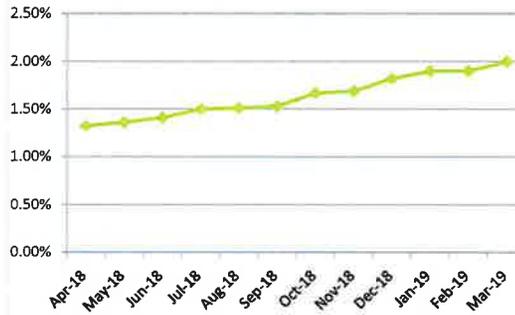
LIST OF EXHIBITS:

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

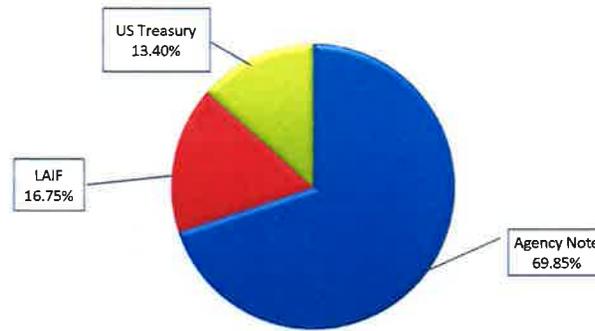
Exhibit "A"

Irvine Ranch Water District Investment Portfolio Summary March 2019

Monthly Fixed Income Yield



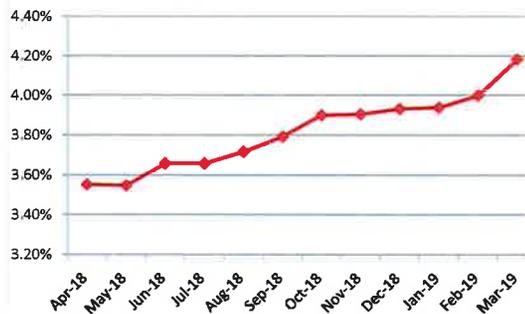
Portfolio Distribution



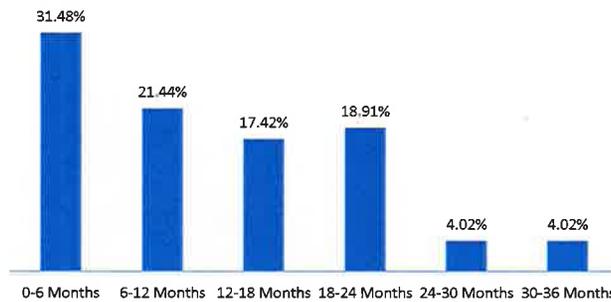
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	260,550,000	260,071,504	259,427,150
LAIF	62,500,000	62,500,000	62,440,695
US Treasury	50,000,000	49,306,146	49,671,950
Grand Total	373,050,000	371,877,650	371,539,795

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	75,000,000	20.10%
Fed Natl Mortgage Assoc	70,550,000	18.92%
Fed Farm Credit Bank	65,000,000	17.43%
State of California Treasury - LAIF	62,500,000	16.75%
US Treasury	50,000,000	13.40%
Fed Home Loan Mortgage Corp	50,000,000	13.40%
Grand Total	373,050,000	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

03/31/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 3/31/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
08/23/17			04/01/19		LAIF	State of California Tsy.	\$62,500,000		2.320%	\$62,500,000.00	\$62,500,000.00	62,440,695.44	(59,304.56)
10/12/16	N/A	N/A	04/15/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.125%	0.992%	10,032,800.00	10,001,218.80	9,994,800.00	(6,418.80)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,964.17	4,995,150.00	(4,814.17)
09/01/16	N/A	N/A	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,999,860.21	4,989,100.00	(10,760.21)
04/19/18	N/A	N/A	05/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.750%	2.252%	4,972,500.00	4,996,003.69	4,994,450.00	(1,553.69)
09/01/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.987%	5,087,400.00	5,006,365.75	4,992,100.00	(14,265.75)
10/12/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	1.103%	5,068,515.88	5,006,605.63	4,992,100.00	(14,505.63)
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,996,123.98	4,976,150.00	(19,973.98)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,999,528.54	4,979,200.00	(20,328.54)
09/01/16	N/A	N/A	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,795.14	4,973,150.00	(26,645.14)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,863.43	4,972,650.00	(27,213.43)
03/29/19	NA	NA	08/29/19	NR	FHLB - Discount Note	Fed Home Loan Bank	10,000,000	2.400%	2.460%	9,898,000.00	9,900,000.00	9,899,600.00	(400.00)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,999,620.02	4,970,700.00	(28,920.02)
04/10/18	NA	NA	09/13/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.288%	5,006,000.00	5,001,900.19	4,998,100.00	(3,800.19)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,245.43	4,971,100.00	(29,145.43)
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,998,070.81	9,933,700.00	(64,370.81)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,995,132.54	9,936,000.00	(59,132.54)
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,151.37	4,963,600.00	(36,551.37)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,998,008.69	4,968,750.00	(29,258.69)
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,996,730.77	4,963,350.00	(33,380.77)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,336.65	4,968,500.00	(31,836.65)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,995,769.17	4,969,150.00	(26,619.17)
12/20/17	NA	NA	01/17/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.500%	1.932%	4,956,250.00	4,977,316.95	4,962,450.00	(14,866.95)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,995,005.00	4,958,450.00	(36,555.00)
12/19/18	NA	NA	02/29/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.250%	2.672%	9,833,593.76	9,867,865.07	9,894,900.00	27,034.93
12/20/17	NA	NA	03/13/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	4.125%	1.940%	5,237,200.00	5,130,838.82	5,077,550.00	(53,288.82)
12/20/18	NA	NA	03/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	2.250%	2.665%	9,948,000.00	9,958,021.41	9,983,200.00	25,178.59
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,968,350.00	4,986,897.58	4,945,700.00	(41,197.58)
06/29/18	NA	NA	04/23/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.500%	2.544%	4,996,000.00	4,997,714.29	5,002,700.00	4,985.71
06/29/18	NA	NA	05/15/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.566%	4,998,450.00	4,999,073.62	5,010,350.00	11,276.38
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,984,619.90	4,970,850.00	(13,769.90)
06/11/18	NA	NA	06/11/20	Aaa/NR/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.570%	4,997,100.00	4,998,266.35	5,011,100.00	12,833.65
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,994,456.64	4,946,200.00	(48,256.64)
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.535%	4,886,000.00	4,933,488.60	4,942,250.00	8,761.40
06/08/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.559%	4,890,100.00	4,931,786.21	4,942,250.00	10,463.79
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.450%	2.052%	4,923,000.00	4,952,154.56	4,930,850.00	(21,304.56)
09/14/18	NA	NA	08/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.680%	2.789%	4,989,700.00	4,992,586.90	5,021,700.00	29,113.10
05/21/18	Continuous after	12/01/17	09/01/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.680%	2.735%	4,884,250.00	4,927,968.53	4,954,550.00	26,581.47
09/14/18	NA	NA	09/04/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.690%	2.794%	4,990,050.00	4,992,796.26	5,024,750.00	31,953.74
12/12/17	One Time	09/28/18	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2.000%	2.000%	5,000,000.00	5,000,000.00	4,966,800.00	(33,200.00)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

03/31/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 3/31/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,494,999.50	(55,000.50)
09/28/18	NA	NA	10/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.750%	2.847%	4,889,453.13	4,862,684.58	4,953,150.00	90,465.42
12/13/17	Continuous after	08/23/17	11/23/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.770%	2.060%	4,958,750.00	4,972,742.80	4,954,150.00	(18,592.80)
12/13/17	Quarterly	05/24/18	11/24/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.900%	2.023%	4,982,500.00	4,988,430.83	4,960,550.00	(27,880.83)
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,990,899.68	4,960,500.00	(30,399.68)
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.875%	2.023%	4,978,400.00	4,985,541.30	4,963,350.00	(22,191.30)
11/09/18	NA	NA	12/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.375%	2.958%	4,939,843.75	4,950,830.14	5,004,100.00	53,269.86
10/12/18	NA	NA	01/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	2.890%	9,664,843.76	9,732,909.93	9,831,300.00	98,390.07
12/14/18	NA	NA	02/16/21	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	2.806%	4,954,750.00	4,959,872.64	5,004,850.00	44,977.36
12/14/18	NA	NA	02/28/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	2.755%	4,919,515.95	4,928,491.87	4,971,500.00	43,008.13
02/12/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.500%	2.516%	9,996,500.00	9,996,721.34	10,028,200.00	31,478.66
02/25/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.549%	4,982,700.00	4,983,511.66	5,003,350.00	19,838.34
03/08/19	NA	NA	01/15/22	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.500%	2.460%	5,005,468.75	5,005,343.03	5,033,800.00	28,456.97
03/21/19	NA	NA	02/03/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.030%	2.361%	4,954,350.00	4,954,828.24	4,960,650.00	5,821.76
03/08/19	NA	NA	03/11/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.500%	2.549%	5,002,750.00	5,002,689.95	5,026,650.00	23,960.05
TOTAL INVESTMENTS							\$373,050,000			\$371,652,192.88	\$371,877,649.65	\$371,539,794.94	(\$337,854.71)
Petty Cash											3,400.00		
Ck Balance									Bank of America		1,849,167.99		
											<u>\$373,504,760.87</u>		

⁽¹⁾ LAIF market value is as of the most recent quarter-end as reported by LAIF.
⁽²⁾ Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.
⁽³⁾ Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers
⁽³⁾ Real estate rate of return is based on most recent quarter end return

Outstanding Variable Rate Debt	\$273,300,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$143,300,000
Investment Balance:	\$373,504,761
Investment to Variable Rate Debt Ratio:	261%
Portfolio - Average Number of Days To Maturity	327

	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return
March	2.00%	9.42%	4.18%
February	1.90%	9.02%	4.00%
Change	0.10%		0.18%

This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.
 *S - Step up

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

03/31/19

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
03/19	\$62,500,000	16.75%	\$62,500,000				
04/19	15,000,000	4.02%		15,000,000			
05/19	10,000,000	2.68%		10,000,000		-	
06/19	10,000,000	2.68%		10,000,000			
07/19	10,000,000	2.68%		10,000,000			
08/19	20,000,000	5.36%		10,000,000	10,000,000		
09/19	15,000,000	4.02%		15,000,000			
10/19	20,000,000	5.36%		20,000,000			
11/19	15,000,000	4.02%		15,000,000			
12/19	10,000,000	2.68%		10,000,000			
01/20	5,000,000	1.34%		5,000,000			
02/20	15,000,000	4.02%		5,000,000			10,000,000
SUB-TOTAL	\$207,500,000	55.62%	\$62,500,000	\$125,000,000	\$10,000,000		\$10,000,000
13 Months - 3 YEARS							
3/01/2020 - 5/31/2020	40,000,000	10.72%		30,000,000			10,000,000
6/01/2020 - 8/31/2020	25,000,000	6.70%		25,000,000			
9/01/2020 - 11/30/2020	40,550,000	10.87%		35,550,000			5,000,000
12/01/2020 - 2/28/2021	30,000,000	8.04%		10,000,000			20,000,000
03/01/2021 - 05/31/2021	15,000,000	4.02%		15,000,000			
6/01/2021 - 8/31/2021	-						
9/01/2021 - 11/31/2021	-						
12/01/2022 - 03/31/2022	15,000,000	4.02%		10,000,000			5,000,000
04/01/2022 - 05/31/22	-						
TOTALS	\$373,050,000	100.00%	\$62,500,000	\$250,550,000	\$10,000,000		\$50,000,000

% OF PORTFOLIO

16.75%

67.17%

2.68%

13.40%

Irvine Ranch Water District
Summary of Real Estate - Income Producing Investments
3/31/2019

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 3/31/2019	ANNUALIZED RATE OF RETURN QUARTER ENDED 3/31/2019
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 145,000,000	19.60%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 30,670,120	8.55%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 11,500,000	15.84%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 9,000,000	5.90%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,000,000	9.08%
Total - Income Properties				\$ 72,569,826	\$ 207,170,120	15.51%
OTHER REAL ESTATE						
DESCRIPTION						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
Total - Income Producing Real Estate Investments				\$ 154,169,826	\$ 288,770,120	9.42%

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
Mar-19

MATURITIES/SALES/CALLS

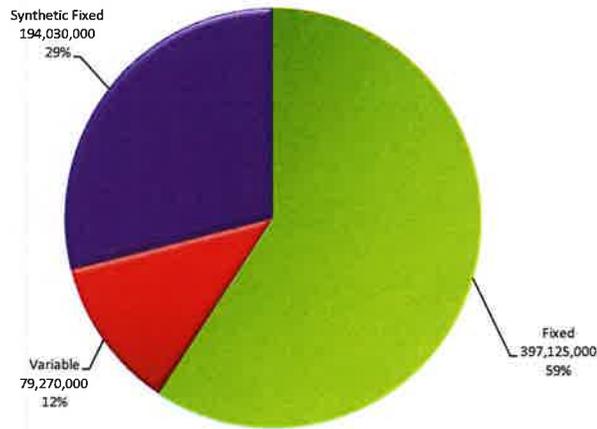
PURCHASES

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
3/8/2019	FHLB - Note	\$5,000,000	0.96%	3/8/2019	1/15/2022	US Treasury	\$5,000,000	2.46%
3/21/2019	FHLB - Note	\$10,000,000	2.13%	3/8/2019	3/11/2022	FHLB - Note	\$5,000,000	2.48%
3/29/2019	FHLC - Note	\$5,000,000	1.05%	3/21/2019	2/3/2022	FFCB - Note	\$5,000,000	2.36%
				3/29/2019	8/29/2019	FHLB - Discount Note	\$10,000,000	2.46%

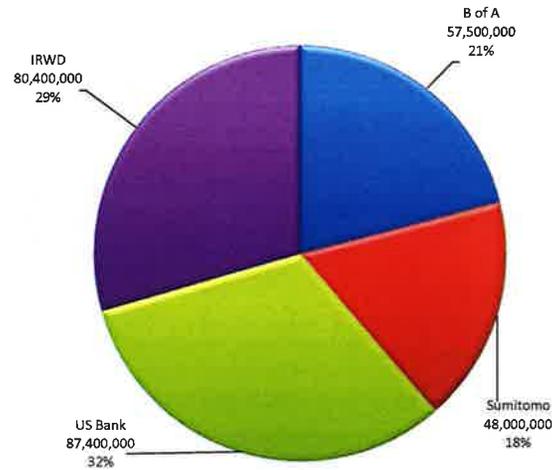
Exhibit "B"

Irvine Ranch Water District Summary of Fixed and Variable Rate Debt March 2019

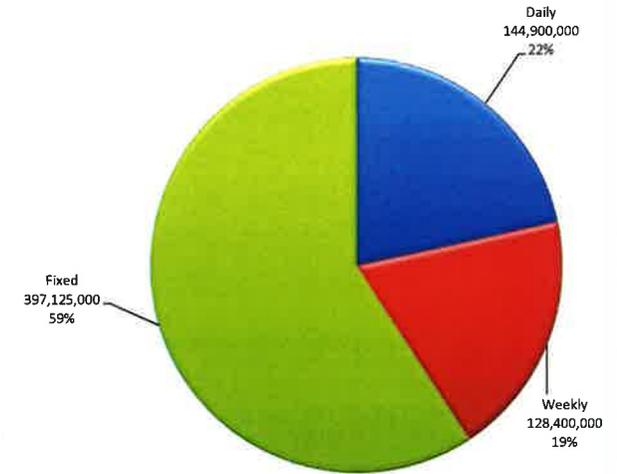
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$29,900,000	4.46%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$48,000,000	7.16%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$48,240,000	7.20%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$32,160,000	4.80%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$57,500,000	8.58%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$57,500,000	8.58%	B of A	Goldman	Variable	Daily
2010 Refunding COPS	02/23/10	03/01/20	\$1,980,000	0.30%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.41%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	26.10%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.42%	N/A	N/A	Fixed	Fixed
Total			\$670,425,000	100.00%				

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

March-19

ITN

Daily

Weekly

GENERAL BOND INFORMATION

LETTER OF CREDIT INFORMATION

TRUSTEE INFORMATION

VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODYS	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus. Day	\$38,300,000	\$29,900,000	US BANK	05/07/15	12/15/21	Aa3/VMIG1	AA-/A-1+	N/R	\$30,303,036	0.3300%	\$100,000	BAML	DAILY	0.10%	\$29,900	BANK OF NY
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus. Day	\$60,215,000	\$48,000,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/JF1	\$48,710,137	0.3150%	\$153,437	BAML	WED	0.07%	\$33,600	BANK OF NY
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$48,240,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$60,300	BANK OF NY
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$32,160,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$40,200	BANK OF NY
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$57,500,000	US BANK	04/01/11	12/15/21	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$58,142,740	0.3300%	\$191,871	US Bank	DAILY	0.07%	\$40,250	US BANK
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$57,500,000	B of A	04/01/11	07/15/19	Aa2/VMIG 1	A/A-1	A1/F1+	\$58,142,740	0.4000%	\$232,571	Goldman	DAILY	0.10%	\$57,500	US BANK

\$349,430,000	\$273,300,000	SUB-TOTAL VARIABLE RATE DEBT	\$195,298,652	0.3471%	\$677,879	0.10%	\$261,750
			(Wt. Avg)			(Wt. Avg)	

FIXED RATE ISSUES

2010 REFUNDING COPS	02/23/10	03/01/20	Mar -1	MAR/SEPT	\$85,145,000	\$1,980,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	BANK OF NY							
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	US BANK							
2016 COPS	09/01/16	03/01/46	Mar - 1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	US BANK							
SERIES 2016	10/12/16	02/01/46	Feb - 1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	BANK OF NY							

\$480,290,000 **\$397,125,000** **SUB-TOTAL FIXED RATE DEBT**

\$829,720,000 **\$670,425,000** **TOTAL - FIXED & VARIABLE RATE DEBT**

Remarketing Agents

Goldman	137,900,000	50%
BAML	77,900,000	29%
US Bank	57,500,000	21%
	273,300,000	

GO VS COP's

GO:	551,700,000	82%
COPS:	118,725,000	18%
Total	670,425,000	

LOC Banks

SUMITOMO	48,000,000
BANK OF AMERICA	57,500,000
US BANK	87,400,000
	192,900,000

Breakdown Between Variable & Fixed Rate Mode

Daily Issues	144,900,000	22%
Weekly Issues	48,000,000	7%
ITN Issues	80,400,000	12%
Sub-Total	273,300,000	
Fixed Rate Issues	\$397,125,000	59%
Sub-Total - Fixed	397,125,000	
TOTAL DEBT		
FIXED & VAR	670,425,000	100%

IRVINE RANCH WATER DISTRICT
SUMMARY OF DEBT RATES
Mar-19

Rmkt Agent Mode	GOLDMAN DAILY	GOLDMAN WEEKLY	GOLDMAN WEEKLY	MERRILL LYNCH DAILY	MERRILL LYNCH WEEKLY	US BANK DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993	2008-A	2009-A
Par Amount	57,500,000	48,240,000	32,160,000	29,900,000	48,000,000	57,500,000
Bank	BOFA	(SIFMA -1)	(SIFMA -1)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
3/1/2019	1.42%	1.73%	1.73%	1.49%	1.61%	1.45%
3/2/2019	1.42%	1.73%	1.73%	1.49%	1.61%	1.45%
3/3/2019	1.42%	1.73%	1.73%	1.49%	1.61%	1.45%
3/4/2019	1.39%	1.73%	1.73%	1.44%	1.61%	1.45%
3/5/2019	1.35%	1.73%	1.73%	1.38%	1.61%	1.43%
3/6/2019	1.28%	1.73%	1.73%	1.32%	1.61%	1.40%
3/7/2019	1.27%	1.66%	1.66%	1.31%	1.54%	1.34%
3/8/2019	1.29%	1.66%	1.66%	1.29%	1.54%	1.28%
3/9/2019	1.29%	1.66%	1.66%	1.29%	1.54%	1.28%
3/10/2019	1.29%	1.66%	1.66%	1.29%	1.54%	1.28%
3/11/2019	1.25%	1.66%	1.66%	1.28%	1.54%	1.26%
3/12/2019	1.23%	1.66%	1.66%	1.26%	1.54%	1.25%
3/13/2019	1.21%	1.66%	1.66%	1.24%	1.54%	1.23%
3/14/2019	1.21%	1.60%	1.60%	1.25%	1.45%	1.23%
3/15/2019	1.20%	1.60%	1.60%	1.24%	1.45%	1.20%
3/16/2019	1.20%	1.60%	1.60%	1.24%	1.45%	1.20%
3/17/2019	1.20%	1.60%	1.60%	1.24%	1.45%	1.20%
3/18/2019	1.19%	1.60%	1.60%	1.22%	1.45%	1.18%
3/19/2019	1.12%	1.60%	1.60%	1.15%	1.45%	1.18%
3/20/2019	1.08%	1.60%	1.60%	1.10%	1.45%	1.10%
3/21/2019	1.08%	1.52%	1.52%	1.08%	1.38%	1.07%
3/22/2019	1.09%	1.52%	1.52%	1.09%	1.38%	1.10%
3/23/2019	1.09%	1.52%	1.52%	1.09%	1.38%	1.10%
3/24/2019	1.09%	1.52%	1.52%	1.09%	1.38%	1.10%
3/25/2019	1.09%	1.52%	1.52%	1.10%	1.38%	1.10%
3/26/2019	1.10%	1.52%	1.52%	1.13%	1.38%	1.10%
3/27/2019	1.13%	1.52%	1.52%	1.17%	1.38%	1.15%
3/28/2019	1.17%	1.49%	1.49%	1.26%	1.36%	1.20%
3/29/2019	1.28%	1.49%	1.49%	1.36%	1.36%	1.30%
3/30/2019	1.28%	1.49%	1.49%	1.36%	1.36%	1.30%
3/31/2019	1.28%	1.49%	1.49%	1.36%	1.36%	1.30%
Avg Interest Rates	1.23%	1.61%	1.61%	1.26%	1.47%	1.25%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.40%			0.33%	0.32%	0.33%
All-In Rate	1.73%	1.73%	1.73%	1.69%	1.86%	1.65%
Par Amount	105,740,000		32,160,000	77,900,000		57,500,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	53.02%	144,900,000	1.69%	1.24%
Weekly	46.98%	128,400,000	1.78%	1.56%
Fixed	100.00%	\$ 273,300,000	1.73%	1.39%
COPS 2010	0.50%	1,980,000	3.82%	
COPS 2016	29.40%	116,745,000	2.90%	
BABS 2010	44.07%	175,000,000	4.45%	(1)
SERIES 2016	26.04%	103,400,000	3.32%	
	100.00%	\$ 397,125,000	3.70%	
All-In Debt Rate Including \$130 Million Notional Amount of Swaps				3.48%

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.2%

Exhibit "C"

IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
March 31, 2019

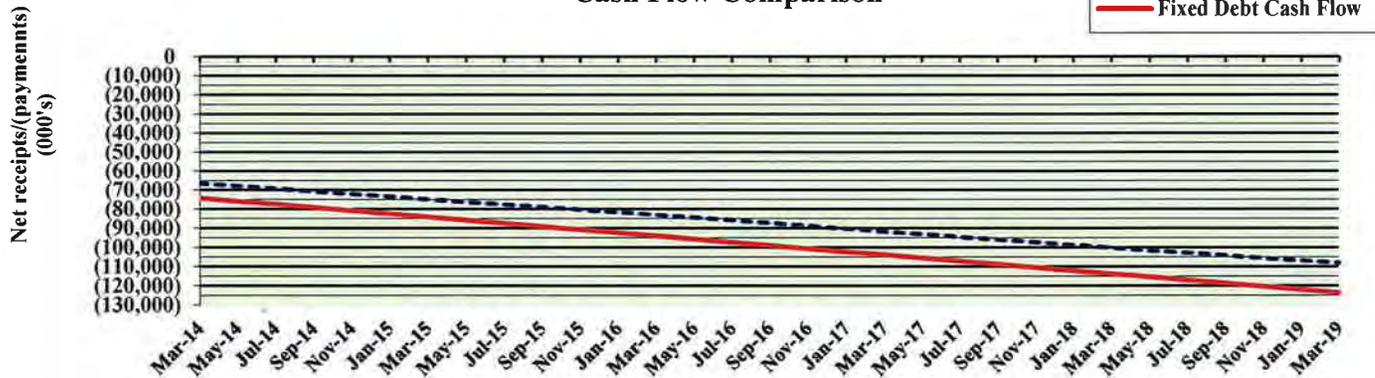
LIBOR Avg %	Prior Mo.	Current Mo.	12-Mo Avg
	2.49%	2.49%	2.23%

Current Fiscal Year Active Swaps								Cash Flow			(Since 6/06)	Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Fixed Payer Swaps - By Effective Date													
6/4/2006	6/4/2019	0.2	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(53,912)	(70,725)	\$ (586,334)	\$ (12,442,726)	\$ 19,874,659	\$ (125,341)
6/4/2006	6/4/2019	0.2	CG	20,000,000	FXP	LIBOR	6.200%	(53,912)	(70,725)	(586,334)	(12,442,726)	19,874,659	(125,341)
6/17/2006	6/17/2019	0.2	CG	30,000,000	FXP	LIBOR	6.140%	(79,881)	(104,744)	(867,961)	(18,451,669)	29,769,522	(230,478)
3/10/2007	3/10/2029	10.0	ML	30,000,000	FXP	LIBOR	5.687%	(69,242)	(91,795)	(763,817)	(16,615,725)	20,946,958	(9,053,042)
3/10/2007	3/10/2029	10.0	CG	30,000,000	FXP	LIBOR	5.687%	(69,242)	(91,795)	(763,817)	(16,615,725)	20,944,742	(9,055,258)
Totals/Weighted Avgs		4.7		\$ 130,000,000			5.949%	\$ (326,189)	\$ (429,784)	\$ (3,568,263)	\$ (76,568,569)	\$ 111,410,540	\$ (18,589,460)
Total Current Year Active Swaps				\$ 130,000,000				\$ (326,189)	\$ (429,784)	\$ (3,568,263)	\$ (76,568,569)	\$ 111,410,540	\$ (18,589,460)

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

Current Fiscal Year - Total Swaps								Cash Flow			Mark to Market	
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Interest Rate Swap Portfolio
Cash Flow Comparison



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
	Cash Flow to Date
Synthetic Fixed =	\$107,990,230
Fixed Rate =	\$125,090,937
Assumptions:	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

Exhibit "D"

IRWD Ledger Upgrade

Void Payment Register

Report Date: 01-APR-2019 07:43

Include Zero Amount Payments: Yes
Display Payee Address: No

Period From: 01-MAR-19

Page: 1
To: 31-MAR-19
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD (US Dollar)

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
393116	01-NOV-18	MOHAMED, ASHRAF	PAY		39.12	11-MAR-19
393124	01-NOV-18	NIKNAMI, MOHAMMAD	PAY		28.83	11-MAR-19
393132	01-NOV-18	PANCHAL, AADIS	PAY		9.29	11-MAR-19
393133	01-NOV-18	PAREJA, IAN	PAY		45.82	11-MAR-19
393135	01-NOV-18	PEFFFER, ZACH	PAY		70.93	11-MAR-19
393140	01-NOV-18	QIAO, ZIYU	PAY		15.50	11-MAR-19
393191	01-NOV-18	YONEZAKI, KRIS	PAY		206.03	11-MAR-19
393249	08-NOV-18	CHEN, KAI	PAY		17.00	11-MAR-19
393281	08-NOV-18	FAN, YIREN	PAY		99.08	11-MAR-19
393306	08-NOV-18	HEALEY, LUISE	PAY		35.25	11-MAR-19
393332	08-NOV-18	LIU, SHUO	PAY		55.00	11-MAR-19
393361	08-NOV-18	PENG, ZUJAM	PAY		31.47	11-MAR-19
393381	08-NOV-18	SHINEY, WILLIAM	PAY		31.75	11-MAR-19
393390	08-NOV-18	TEMLIN, PAM	PAY		100.00	11-MAR-19
393449	15-NOV-18	ABOBAKER, MURHAF	PAY		31.77	11-MAR-19
393456	15-NOV-18	ALI, ANMAR	PAY		37.51	11-MAR-19
393468	15-NOV-18	BATTERIES PLUS AND BATTERIE	VISTA		779.01	11-MAR-19
393539	15-NOV-18	JIANG, HONG	PAY		45.48	11-MAR-19
393548	15-NOV-18	LEFTWICH, ROBIN	PAY		17.16	11-MAR-19
393551	15-NOV-18	LI, SHUJIE	PAY		31.04	11-MAR-19
393552	15-NOV-18	LIM, EDDY	PAY		38.90	11-MAR-19
393595	15-NOV-18	QUACKENBUSH, JENNIFER	PAY		19.36	11-MAR-19
393748	28-NOV-18	CRADE, CLAIRE	PAY		20.69	11-MAR-19
393805	28-NOV-18	JELINEK, JONATHAN	PAY		200.00	11-MAR-19
393835	28-NOV-18	MOJARRO, YESENIA	PAY		42.68	11-MAR-19
393873	28-NOV-18	RELIANCE SAFETY CONSULTANTS	LA CRESCENTA		5,700.00	11-MAR-19
393911	28-NOV-18	TRAN, LYNDIA	PAY		77.74	11-MAR-19
393938	28-NOV-18	ZHOU, SUYUE	PAY		86.67	11-MAR-19
395262	17-JAN-19	SPARKLETTTS	PAY		59.93	12-MAR-19
395883	07-FEB-19	KAKIZAKI, KENICHI	PAY		14.13	05-MAR-19
396248	21-FEB-19	AUSTIN HARDWOODS, INC	PURCHASE		281.86	04-MAR-19
396250	21-FEB-19	BASU, BIKASH	PAY		221.06	21-MAR-19
396278	21-FEB-19	DIRECTV INC	LOS ANGELES		133.51	26-MAR-19
396370	21-FEB-19	SEVILLA, NILS	PAY		100.00	05-MAR-19
396513	27-FEB-19	POLARIS SALES INC.	PO BOX 86		2,523.99	01-MAR-19
396729	07-MAR-19	MA, ZHONGLEI	PAY		13.11	21-MAR-19
396783	07-MAR-19	SANTON, KATHERINE	PAY		28.91	21-MAR-19

IRWD Ledger Upgrade

Void Payment Register

Report Date: 01-APR-2019 07:43

Include Zero Amount Payments: Yes
Display Payee Address: No

Period From: 01-MAR-19

Page: 2
To: 31-MAR-19
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD (US Dollar)

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
					Payment Document Subtotal	11,289.58
					Bank Account Subtotal	11,289.58
Report Count: 37					Report Total	11,289.58
						Voids

*** End of Report ***

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 1
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396572		01-MAR-19	ANTHEM BLUE CROSS	LOS ANGELES	317.44	07-MAR-19	317.44	Reconciled
396573		01-MAR-19	ANTHEM BLUE CROSS	LOS ANGELES	234.65	07-MAR-19	234.65	Reconciled
396574		01-MAR-19	ANTHEM BLUE CROSS	LOS ANGELES	597.14	07-MAR-19	597.14	Reconciled
396575		01-MAR-19	ANTHEM BLUE CROSS	LOS ANGELES	597.14	07-MAR-19	597.14	Reconciled
396576		01-MAR-19	DEACON, JANET	TEMP ADDRESS	340.58	19-MAR-19	340.58	Reconciled
396577		01-MAR-19	POLARIS SALES INC.	PO BOX 86	838.22	04-MAR-19	838.22	Reconciled
396578		01-MAR-19	UNIVERSITY OF CALIFORNIA, IRVINE	IRVINE	10,995.00	08-MAR-19	10,995.00	Reconciled
396579		04-MAR-19	JCI JONES CHEMICALS INC	NEWARK	3,162.73	11-MAR-19	3,162.73	Reconciled
396580		04-MAR-19	AUSTIN HARDWOODS, INC	PURCHASE	153.18	08-MAR-19	153.18	Reconciled
396581		04-MAR-19	AMUNDSON, JAN	PURCHASE	3,150.00	08-MAR-19	3,150.00	Reconciled
396582		05-MAR-19	CITY OF IRVINE	IRVINE 1	142,694.39	12-MAR-19	142,694.39	Reconciled
396583		05-MAR-19	FOOTHILL/EASTERN TRANSPORTATION	IRVINE	326,750.56	25-MAR-19	326,750.56	Reconciled
396584		07-MAR-19	Acosta, Monica (Monica)		9.28			Negotiable
396585		07-MAR-19	Chauv, Denise		9.28	11-MAR-19	9.28	Reconciled
396586		07-MAR-19	Cortez, Malcolm A (Malcolm)		41.76	26-MAR-19	41.76	Reconciled
396587		07-MAR-19	Davis, Jennifer R (Jennifer)		195.00	18-MAR-19	195.00	Reconciled
396588		07-MAR-19	Do, Thu-Tam T (Thu-Tam)		5.80	11-MAR-19	5.80	Reconciled
396589		07-MAR-19	Hufana, Mr. Eugenio D II (Gino)		69.60			Negotiable
396590		07-MAR-19	Jacobson, Robert C (Rob)		35.54	25-MAR-19	35.54	Reconciled
396591		07-MAR-19	Justice, Jack L (Jack)		188.00	18-MAR-19	188.00	Reconciled
396592		07-MAR-19	Kanoff, Debbie G (Debbie)		66.47	07-MAR-19	66.47	Reconciled
396593		07-MAR-19	Lao, Richard S		393.10	11-MAR-19	393.10	Reconciled
396594		07-MAR-19	Nash, Joel		40.02	12-MAR-19	40.02	Reconciled
396595		07-MAR-19	Oldewage, Lars D (Lars)		396.39	11-MAR-19	396.39	Reconciled
396596		07-MAR-19	Orozco, Linda		23.92	12-MAR-19	23.92	Reconciled
396597		07-MAR-19	Perez, Rodolfo (Rudy)		139.34	12-MAR-19	139.34	Reconciled

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 2
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396598		07-MAR-19	Spangenberg, Carl W (Carl)		879.95	08-MAR-19	879.95	Reconciled
396599		07-MAR-19	Stontz, Adam J		13.92	21-MAR-19	13.92	Reconciled
396600		07-MAR-19	Torres, Richard P (Richard)		200.00	11-MAR-19	200.00	Reconciled
396601		07-MAR-19	AAF INTERNATIONAL		1,215.90	12-MAR-19	1,215.90	Reconciled
396602		07-MAR-19	ACCUSTANDARD INC		622.06	12-MAR-19	622.06	Reconciled
396603		07-MAR-19	ADS LLC		2,160.00	12-MAR-19	2,160.00	Reconciled
396604		07-MAR-19	AGILENT TECHNOLOGIES, INC.		2,422.49	11-MAR-19	2,422.49	Reconciled
396605		07-MAR-19	AKPALA, PRINCE		5.03	11-MAR-19	5.03	Reconciled
396606		07-MAR-19	ALAGBAND, DAVID		215.22	19-MAR-19	215.22	Reconciled
396607		07-MAR-19	ALEXANDER'S CONTRACT SERVICES, INC.		120,120.37	13-MAR-19	120,120.37	Reconciled
396608		07-MAR-19	ALONSO, LEO		38.86	25-MAR-19	38.86	Reconciled
396609		07-MAR-19	ALSTON & BIRD LLP		77,143.49	14-MAR-19	77,143.49	Reconciled
396610		07-MAR-19	AMAZON CAPITAL SERVICES, INC.		377.22	11-MAR-19	377.22	Reconciled
396611		07-MAR-19	AMERICAN WATER WORKS ASSOC		10,619.00	18-MAR-19	10,619.00	Reconciled
396612		07-MAR-19	AMETEK BROOKFIELD		91.81	11-MAR-19	91.81	Reconciled
396613		07-MAR-19	APEX LIFE SCIENCES, LLC		2,380.00	12-MAR-19	2,380.00	Reconciled
396614		07-MAR-19	APEX SYSTEMS, LLC		1,190.00	12-MAR-19	1,190.00	Reconciled
396615		07-MAR-19	APPLIED		1,600.00	11-MAR-19	1,600.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
ENGINEERING CONCEPTS								
396616	07-MAR-19	07-MAR-19	ARTINIAN, MICHELLE		38.27	18-MAR-19	38.27	Reconciled
396617	07-MAR-19	07-MAR-19	AT&T		4,045.12	13-MAR-19	4,045.12	Reconciled
396618	07-MAR-19	07-MAR-19	AT&T		11.61	12-MAR-19	11.61	Reconciled
396619	07-MAR-19	07-MAR-19	AT&T		54.01	11-MAR-19	54.01	Reconciled
396620	07-MAR-19	07-MAR-19	AUTOZONE PARTS, INC.		1,460.18	11-MAR-19	1,460.18	Reconciled
396621	07-MAR-19	07-MAR-19	B & H PHOTO & VIDEO		2,410.39	11-MAR-19	2,410.39	Reconciled
396622	07-MAR-19	07-MAR-19	B & K ELECTRIC WHOLESALE		10,426.28	13-MAR-19	10,426.28	Reconciled
396623	07-MAR-19	07-MAR-19	BATTERIES PLUS AND BATTERIES PLUS BULBS		2,884.38	12-MAR-19	2,884.38	Reconciled
396624	07-MAR-19	07-MAR-19	BILEK, MICHAEL		53.76	13-MAR-19	53.76	Reconciled
396625	07-MAR-19	07-MAR-19	BILL'S SWEEPING SERVICE INC		1,050.00	13-MAR-19	1,050.00	Reconciled
396626	07-MAR-19	07-MAR-19	BIOMERIEUX INC		622.72	12-MAR-19	622.72	Reconciled
396627	07-MAR-19	07-MAR-19	BOYD & ASSOCIATES		3,753.00	12-MAR-19	3,753.00	Reconciled
IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42								
BANK: Bank of America N.A.			Branch : Los Angeles		Account: Checking AP and PR		Page: 3	
Bank Account Currency: USD (US Dollar)					Payment Currency: USD (US Dollar)			
Payment Type: All					Display Supplier Address: No			

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396628	07-MAR-19	07-MAR-19	BRITHINEE ELECTRIC		215.50	11-MAR-19	215.50	Reconciled
396629	07-MAR-19	07-MAR-19	BROWN AND CALDWELL		2,267.36	11-MAR-19	2,267.36	Reconciled
396630	07-MAR-19	07-MAR-19	CALIFORNIA BARRICADE RENTAL, INC.		15,570.00	18-MAR-19	15,570.00	Reconciled
396631	07-MAR-19	07-MAR-19	CALIFORNIA PACIFIC HOMES		431.57	11-MAR-19	431.57	Reconciled
396632	07-MAR-19	07-MAR-19	CANON SOLUTIONS AMERICA, INC.		8.69	13-MAR-19	8.69	Reconciled
396633	07-MAR-19	07-MAR-19	CAPTIVE AUDIENCE MARKETING INC.		79.00	12-MAR-19	79.00	Reconciled
396634	07-MAR-19	07-MAR-19	CAROLLO ENGINEERS, INC		74,853.03	18-MAR-19	74,853.03	Reconciled
396635	07-MAR-19	07-MAR-19	CASA EDUCATION FOUNDATION		2,000.00			Negotiable
396636	07-MAR-19	07-MAR-19	CDW GOVERNMENT LLC		2,118.98	13-MAR-19	2,118.98	Reconciled
396637	07-MAR-19	07-MAR-19	CHO DESIGN ASSOCIATES, INC		2,400.00	08-MAR-19	2,400.00	Reconciled
396638	07-MAR-19	07-MAR-19	CHOI, TYLER		133.75	12-MAR-19	133.75	Reconciled
396639	07-MAR-19	07-MAR-19	CHOUN, YOUNG SUK		44.45			Negotiable
396640	07-MAR-19	07-MAR-19	CHUNG, NORAH		133.30	11-MAR-19	133.30	Reconciled
396641	07-MAR-19	07-MAR-19	CHUNG, SOOKOK		11.04	11-MAR-19	11.04	Reconciled
396642	07-MAR-19	07-MAR-19	CITY OF IRVINE		360.00	11-MAR-19	360.00	Reconciled
396643	07-MAR-19	07-MAR-19	CITY OF ORANGE		167.24	11-MAR-19	167.24	Reconciled
396644	07-MAR-19	07-MAR-19	CITY OF TUSTIN		7,103.20	08-MAR-19	7,103.20	Reconciled
396645	07-MAR-19	07-MAR-19	CIVIL SOURCE, INC.		20,300.00	18-MAR-19	20,300.00	Reconciled
396646	07-MAR-19	07-MAR-19	CLARIS STRATEGY INC.		9,100.00	12-MAR-19	9,100.00	Reconciled
396647	07-MAR-19	07-MAR-19	CLEAN ENERGY		4,843.79	13-MAR-19	4,843.79	Reconciled
396648	07-MAR-19	07-MAR-19	CLIFFORD MORIYAMA		4,441.84	11-MAR-19	4,441.84	Reconciled
396649	07-MAR-19	07-MAR-19	COLE-PARMER INSTRUMENT CO		64.40	13-MAR-19	64.40	Reconciled
396650	07-MAR-19	07-MAR-19	CONSTELLATION NEWENERGY, INC.		67,998.46	13-MAR-19	67,998.46	Reconciled
396651	07-MAR-19	07-MAR-19	CONTROLLED KEY SYSTEMS INC		1,437.85	12-MAR-19	1,437.85	Reconciled
396652	07-MAR-19	07-MAR-19	CORELOGIC INC		13.66	11-MAR-19	13.66	Reconciled
396653	07-MAR-19	07-MAR-19	COUNTY OF ORANGE		6,732.75	14-MAR-19	6,732.75	Reconciled
396654	07-MAR-19	07-MAR-19	COUNTY OF ORANGE		245,580.45	12-MAR-19	245,580.45	Reconciled
396655	07-MAR-19	07-MAR-19	CS-AMSCO		4,430.35	08-MAR-19	4,430.35	Reconciled
396656	07-MAR-19	07-MAR-19	DE LA ROSA, JEREMY		17.04	12-MAR-19	17.04	Reconciled
396657	07-MAR-19	07-MAR-19	DEACON, JANET		2,750.36	19-MAR-19	2,750.36	Reconciled
396658	07-MAR-19	07-MAR-19	DELL MARKETING LP		10,414.74	14-MAR-19	10,414.74	Reconciled
396659	07-MAR-19	07-MAR-19	DISCOUNT COURIER SERVICE INC.		67.47	08-MAR-19	67.47	Reconciled

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 4
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396660	07-MAR-19	07-MAR-19	DRYSDALE ENTERPRISES INC.		1,770.04	14-MAR-19	1,770.04	Reconciled
396661	07-MAR-19	07-MAR-19	DUDLEY RIDGE WATER DISTRICT		91,937.84	14-MAR-19	91,937.84	Reconciled
396662	07-MAR-19	07-MAR-19	EAST ORANGE COUNTY WATER DISTRICT		68,084.87	11-MAR-19	68,084.87	Reconciled
396663	07-MAR-19	07-MAR-19	EHS INTERNATIONAL, INC		1,200.00	12-MAR-19	1,200.00	Reconciled

396664	07-MAR-19	ET&C ENGINEERING INC	68,947.65	15-MAR-19	68,947.65	Reconciled
396665	07-MAR-19	EKI ENVIRONMENT & WATER, INC.	14,404.26	14-MAR-19	14,404.26	Reconciled
396666	07-MAR-19	ENDRESS AND HAUSER INC	803.57	13-MAR-19	803.57	Reconciled
396667	07-MAR-19	ENTERPRISE HOLDINGS, INC.	38,244.14	14-MAR-19	38,244.14	Reconciled
396668	07-MAR-19	ENVIRONMENTAL SCIENCE ASSOCIATES	49,624.36	14-MAR-19	49,624.36	Reconciled
396669	07-MAR-19	EXTRA SPACE MANAGEMENT INC	497.61			Negotiable
396670	07-MAR-19	FAMILIES FORWARD	73.04	19-MAR-19	73.04	Reconciled
396671	07-MAR-19	FASTENAL COMPANY	426.59	11-MAR-19	426.59	Reconciled
396672	07-MAR-19	FEDEX	167.94	11-MAR-19	167.94	Reconciled
396673	07-MAR-19	FERGUSON ENTERPRISES, INC.	905.10	11-MAR-19	905.10	Reconciled
396674	07-MAR-19	FIRE EXTINGUISHING SAFETY & SERVICE	525.54	12-MAR-19	525.54	Reconciled
396675	07-MAR-19	FISHER SCIENTIFIC COMPANY LLC	52.30	11-MAR-19	52.30	Reconciled
396676	07-MAR-19	FLUKE CORPORATION	3,063.00	12-MAR-19	3,063.00	Reconciled
396677	07-MAR-19	FREEWAY MACHINE & WELDING SHOP	7,293.00	11-MAR-19	7,293.00	Reconciled
396678	07-MAR-19	FREID, ROBERT	279.62	11-MAR-19	279.62	Reconciled
396679	07-MAR-19	FRONTIER CALIFORNIA INC.	273.27	15-MAR-19	273.27	Reconciled
396680	07-MAR-19	GAO, STACEY	33.03	22-MAR-19	33.03	Reconciled
396681	07-MAR-19	GONG, CHAOHUI	35.12			Negotiable
396682	07-MAR-19	GRAINGER	3,090.04	12-MAR-19	3,090.04	Reconciled
396683	07-MAR-19	GRAYBAR ELECTRIC COMPANY	2,528.81	11-MAR-19	2,528.81	Reconciled
396684	07-MAR-19	GUNTI, RAGHUNATH	374.64	08-MAR-19	374.64	Reconciled
396685	07-MAR-19	GUO, JING	36.55			Negotiable
396686	07-MAR-19	GUY L WARDEN & SONS	1,178.33	11-MAR-19	1,178.33	Reconciled
396687	07-MAR-19	HAAKER EQUIPMENT COMPANY	738.33	12-MAR-19	738.33	Reconciled

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396688		07-MAR-19	HACH COMPANY		21,077.67	18-MAR-19	21,077.67	Reconciled
396689		07-MAR-19	HARRY H. KOBEFF		3,020.00	08-MAR-19	3,020.00	Reconciled
396690		07-MAR-19	HDR ENGINEERING INC		99,575.85	18-MAR-19	99,575.85	Reconciled
396691		07-MAR-19	HELLAS CONSTRUCTION, INC		1,258.46	12-MAR-19	1,258.46	Reconciled
396692		07-MAR-19	HELPMATES STAFFING SERVICES		22,555.67	13-MAR-19	22,555.67	Reconciled
396693		07-MAR-19	HERITAGE FIELDS EL TORO, LLC		119,070.70	18-MAR-19	119,070.70	Reconciled
396694		07-MAR-19	HILL BROTHERS CHEMICAL COMPANY		14,634.82	14-MAR-19	14,634.82	Reconciled
396695		07-MAR-19	HIRBODI, PATTI		51.59	12-MAR-19	51.59	Reconciled
396696		07-MAR-19	HOME DEPOT USA INC		357.74	12-MAR-19	357.74	Reconciled
396697		07-MAR-19	HOU, GUANTING		29.92			Negotiable
396698		07-MAR-19	HOYA OPTICAL LABS OF AMERICA, INC.		422.00	12-MAR-19	422.00	Reconciled
396699		07-MAR-19	HUANG, QING		1,785.67			Negotiable
396700		07-MAR-19	HUNSAKER & ASSOCIATES IRVINE		2,408.00	11-MAR-19	2,408.00	Reconciled
396701		07-MAR-19	HYLAND, RICHARD		76.01	14-MAR-19	76.01	Reconciled
396702		07-MAR-19	IBM CORPORATION		88,511.40	15-MAR-19	88,511.40	Reconciled
396703		07-MAR-19	INDUSTRIAL ELECTRIC MACHINERY LLC		1,201.68	11-MAR-19	1,201.68	Reconciled
396704		07-MAR-19	IRVINE MANAGEMENT COMPANY		578.43	12-MAR-19	578.43	Reconciled
396705		07-MAR-19	IRVINE PIPE & SUPPLY INC		3,337.30	08-MAR-19	3,337.30	Reconciled
396706		07-MAR-19	IRVINE POLICE ASSOCIATION		750.00	15-MAR-19	750.00	Reconciled
396707		07-MAR-19	IRVINE UNIFIED SCHOOL DISTRICT		10,062.20	15-MAR-19	10,062.20	Reconciled
396708		07-MAR-19	IRWD-PETTY CASH CUSTODIAN		923.62	11-MAR-19	923.62	Reconciled
396709		07-MAR-19	JIN AND YU, LLC		99.28	12-MAR-19	99.28	Reconciled
396710		07-MAR-19	KB HOMES		361.46	26-MAR-19	361.46	Reconciled
396711		07-MAR-19	KENT & AMY DAHLBERG		6,949.60	11-MAR-19	6,949.60	Reconciled
396712		07-MAR-19	KERSLAKE, JOHN		15.63			Negotiable
396713		07-MAR-19	KIRSCH, JAMES		527.06	11-MAR-19	527.06	Reconciled
396714		07-MAR-19	KONECRANES INC		11,713.27	14-MAR-19	11,713.27	Reconciled
396715		07-MAR-19	KERS CONSTRUCTION SERVICES, INC.		1,969.07	14-MAR-19	1,969.07	Reconciled

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 Payment Type: All

Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396716		07-MAR-19	KRUEGER INTERNATIONAL, INC.		3,097.25	13-MAR-19	3,097.25	Reconciled
396717		07-MAR-19	KUO, CHIN CHENG		45.55	13-MAR-19	45.55	Reconciled
396718		07-MAR-19	LA HABRA FENCE COMPANY INC		7,298.00	15-MAR-19	7,298.00	Reconciled
396719		07-MAR-19	LANCE AUMAN AND KISSILYN AUMAN		13.01	11-MAR-19	13.01	Reconciled
396720		07-MAR-19	LANDCARE HOLDINGS, INC.		125,219.61	14-MAR-19	125,219.61	Reconciled
396721		07-MAR-19	LANDSEA HOLDINGS CORPORATION		214.29			Negotiable
396722		07-MAR-19	LCS TECHNOLOGIES, INC.		6,480.00	14-MAR-19	6,480.00	Reconciled
396723		07-MAR-19	LEE & RO, INC.		17,870.00	15-MAR-19	17,870.00	Reconciled
396724		07-MAR-19	LENNAR HOMES		268.21	11-MAR-19	268.21	Reconciled
396725		07-MAR-19	LI, YUNQING		45.53	18-MAR-19	45.53	Reconciled
396726		07-MAR-19	LOUEY, QUON K		28.67	11-MAR-19	28.67	Reconciled
396727		07-MAR-19	LU, ZHANSHENG		31.25	11-MAR-19	31.25	Reconciled
396728		07-MAR-19	LUI, ZHONG		46.55			Negotiable
396729		07-MAR-19	MA, ZHONGLEI		13.11			Voided
396730		07-MAR-19	MADORSKY, RACHEL		11.83	12-MAR-19	11.83	Reconciled
396731		07-MAR-19	MAILFINANCE INC		3,265.46	13-MAR-19	3,265.46	Reconciled
396732		07-MAR-19	MAIN ELECTRIC SUPPLY COMPANY LLC		9.13	11-MAR-19	9.13	Reconciled
396733		07-MAR-19	MALIO, TAFITO		39.15			Negotiable
396734		07-MAR-19	MARK KADESH		10,000.00	20-MAR-19	10,000.00	Reconciled
396735		07-MAR-19	MBC AQUATIC SCIENCES, INC.		1,350.00	14-MAR-19	1,350.00	Reconciled
396736		07-MAR-19	MC FADDEN-DALE INDUSTRIAL		161.78	11-MAR-19	161.78	Reconciled
396737		07-MAR-19	MCCROMETER, INC.		941.33	12-MAR-19	941.33	Reconciled
396738		07-MAR-19	MICRO FOCUS SOFTWARE INC.		27,960.00	13-MAR-19	27,960.00	Reconciled
396739		07-MAR-19	MRO ELECTRIC & SUPPLY CO.		2,179.00	11-MAR-19	2,179.00	Reconciled
396740		07-MAR-19	MULHOLLAND, JENNIFER		36.27	26-MAR-19	36.27	Reconciled
396741		07-MAR-19	MYERS & SONS HI-WAY SAFETY, INC.		3,599.39	11-MAR-19	3,599.39	Reconciled
396742		07-MAR-19	NATIONAL READY MIXED CONCRETE CO.		1,068.91	11-MAR-19	1,068.91	Reconciled
396743		07-MAR-19	NATURES IMAGE INC		2,647.34	08-MAR-19	2,647.34	Reconciled
396744		07-MAR-19	NEWLAND, CINDY		19.55	13-MAR-19	19.55	Reconciled
396745		07-MAR-19	NINYO & MOORE		2,167.00	11-MAR-19	2,167.00	Reconciled
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Bank Account Currency: USD (US Dollar)					Payment Currency: USD (US Dollar)			
Payment Type: All					Display Supplier Address: No			

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396746		07-MAR-19	NMG GEOTECHNICAL INC		7,904.00	21-MAR-19	7,904.00	Reconciled
396747		07-MAR-19	O.C. SUPERIOR CUSTOM CLEANING		4,392.00	08-MAR-19	4,392.00	Reconciled
396748		07-MAR-19	OC WELDING SERVICES		360.00	13-MAR-19	360.00	Reconciled
396749		07-MAR-19	OCTA		2,905.00	11-MAR-19	2,905.00	Reconciled
396750		07-MAR-19	OLIN CORPORATION		1,666.98	13-MAR-19	1,666.98	Reconciled
396751		07-MAR-19	OMAR DANDASHI		2,720.87	18-MAR-19	2,720.87	Reconciled
396752		07-MAR-19	ONESOURCE DISTRIBUTORS LLC		4,886.29	11-MAR-19	4,886.29	Reconciled
396753		07-MAR-19	ORANGE COUNTY AUTO PARTS CO		1,225.89	08-MAR-19	1,225.89	Reconciled
396754		07-MAR-19	ORANGE COUNTY WATER DISTRICT		7,600.00			Negotiable
396755		07-MAR-19	OSTS, INC		1,760.00	12-MAR-19	1,760.00	Reconciled
396756		07-MAR-19	PACIFIC HYDROTECH CORPORATION		126,734.75	14-MAR-19	126,734.75	Reconciled
396757		07-MAR-19	PACIFIC HYDROTECH CORPORATION		6,670.25	11-MAR-19	6,670.25	Reconciled
396758		07-MAR-19	PACIFIC PARTS & CONTROLS INC		11,096.10	13-MAR-19	11,096.10	Reconciled
396759		07-MAR-19	PAN, ZHENYUE		36.08			Negotiable
396760		07-MAR-19	PARKHOUSE TIRE INC		5,353.91	12-MAR-19	5,353.91	Reconciled
396761		07-MAR-19	PASCAL & LUDWIG CONSTRUCTORS		5,901.01	12-MAR-19	5,901.01	Reconciled
396762		07-MAR-19	PASCAL & LUDWIG CONSTRUCTORS		112,119.14	13-MAR-19	112,119.14	Reconciled
396763		07-MAR-19	PDMA CORPORATION		1,891.49	11-MAR-19	1,891.49	Reconciled
396764		07-MAR-19	PENHALL COMPANY		1,111.80	11-MAR-19	1,111.80	Reconciled

396765	07-MAR-19	PONTO AND SON'S WHOLESALE	816.18	14-MAR-19	816.18	Reconciled
396766	07-MAR-19	PRAXAIR DISTRIBUTION INC	652.66	11-MAR-19	652.66	Reconciled
396767	07-MAR-19	PUREWORKS, INC.	63,800.00	18-MAR-19	63,800.00	Reconciled
396768	07-MAR-19	QUINN COMPANY	1,193.00	11-MAR-19	1,193.00	Reconciled
396769	07-MAR-19	QUINTANA, WATTS & HARTMANN, LLC	11,174.39	14-MAR-19	11,174.39	Reconciled
396770	07-MAR-19	RAM AIR ENGINEERING INC	33,602.73	12-MAR-19	33,602.73	Reconciled
396771	07-MAR-19	RANCHO ALISAL APTS	381.87	22-MAR-19	381.87	Reconciled
396772	07-MAR-19	RANCHO TIERRA APTS	244.22	22-MAR-19	244.22	Reconciled
396773	07-MAR-19	RAY BOLD PARTNERS, INC	16.59			Negotiable
396774	07-MAR-19	REBAR, JONATHAN	57.44	25-MAR-19	57.44	Reconciled

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396775		07-MAR-19	RED HAWK FIRE & SECURITY (CA) LLC		1,535.00			Negotiable
396776		07-MAR-19	RED WING SHOE STORE		600.00	11-MAR-19	600.00	Reconciled
396777		07-MAR-19	RINCON TRUCK CENTER INC.		211.75	08-MAR-19	211.75	Reconciled
396778		07-MAR-19	RLG ENTERPRISES, INC		472.79	08-MAR-19	472.79	Reconciled
396779		07-MAR-19	ROGERS, SCOTT		369.22	11-MAR-19	369.22	Reconciled
396780		07-MAR-19	ROSANNA PEDROARENA AND CHRIS PEDROARENA		4.06	12-MAR-19	4.06	Reconciled
396781		07-MAR-19	ROYAL INDUSTRIAL SOLUTIONS		1,323.25	11-MAR-19	1,323.25	Reconciled
396782		07-MAR-19	S & J SUPPLY CO INC		1,961.05	11-MAR-19	1,961.05	Reconciled
396783		07-MAR-19	SANTON, KATHERINE		28.91			Voided
396784		07-MAR-19	SCHULER CONSTRUCTORS, INC.		169,005.99	14-MAR-19	169,005.99	Reconciled
396785		07-MAR-19	SEAL ANALYTICAL INC		902.11	11-MAR-19	902.11	Reconciled
396786		07-MAR-19	SECURITAS SECURITY SERVICES USA, INC.		53,342.00	14-MAR-19	53,342.00	Reconciled
396787		07-MAR-19	SHALABY, TINA		14.96	12-MAR-19	14.96	Reconciled
396788		07-MAR-19	SHAMROCK SUPPLY CO INC		356.09	12-MAR-19	356.09	Reconciled
396789		07-MAR-19	SHOETERIA		398.77	12-MAR-19	398.77	Reconciled
396790		07-MAR-19	SIGBAND, ERIKA		76.08			Negotiable
396791		07-MAR-19	SIMI VALLEY LANDFILL AND RECYCLING CENTER		422.64	11-MAR-19	422.64	Reconciled
396792		07-MAR-19	SMARTWATT ENERGY INC.		3,993.20	13-MAR-19	3,993.20	Reconciled
396793		07-MAR-19	SMITH SYSTEM DRIVER IMPROVEMENT INSTITUTE, INC.		14,750.00	14-MAR-19	14,750.00	Reconciled
396794		07-MAR-19	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		311.60			Negotiable
396795		07-MAR-19	SOUTHERN CALIFORNIA EDISON COMPANY		366,859.35	08-MAR-19	366,859.35	Reconciled
396796		07-MAR-19	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.		430.05	15-MAR-19	430.05	Reconciled

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396797		07-MAR-19	SOUTHWESTERN INDUSTRIES, INC.		703.00	15-MAR-19	703.00	Reconciled
396798		07-MAR-19	SPARKLETT'S		178.28	13-MAR-19	178.28	Reconciled
396799		07-MAR-19	STETSON ENGINEERS INC.		6,501.25	11-MAR-19	6,501.25	Reconciled
396800		07-MAR-19	STREAKWAVE WIRELESS, INC.		4,209.54	12-MAR-19	4,209.54	Reconciled
396801		07-MAR-19	STRETCH, MARY ANN		566.22	08-MAR-19	566.22	Reconciled
396802		07-MAR-19	SUBOH, AMRO		530.82	18-MAR-19	530.82	Reconciled
396803		07-MAR-19	SUFFOLK CONSTRUCTION COMPANY, INC.		2,998.58	12-MAR-19	2,998.58	Reconciled

396804	07-MAR-19	SUN, NATHANIEL	31.36	18-MAR-19	31.36	Reconciled
396805	07-MAR-19	SUSAN A. SIROTA	4,395.00	12-MAR-19	4,395.00	Reconciled
396806	07-MAR-19	T.E. ROBERTS, INC.	34,846.00	20-MAR-19	34,846.00	Reconciled
396807	07-MAR-19	TAHA, TERRI	200.00	20-MAR-19	200.00	Reconciled
396808	07-MAR-19	TASSIN SCIENTIFIC SERVICES, LLC.	1,125.00	19-MAR-19	1,125.00	Reconciled
396809	07-MAR-19	TESTAMERICA LABORATORIES, INC	244.65	12-MAR-19	244.65	Reconciled
396810	07-MAR-19	TETRA TECH, INC	8,950.00	11-MAR-19	8,950.00	Reconciled
396811	07-MAR-19	THOMPSON INDUSTRIAL SUPPLY	481.34	12-MAR-19	481.34	Reconciled
396812	07-MAR-19	THYSSENKRUPP ELEVATOR CORPORATION	198.24	11-MAR-19	198.24	Reconciled
396813	07-MAR-19	TIC-OFFICE PROPERTIES	1,326.67	25-MAR-19	1,326.67	Reconciled
396814	07-MAR-19	TIC-RETAIL PROPERTIES	201.72	25-MAR-19	201.72	Reconciled
396815	07-MAR-19	TIC-SPECTRUM OFFICE	3,295.04	25-MAR-19	3,295.04	Reconciled
396816	07-MAR-19	TROPICAL PLAZA NURSERY INC	15,341.15	13-MAR-19	15,341.15	Reconciled
396817	07-MAR-19	TRUCPARCO	270.44	18-MAR-19	270.44	Reconciled
396818	07-MAR-19	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	2,015.33	13-MAR-19	2,015.33	Reconciled
396819	07-MAR-19	UNITED PARCEL SERVICE INC	43.68	11-MAR-19	43.68	Reconciled
396820	07-MAR-19	UNITED STATES PLASTIC CORP.	1,268.80	14-MAR-19	1,268.80	Reconciled
396821	07-MAR-19	VEOLIA WATER TECHNOLOGIES, INC.	25,017.74	18-MAR-19	25,017.74	Reconciled

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396822		07-MAR-19	VERIZON WIRELESS SERVICES LLC		15,513.60	11-MAR-19	15,513.60	Reconciled
396823		07-MAR-19	VERTECH INDUSTRIAL SYSTEMS, LLC		1,700.00	11-MAR-19	1,700.00	Reconciled
396824		07-MAR-19	WALSH, KAREN		43.59	15-MAR-19	43.59	Reconciled
396825		07-MAR-19	WANG, SIWEN		12.52			Negotiable
396826		07-MAR-19	WASTE MANAGEMENT OF ORANGE COUNTY		5,512.97	11-MAR-19	5,512.97	Reconciled
396827		07-MAR-19	WATER EDUCATION FOUNDATION		3,500.00	14-MAR-19	3,500.00	Reconciled
396828		07-MAR-19	WAXIE'S ENTERPRISES, INC		2,867.87	11-MAR-19	2,867.87	Reconciled
396829		07-MAR-19	WECK LABORATORIES INC		180.00	14-MAR-19	180.00	Reconciled
396830		07-MAR-19	WU, XIAOSHENG		106.17	14-MAR-19	106.17	Reconciled
396831		07-MAR-19	YP LLC		91.00	12-MAR-19	91.00	Reconciled
396832		07-MAR-19	ZHU, JIE		57.26	19-MAR-19	57.26	Reconciled
396833		07-MAR-19	ZIMMER, CODY		250.00	11-MAR-19	250.00	Reconciled
396834		12-MAR-19	JCI JONES CHEMICALS INC	PO BOX 830674	5,491.80	19-MAR-19	5,491.80	Reconciled
396835		14-MAR-19	Akiyoshi, Eric S (Eric)		60.79	27-MAR-19	60.79	Reconciled
396836		14-MAR-19	Bishop, Kaitlyn		140.02	18-MAR-19	140.02	Reconciled
396837		14-MAR-19	Compton, Christine A		44.24			Negotiable
396838		14-MAR-19	Drzymkowski, Michele A (Michele)		15.03	27-MAR-19	15.03	Reconciled
396839		14-MAR-19	Garcia, Alejandro (Alex)		280.00	18-MAR-19	280.00	Reconciled
396840		14-MAR-19	Hartoog, Jeremy		163.00	22-MAR-19	163.00	Reconciled
396841		14-MAR-19	Ho, Connie		23.78	18-MAR-19	23.78	Reconciled
396842		14-MAR-19	Lockhart, Anthony		156.20	25-MAR-19	156.20	Reconciled
396843		14-MAR-19	Mares, Michael		5.22	18-MAR-19	5.22	Reconciled
396844		14-MAR-19	McBride, Damien J		200.00	15-MAR-19	200.00	Reconciled
396845		14-MAR-19	Pizanie, Nicholas B		148.26	18-MAR-19	148.26	Reconciled
396846		14-MAR-19	Schreck, Jeffrey A (Jeffrey)		164.59			Negotiable
396847		14-MAR-19	SOUTH COAST AIR QUALITY MANAGEMENTBAR 2 DISTRICT	DIAMOND	88.61			Negotiable
396848		14-MAR-19	Janelli, Matthew HOME		125.00	14-MAR-19	125.00	Reconciled
396849		14-MAR-19	ABM INDUSTRY GROUPS, LLC		18,915.01	20-MAR-19	18,915.01	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 11
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396850		14-MAR-19	ACCESS TECHNOLOGIES, INC.		157.25	19-MAR-19	157.25	Reconciled
396851		14-MAR-19	AMAZON CAPITAL SERVICES, INC.		44.94	18-MAR-19	44.94	Reconciled
396852		14-MAR-19	APEX SYSTEMS, LLC		1,904.00	18-MAR-19	1,904.00	Reconciled
396853		14-MAR-19	ASHFORD, WALT		30.85	25-MAR-19	30.85	Reconciled
396854		14-MAR-19	AT&T		1,665.91	19-MAR-19	1,665.91	Reconciled
396855		14-MAR-19	AT&T		4,709.18	19-MAR-19	4,709.18	Reconciled
396856		14-MAR-19	AUTOZONE PARTS, INC.		64.61	18-MAR-19	64.61	Reconciled
396857		14-MAR-19	B & H PHOTO & VIDEO		259.96	19-MAR-19	259.96	Reconciled
396858		14-MAR-19	B & K ELECTRIC WHOLESALE		2,779.62	18-MAR-19	2,779.62	Reconciled
396859		14-MAR-19	BATTERIES PLUS AND BATTERIES PLUS BULBS		779.01	18-MAR-19	779.01	Reconciled
396860		14-MAR-19	BELL TOWER FLORIST & GIFTS		113.13			Negotiable
396861		14-MAR-19	BELSHIRE ENVIRONMENTAL SERVICES, INC.		427.55	19-MAR-19	427.55	Reconciled
396862		14-MAR-19	BIOMAGIC INC		16,489.63	20-MAR-19	16,489.63	Reconciled
396863		14-MAR-19	BROWN AND CALDWELL		94,622.51	20-MAR-19	94,622.51	Reconciled
396864		14-MAR-19	BRUCE HADLEY NEWELL		1,250.00	19-MAR-19	1,250.00	Reconciled
396865		14-MAR-19	BUCKNALL POWER TOOL SERVICE, INC.		1,056.59	18-MAR-19	1,056.59	Reconciled
396866		14-MAR-19	BURKE, WILLIAMS & SORENSEN, LLP		1,852.50	18-MAR-19	1,852.50	Reconciled
396867		14-MAR-19	CALIFORNIA BARRICADE RENTAL, INC.		2,559.36	18-MAR-19	2,559.36	Reconciled
396868		14-MAR-19	CALIFORNIA NATIVE PLANT SOCIETY		150.00	19-MAR-19	150.00	Reconciled
396869		14-MAR-19	CAMPBELL, LIN		25.00			Negotiable
396870		14-MAR-19	CANON FINANCIAL SERVICES, INC		423.47	18-MAR-19	423.47	Reconciled
396871		14-MAR-19	CDW GOVERNMENT LLC		1,007.73	20-MAR-19	1,007.73	Reconciled
396872		14-MAR-19	CHAIREL CUSTOM HAY, INC.		6,302.54	18-MAR-19	6,302.54	Reconciled
396873		14-MAR-19	CHANG, JINWOOK		49.62	18-MAR-19	49.62	Reconciled
396874		14-MAR-19	CHEM TECH INTERNATIONAL INC		21,424.90	27-MAR-19	21,424.90	Reconciled
396875		14-MAR-19	CHO DESIGN ASSOCIATES, INC		3,200.00	18-MAR-19	3,200.00	Reconciled
IRWD Ledger Upgrade			Payment Register For			01-MAR-19 To	31-MAR-19	Report Date: 01-APR-2019 07:42
BANK: Bank of America N.A.			Branch : Los Angeles			Account: Checking AP and PR		Page: 12
Bank Account Currency: USD (US Dollar)						Payment Currency: USD (US Dollar)		
Payment Type: All						Display Supplier Address: No		

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396876		14-MAR-19	CITY OF IRVINE		128.00	18-MAR-19	128.00	Reconciled
396877		14-MAR-19	CIVIL SOURCE, INC.		17,360.00			Negotiable
396878		14-MAR-19	CNC ENGINEERING		1,977.82	19-MAR-19	1,977.82	Reconciled
396879		14-MAR-19	CONSTELLATION NEWENERGY, INC.		16,126.67	21-MAR-19	16,126.67	Reconciled
396880		14-MAR-19	CORELOGIC INC		495.00	18-MAR-19	495.00	Reconciled
396881		14-MAR-19	COUNTY OF ORANGE		3,334.00	20-MAR-19	3,334.00	Reconciled
396882		14-MAR-19	COX COMMUNICATIONS, INC.		261.38	19-MAR-19	261.38	Reconciled
396883		14-MAR-19	CR & R INCORPORATED		389.96	18-MAR-19	389.96	Reconciled
396884		14-MAR-19	CULLIGAN OF SANTA ANA		20,000.00	26-MAR-19	20,000.00	Reconciled
396885		14-MAR-19	D & G SIGNS		420.23	25-MAR-19	420.23	Reconciled
396886		14-MAR-19	DEE JASPAR & ASSOCIATES, INC.		401.50			Negotiable
396887		14-MAR-19	DELL MARKETING LP		4,967.53	18-MAR-19	4,967.53	Reconciled
396888		14-MAR-19	DEMARIA ELECTRIC MOTOR SERVICES, INC.		3,590.74	22-MAR-19	3,590.74	Reconciled
396889		14-MAR-19	DENALI WATER SOLUTIONS LLC		4,109.20	18-MAR-19	4,109.20	Reconciled
396890		14-MAR-19	DEPARTMENT OF INDUSTRIAL RELATIONS STATE OF CALIFORNIA		26,525.59	22-MAR-19	26,525.59	Reconciled
396891		14-MAR-19	DISCOUNT COURIER SERVICE INC.		91.32	18-MAR-19	91.32	Reconciled
396892		14-MAR-19	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY		7,951.20	18-MAR-19	7,951.20	Reconciled
396893		14-MAR-19	DRYSDALE		6,795.77	21-MAR-19	6,795.77	Reconciled

396894	14-MAR-19	ENTERPRISES INC. EAST ORANGE COUNTY WATER DISTRICT		2,800.00			Negotiable
396895	14-MAR-19	EMERGENCY POWER CONTROLS INC		2,996.25	21-MAR-19	2,996.25	Reconciled
396896	14-MAR-19	ENTERPRISE SECURITY, INC		260.00	18-MAR-19	260.00	Reconciled
396897	14-MAR-19	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		10,042.50	20-MAR-19	10,042.50	Reconciled
396898	14-MAR-19	ENVIRONMENTAL RESOURCE ASSOCIATES		105.14	19-MAR-19	105.14	Reconciled

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

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396899		14-MAR-19	FARRELL & ASSOCIATES		217.70	15-MAR-19	217.70	Reconciled
396900		14-MAR-19	FEDEX		396.07	18-MAR-19	396.07	Reconciled
396901		14-MAR-19	FIRST CHOICE SERVICES		1,126.98	19-MAR-19	1,126.98	Reconciled
396902		14-MAR-19	FOUGHT, CYNTHIA J.		2,603.39	18-MAR-19	2,603.39	Reconciled
396903		14-MAR-19	FRONTIER CALIFORNIA INC.		55.55	25-MAR-19	55.55	Reconciled
396904		14-MAR-19	FUSCOE ENGINEERING, INC.		3,145.00	15-MAR-19	3,145.00	Reconciled
396905		14-MAR-19	GANAHL LUMBER CO.		2.41	20-MAR-19	2.41	Reconciled
396906		14-MAR-19	GEORGE HILLS COMPANY, INC.		416.50	20-MAR-19	416.50	Reconciled
396907		14-MAR-19	GRAINGER		2,412.31	18-MAR-19	2,412.31	Reconciled
396908		14-MAR-19	GRAYBAR ELECTRIC COMPANY		1,110.04	18-MAR-19	1,110.04	Reconciled
396909		14-MAR-19	HACH COMPANY		241.27	18-MAR-19	241.27	Reconciled
396910		14-MAR-19	HAMDAN, NICK		65.00	18-MAR-19	65.00	Reconciled
396911		14-MAR-19	HAMILTON, KURT		907.70	18-MAR-19	907.70	Reconciled
396912		14-MAR-19	HARMSWORTH ASSOCIATES		1,580.00	28-MAR-19	1,580.00	Reconciled
396913		14-MAR-19	HARRINGTON INDUSTRIAL PLASTICS LLC		7,319.77	18-MAR-19	7,319.77	Reconciled
396914		14-MAR-19	HARRY H. KOBZEFF		2,800.00	18-MAR-19	2,800.00	Reconciled
396915		14-MAR-19	HAZEN AND SAWYER		2,320.00	21-MAR-19	2,320.00	Reconciled
396916		14-MAR-19	HEAD, SHELBY		51.17	26-MAR-19	51.17	Reconciled
396917		14-MAR-19	HELPMATES STAFFING SERVICES		11,310.92	20-MAR-19	11,310.92	Reconciled
396918		14-MAR-19	HGCPM, INC		3,025.57	18-MAR-19	3,025.57	Reconciled
396919		14-MAR-19	HILL BROTHERS CHEMICAL COMPANY		2,646.52	20-MAR-19	2,646.52	Reconciled
396920		14-MAR-19	HILTS CONSULTING GROUP, INC.		6,095.20	18-MAR-19	6,095.20	Reconciled
396921		14-MAR-19	HOME DEPOT USA INC		1,090.22	19-MAR-19	1,090.22	Reconciled
396922		14-MAR-19	HUANG, SHIYI		17.32			Negotiable
396923		14-MAR-19	HUMANA INSURANCE COMPANY		73.80	20-MAR-19	73.80	Reconciled
396924		14-MAR-19	INTEGRATED PROCESS TECHNOLOGIES, INC.		23,914.14	20-MAR-19	23,914.14	Reconciled
396925		14-MAR-19	INTEGRITY MUNICIPAL SERVICES LLC		1,800.00	22-MAR-19	1,800.00	Reconciled
396926		14-MAR-19	IRVINE PIPE & SUPPLY INC		191.90	15-MAR-19	191.90	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 14
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396927		14-MAR-19	IRWD-PETTY CASH CUSTODIAN		941.90	15-MAR-19	941.90	Reconciled
396928		14-MAR-19	JIG CONSULTANTS		1,082.77	19-MAR-19	1,082.77	Reconciled
396929		14-MAR-19	JIN, YOONDOO		108.62	18-MAR-19	108.62	Reconciled
396930		14-MAR-19	JONES, KEVIN		1,137.40			Negotiable
396931		14-MAR-19	KENT & AMY DAHLBERG		9,995.28	20-MAR-19	9,995.28	Reconciled
396932		14-MAR-19	KIMBALL MIDWEST		835.89	19-MAR-19	835.89	Reconciled
396933		14-MAR-19	KOELLER, NEBEKER, CARLSON & HALUCK, LLP		820.00	18-MAR-19	820.00	Reconciled
396934		14-MAR-19	KUSTERS ZIMA CORPORATION		6,135.25	19-MAR-19	6,135.25	Reconciled
396935		14-MAR-19	LANCER SALES USA, INC.		540.42	21-MAR-19	540.42	Reconciled

396936	14-MAR-19	LANDCARE HOLDINGS, INC.	40,049.72	25-MAR-19	40,049.72	Reconciled
396937	14-MAR-19	LAW OFFICE OF ATOOSA VAKILI	4,000.00	28-MAR-19	4,000.00	Reconciled
396938	14-MAR-19	LCS TECHNOLOGIES, INC.	6,075.00	18-MAR-19	6,075.00	Reconciled
396939	14-MAR-19	LEE & RO, INC.	4,728.00	19-MAR-19	4,728.00	Reconciled
396940	14-MAR-19	LEVERETT, ELIZABETH	39.19	18-MAR-19	39.19	Reconciled
396941	14-MAR-19	LILLESTRAND LEADERSHIP CONSULTING, INC.	4,612.86			Negotiable
396942	14-MAR-19	LU'S LIGHTHOUSE, INC.	3,272.06	18-MAR-19	3,272.06	Reconciled
396943	14-MAR-19	MARIE FISHER	36.14			Negotiable
396944	14-MAR-19	MCR TECHNOLOGIES INC	20,545.64	19-MAR-19	20,545.64	Reconciled
396945	14-MAR-19	MODI, NIHAR	11.92			Negotiable
396946	14-MAR-19	MOTION INDUSTRIES INC	374.41	18-MAR-19	374.41	Reconciled
396947	14-MAR-19	MPULSE MOBILE, INC	144.82	19-MAR-19	144.82	Reconciled
396948	14-MAR-19	MRO ELECTRIC & SUPPLY CO.	2,179.00	18-MAR-19	2,179.00	Reconciled
396949	14-MAR-19	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	14,474.81	19-MAR-19	14,474.81	Reconciled
396950	14-MAR-19	MUTUAL PROPANE	279.86	19-MAR-19	279.86	Reconciled
396951	14-MAR-19	NATIONAL READY MIXED CONCRETE CO.	1,646.93	18-MAR-19	1,646.93	Reconciled
396952	14-MAR-19	O.C. SUPERIOR CUSTOM CLEANING	3,600.00	15-MAR-19	3,600.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 15
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
396953		14-MAR-19	OC WELDING SERVICES		680.00			Negotiable
396954		14-MAR-19	OLIN CORPORATION		22,433.25	25-MAR-19	22,433.25	Reconciled
396955		14-MAR-19	ONESOURCE DISTRIBUTORS LLC		1,704.67	18-MAR-19	1,704.67	Reconciled
396956		14-MAR-19	ORANGE COUNTY AUTO PARTS CO		1,348.72	15-MAR-19	1,348.72	Reconciled
396957		14-MAR-19	ORANGE COUNTY COASTKEEPER		750.00	18-MAR-19	750.00	Reconciled
396958		14-MAR-19	ORANGE COUNTY SANITATION DISTRICT		1,520.00	15-MAR-19	1,520.00	Reconciled
396959		14-MAR-19	PACIFIC HYDROTECH CORPORATION		28,716.56	21-MAR-19	28,716.56	Reconciled
396960		14-MAR-19	PACIFIC HYDROTECH CORPORATION		655,077.72	22-MAR-19	655,077.72	Reconciled
396961		14-MAR-19	PACIFIC HYDROTECH CORPORATION		5,761.22	18-MAR-19	5,761.22	Reconciled
396962		14-MAR-19	PACIFIC TECHNICAL EQUIPMENT AND ENGINEERING, INC.		4,552.44	19-MAR-19	4,552.44	Reconciled
396963		14-MAR-19	PAPER DEPOT DOCUMENT DESTRUCTION LLC		374.00	22-MAR-19	374.00	Reconciled
396964		14-MAR-19	PAULELE, MAY		94.68	21-MAR-19	94.68	Reconciled
396965		14-MAR-19	PAYNE & FEARS LLP		3,507.50	18-MAR-19	3,507.50	Reconciled
396966		14-MAR-19	PIVOT INTERIORS INC		794.85	18-MAR-19	794.85	Reconciled
396967		14-MAR-19	PRAXAIR DISTRIBUTION INC		320.09	18-MAR-19	320.09	Reconciled
396968		14-MAR-19	PRUDENTIAL OVERALL SUPPLY		6,397.22	15-MAR-19	6,397.22	Reconciled
396969		14-MAR-19	PTI SAND & GRAVEL INC		4,090.70	21-MAR-19	4,090.70	Reconciled
396970		14-MAR-19	PYRO-COMM SYSTEMS INC		270.00	15-MAR-19	270.00	Reconciled
396971		14-MAR-19	QIAN GAO AND CHENGFEI DING		63.16			Negotiable
396972		14-MAR-19	RAM AIR ENGINEERING INC		6,971.18	19-MAR-19	6,971.18	Reconciled
396973		14-MAR-19	RED WING SHOE STORE		459.65	18-MAR-19	459.65	Reconciled
396974		14-MAR-19	REFRIGERATION SUPPLIES DISTRIBUTOR		979.62	15-MAR-19	979.62	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 16
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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397018	14-MAR-19	WAXIE'S ENTERPRISES, INC		507.91	18-MAR-19	507.91	Reconciled
397019	14-MAR-19	WECK LABORATORIES INC		1,953.00	25-MAR-19	1,953.00	Reconciled
397020	14-MAR-19	WIRELESS WATCHDOGS, LLC		1,060.00	19-MAR-19	1,060.00	Reconciled
397021	14-MAR-19	ZHAO, STRUI		39.91	18-MAR-19	39.91	Reconciled
397022	14-MAR-19	ATTORNEY GENERAL'S SACRAMENTO REGISTRY OF CHARITABLE TRUSTS		150.00	25-MAR-19	150.00	Reconciled

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397023		15-MAR-19	JCI JONES CHEMICALS INC	PO BOX 830674	5,255.25	19-MAR-19	5,255.25	Reconciled
397024		15-MAR-19	AFLAC	1932 WYNNTON RD	7,346.96	22-MAR-19	7,346.96	Reconciled
397025		15-MAR-19	AFLAC	PO BOX 84069	148.74	22-MAR-19	148.74	Reconciled
397026		15-MAR-19	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA	PO BOX 619082	37,992.61	21-MAR-19	37,992.61	Reconciled
397027		15-MAR-19	FIDELITY SECURITY LIFE INSURANCE COMPANY	PO BOX 632530	7,253.92	21-MAR-19	7,253.92	Reconciled
397028		15-MAR-19	COLONIAL LIFE & ACCIDENT INSURANCE CO.	COLUMBIA	1,103.26	21-MAR-19	1,103.26	Reconciled
397029		15-MAR-19	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	ATLANTA	72.30	21-MAR-19	72.30	Reconciled
397030		15-MAR-19	PRE-PAID LEGAL SERVICES INC	PO BOX 2629	1,188.10	22-MAR-19	1,188.10	Reconciled
397031		15-MAR-19	COUNTY OF ORANGE	1241 E DYER RD	414.20	20-MAR-19	414.20	Reconciled
397032		15-MAR-19	COSTCO WHOLESALE CORPORATION	IRVINE	13,292.04	18-MAR-19	13,292.04	Reconciled
397033		15-MAR-19	PERS LONG TERM CARE	PASADENA	538.89	18-MAR-19	538.89	Reconciled
397034		15-MAR-19	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	224.50	21-MAR-19	224.50	Reconciled
397035		15-MAR-19	FRANCHISE TAX BOARD	SACRAMENTO 1	100.00	27-MAR-19	100.00	Reconciled
397036		15-MAR-19	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	DIAMOND BAR	1,355.00	26-MAR-19	1,355.00	Reconciled
397037		18-MAR-19	JCI JONES CHEMICALS INC	PO BOX 830674	3,602.75	25-MAR-19	3,602.75	Reconciled
397038		21-MAR-19	HENKELS & MCCOY INC	PAY	989.43			Negotiable
397039		21-MAR-19	Cotton, Derrien		2,424.37	26-MAR-19	2,424.37	Reconciled
397040		21-MAR-19	McGehee, Joseph M (Joe)		115.00	21-MAR-19	115.00	Reconciled
397041		21-MAR-19	Nieto, Agustin (Augie)		1,953.57	25-MAR-19	1,953.57	Reconciled
397042		21-MAR-19	Pfister, Ken D (Ken)		1,260.67	27-MAR-19	1,260.67	Reconciled
397043		21-MAR-19	Phuong, Sophia		1,860.93	26-MAR-19	1,860.93	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 19
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397044		21-MAR-19	McKinstry, Brian HHOME (Brian)		137.00	22-MAR-19	137.00	Reconciled
397045		21-MAR-19	ABC ICEHOUSE, INC.		156.98	26-MAR-19	156.98	Reconciled
397046		21-MAR-19	AIRGAS, INC.		1,341.90	25-MAR-19	1,341.90	Reconciled
397047		21-MAR-19	AMAZON CAPITAL SERVICES, INC.		638.53	27-MAR-19	638.53	Reconciled
397048		21-MAR-19	ANDERSONPENNA PARTNERS, INC		64,968.50			Negotiable
397049		21-MAR-19	APEX LIFE SCIENCES, LLC		2,283.61			Negotiable
397050		21-MAR-19	APEX SYSTEMS, LLC		1,190.00	26-MAR-19	1,190.00	Reconciled
397051		21-MAR-19	ASCHRAFANIA, SALAHUDDIN		264.85	22-MAR-19	264.85	Reconciled
397052		21-MAR-19	AT&T		173.53	25-MAR-19	173.53	Reconciled
397053		21-MAR-19	AT&T		7,553.11	26-MAR-19	7,553.11	Reconciled
397054		21-MAR-19	ATHENS SERVICES		3,656.45	25-MAR-19	3,656.45	Reconciled
397055		21-MAR-19	AUTOZONE PARTS,		18.53	27-MAR-19	18.53	Reconciled

397056	21-MAR-19	INC. B & K ELECTRIC	973.52	25-MAR-19	973.52	Reconciled
397057	21-MAR-19	WHOLESALE BATTERIES PLUS AND BATTERIES PLUS BULBS	4,118.45	26-MAR-19	4,118.45	Reconciled
397058	21-MAR-19	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	172.16	27-MAR-19	172.16	Reconciled
397059	21-MAR-19	BDC SPECIAL WASTE	336.00	28-MAR-19	336.00	Reconciled
397060	21-MAR-19	BELSHIRE ENVIRONMENTAL SERVICES, INC.	1,825.00	27-MAR-19	1,825.00	Reconciled
397061	21-MAR-19	BILL'S SWEEPING SERVICE INC	460.00	26-MAR-19	460.00	Reconciled
397062	21-MAR-19	BLOOMBERG FINANCE LP	12,735.00	28-MAR-19	12,735.00	Reconciled
397063	21-MAR-19	BORCHARD SURVEYING & MAPPING, INC.	3,640.00	25-MAR-19	3,640.00	Reconciled
397064	21-MAR-19	BRITHINEE ELECTRIC	25,374.06	27-MAR-19	25,374.06	Reconciled
397065	21-MAR-19	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC	315.81	25-MAR-19	315.81	Reconciled
397066	21-MAR-19	BUSINESS MACHINES UNLIMITED	200.00			Negotiable
397067	21-MAR-19	CALIFORNIA BARRICADE RENTAL, INC.	2,160.00	25-MAR-19	2,160.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 20
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397068		21-MAR-19	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION		1,607.00			Negotiable
397069		21-MAR-19	CANON FINANCIAL SERVICES, INC		8,294.79	27-MAR-19	8,294.79	Reconciled
397070		21-MAR-19	CAO, MIN		411.52			Negotiable
397071		21-MAR-19	CASSELLS, BRETT		43.20	26-MAR-19	43.20	Reconciled
397072		21-MAR-19	CAUDILL, ROBERT		59.33			Negotiable
397073		21-MAR-19	CHEM TECH INTERNATIONAL INC		10,401.60			Negotiable
397074		21-MAR-19	CHEN, JONATHAN		34.59			Negotiable
397075		21-MAR-19	CHOI, WAI		13.84			Negotiable
397076		21-MAR-19	CITY OF COSTA MESA		3,316.29			Negotiable
397077		21-MAR-19	CITY OF SANTA ANA		79.94	25-MAR-19	79.94	Reconciled
397078		21-MAR-19	CLARKE MOSQUITO CONTROL PRODUCTS, INC.		14,790.15			Negotiable
397079		21-MAR-19	CONSTELLATION NEWENERGY, INC.		3,326.95	26-MAR-19	3,326.95	Reconciled
397080		21-MAR-19	CORRPRO COMPANIES, INC.		90,072.57			Negotiable
397081		21-MAR-19	CRITCHFIELD MECHANICAL, INC. OF SO CAL		231.64			Negotiable
397082		21-MAR-19	CURA MEDICAL TECHNOLOGIES		40.65			Negotiable
397083		21-MAR-19	DATA CLEAN CORPORATION		534.00	27-MAR-19	534.00	Reconciled
397084		21-MAR-19	DELL MARKETING LP		14,164.56	27-MAR-19	14,164.56	Reconciled
397085		21-MAR-19	DERISCHEBOURG, DALE		150.00			Negotiable
397086		21-MAR-19	DIRECTV INC		136.23	26-MAR-19	136.23	Reconciled
397087		21-MAR-19	DIVERSIFIED COMMUNICATIONS SERVICES, INC.		9,590.00	27-MAR-19	9,590.00	Reconciled
397088		21-MAR-19	DRYSDALE ENTERPRISES INC.		559.72			Negotiable
397089		21-MAR-19	DUKE CULTURAL RESOURCES MANAGEMENT, LLC		1,653.65	25-MAR-19	1,653.65	Reconciled
397090		21-MAR-19	EAGLE PRINT DYNAMICS		4,147.83	25-MAR-19	4,147.83	Reconciled
397091		21-MAR-19	EAGLE SYSTEMS INTERNATIONAL INC.		40,590.70			Negotiable
397092		21-MAR-19	EDWARD P BAKER III		9,935.67	26-MAR-19	9,935.67	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 21
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

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

397093	21-MAR-19	ELITE EQUIPMENT, INC.	900.35	27-MAR-19	900.35	Reconciled
397094	21-MAR-19	ENVIRONMENTAL EXPRESS INC	2,098.92	26-MAR-19	2,098.92	Reconciled
397095	21-MAR-19	EUROFINS EATON ANALYTICAL, INC.	300.00	25-MAR-19	300.00	Reconciled
397096	21-MAR-19	EVERETT DOREY LLP	3,601.25	25-MAR-19	3,601.25	Reconciled
397097	21-MAR-19	EVOQUA WATER TECHNOLOGIES LLC	3,205.57	27-MAR-19	3,205.57	Reconciled
397098	21-MAR-19	EWALT, CHARLES	111.14	25-MAR-19	111.14	Reconciled
397099	21-MAR-19	EXECUTIVE LIGHTING & ELECTRIC	964.44	27-MAR-19	964.44	Reconciled
397100	21-MAR-19	FARRELL & ASSOCIATES	2,163.32	22-MAR-19	2,163.32	Reconciled
397101	21-MAR-19	FASTENAL COMPANY	205.16	25-MAR-19	205.16	Reconciled
397102	21-MAR-19	FEDEX	359.63	25-MAR-19	359.63	Reconciled
397103	21-MAR-19	FERGUSON ENTERPRISES, INC.	1,164.78	25-MAR-19	1,164.78	Reconciled
397104	21-MAR-19	FIDELITY SECURITY LIFE INSURANCE COMPANY	207.31	28-MAR-19	207.31	Reconciled
397105	21-MAR-19	FISHER SCIENTIFIC COMPANY LLC	268.47	25-MAR-19	268.47	Reconciled
397106	21-MAR-19	FLW SERVICE CORPORATION	1,499.56	22-MAR-19	1,499.56	Reconciled
397107	21-MAR-19	FREEWAY MACHINE & WELDING SHOP	11,312.70	28-MAR-19	11,312.70	Reconciled
397108	21-MAR-19	FRONTIER CALIFORNIA INC.	497.75			Negotiable
397109	21-MAR-19	G4S JUSTICE SERVICES	84.96	25-MAR-19	84.96	Reconciled
397110	21-MAR-19	GANAHL LUMBER CO.	648.63	27-MAR-19	648.63	Reconciled
397111	21-MAR-19	GEDDY, HANNAH	148.17	26-MAR-19	148.17	Reconciled
397112	21-MAR-19	GEIGER BROS	1,256.22	25-MAR-19	1,256.22	Reconciled
397113	21-MAR-19	GENERAL MONITORS INC.	791.60	27-MAR-19	791.60	Reconciled
397114	21-MAR-19	GLADWELL GOVERNMENTAL SERVICES, INC.	250.00	26-MAR-19	250.00	Reconciled
397115	21-MAR-19	GM SAGER CONSTRUCTION CO, INC.	19,850.00	27-MAR-19	19,850.00	Reconciled
397116	21-MAR-19	GOODARZ, FIROOZ	1,300.43			Negotiable
397117	21-MAR-19	GRATINGER	2,300.96	26-MAR-19	2,300.96	Reconciled
397118	21-MAR-19	GRANICUS, LLC	6,598.46	26-MAR-19	6,598.46	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 22
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397119		21-MAR-19	GRAYBAR ELECTRIC COMPANY		49.50	25-MAR-19	49.50	Reconciled
397120		21-MAR-19	HAAKER EQUIPMENT COMPANY		583.40	26-MAR-19	583.40	Reconciled
397121		21-MAR-19	HACH COMPANY		174.21	26-MAR-19	174.21	Reconciled
397122		21-MAR-19	HAO, MICHELLE		98.90			Negotiable
397123		21-MAR-19	HARRINGTON INDUSTRIAL PLASTICS LLC		13,505.49	27-MAR-19	13,505.49	Reconciled
397124		21-MAR-19	HDR ENGINEERING INC		76,383.48			Negotiable
397125		21-MAR-19	HELPMATES STAFFING SERVICES		12,665.70	27-MAR-19	12,665.70	Reconciled
397126		21-MAR-19	HERITAGE FIELDS EL TORO, LLC		94.98	25-MAR-19	94.98	Reconciled
397127		21-MAR-19	HILL BROTHERS CHEMICAL COMPANY		13,862.23			Negotiable
397128		21-MAR-19	HINSILBLON LTD		500.00			Negotiable
397129		21-MAR-19	HOME DEPOT USA INC		1,193.70	26-MAR-19	1,193.70	Reconciled
397130		21-MAR-19	INDUSTRIAL METAL SUPPLY CO		142.59	25-MAR-19	142.59	Reconciled
397131		21-MAR-19	INFOSYS LIMITED		24,480.00			Negotiable
397132		21-MAR-19	INSITUFORM TECHNOLOGIES INC		340,117.97			Negotiable
397133		21-MAR-19	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,517.89	25-MAR-19	1,517.89	Reconciled
397134		21-MAR-19	IRVINE GATEWAY DEVELOPMENT		467.74			Negotiable
397135		21-MAR-19	IRVINE PIPE & SUPPLY INC		2,384.25	22-MAR-19	2,384.25	Reconciled
397136		21-MAR-19	IRVINE UNIFIED SCHOOL DISTRICT		1,029.70			Negotiable
397137		21-MAR-19	JOHNSTONE SUPPLY		34.96	25-MAR-19	34.96	Reconciled
397138		21-MAR-19	JUST ENERGY SOLUTIONS INC.		56.12	25-MAR-19	56.12	Reconciled
397139		21-MAR-19	KALANTARI, IRADJ		166.15	27-MAR-19	166.15	Reconciled
397140		21-MAR-19	KAMINSKY, LOUIS J		59.29	26-MAR-19	59.29	Reconciled

397141	21-MAR-19	KAYUGA SOLUTION INC	3,600.00	25-MAR-19	3,600.00	Reconciled
397142	21-MAR-19	KB HOMES	145.50			Negotiable
397143	21-MAR-19	KIM, ELIZABETH B	28.88			Negotiable
397144	21-MAR-19	KNOWBE4, INC.	9,900.00	25-MAR-19	9,900.00	Reconciled
397145	21-MAR-19	KONECRANES INC	5,615.00	25-MAR-19	5,615.00	Reconciled
397146	21-MAR-19	KPRS CONSTRUCTION SERVICES, INC.	384,789.18	27-MAR-19	384,789.18	Reconciled

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397147		21-MAR-19	LAGUNA BEACH COUNTY WATER DISTRICT		7,286.56			Negotiable
397148		21-MAR-19	LANDSEA HOLDINGS CORPORATION		32.17			Negotiable
397149		21-MAR-19	LENNAR HOMES		1,060.98	25-MAR-19	1,060.98	Reconciled
397150		21-MAR-19	LUBRICATION ENGINEERS, INC.		6,485.23	25-MAR-19	6,485.23	Reconciled
397151		21-MAR-19	MANTEGHI SHAHNAZ		38.21			Negotiable
397152		21-MAR-19	MAP COMMUNICATIONS, INC.		741.07	26-MAR-19	741.07	Reconciled
397153		21-MAR-19	MARSHALL REDDICK REAL ESTATE		52.91			Negotiable
397154		21-MAR-19	MC FADDEN-DALE INDUSTRIAL		303.42	27-MAR-19	303.42	Reconciled
397155		21-MAR-19	MC MASTER CARR SUPPLY CO		876.46	25-MAR-19	876.46	Reconciled
397156		21-MAR-19	MCCORMICK SCHMICK, SEAFOOD RES		6,697.43			Negotiable
397157		21-MAR-19	MERRIMAC PETROLEUM, INC.		23,273.36	25-MAR-19	23,273.36	Reconciled
397158		21-MAR-19	MISSION COMMUNICATIONS, LLC		1,126.80	27-MAR-19	1,126.80	Reconciled
397159		21-MAR-19	MUNICIPAL MAINTENANCE EQUIPMENT INC		4,352.35	26-MAR-19	4,352.35	Reconciled
397160		21-MAR-19	NATIONAL READY MIXED CONCRETE CO.		741.52	25-MAR-19	741.52	Reconciled
397161		21-MAR-19	NATIONAL WATER RESEARCH INSTITUTE		2,122.98	28-MAR-19	2,122.98	Reconciled
397162		21-MAR-19	NATURALWELL, LLC		605.00	22-MAR-19	605.00	Reconciled
397163		21-MAR-19	NEOFUNDS		5,010.00	25-MAR-19	5,010.00	Reconciled
397164		21-MAR-19	NEW RESOURCES GROUP INC		830.00	25-MAR-19	830.00	Reconciled
397165		21-MAR-19	NEWPORT REAL ESTATE SERVICES		13,100.00	27-MAR-19	13,100.00	Reconciled
397166		21-MAR-19	NINYO & MOORE		4,166.50	25-MAR-19	4,166.50	Reconciled
397167		21-MAR-19	NMG GEOTECHNICAL INC		2,614.00	28-MAR-19	2,614.00	Reconciled
397168		21-MAR-19	NOVACOAST INC		1,390.00	26-MAR-19	1,390.00	Reconciled
397169		21-MAR-19	OLIN CORPORATION		14,783.17			Negotiable
397170		21-MAR-19	OLSON, HAGEL & FISHBURN, LLP		124.00	25-MAR-19	124.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 24
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397171		21-MAR-19	ONESOURCE DISTRIBUTORS LLC		781.45	25-MAR-19	781.45	Reconciled
397172		21-MAR-19	ORACLE AMERICA, INC.		3,062.00	27-MAR-19	3,062.00	Reconciled
397173		21-MAR-19	ORANGE COUNTY AUTO PARTS CO		1,613.77	22-MAR-19	1,613.77	Reconciled
397174		21-MAR-19	PACIFIC PARTS & CONTROLS INC		9,185.86	26-MAR-19	9,185.86	Reconciled
397175		21-MAR-19	PAGE, DAVID		770.69	26-MAR-19	770.69	Reconciled
397176		21-MAR-19	PANG, JING		21.58			Negotiable
397177		21-MAR-19	PARADA PAINTING INC		5,434.25			Negotiable
397178		21-MAR-19	PASCAL & LUDWIG CONSTRUCTORS		217,387.74	27-MAR-19	217,387.74	Reconciled
397179		21-MAR-19	PASCAL & LUDWIG CONSTRUCTORS		11,441.46	28-MAR-19	11,441.46	Reconciled
397180		21-MAR-19	PERKINELMER HEALTH SCIENCES INC		39.19			Negotiable
397181		21-MAR-19	PILAR ONATE		5,000.00			Negotiable
397182		21-MAR-19	PINNACLE TOWERS		749.21	27-MAR-19	749.21	Reconciled

397183	21-MAR-19	LLC PRAXAIR DISTRIBUTION INC	233.21	25-MAR-19	233.21	Reconciled
397184	21-MAR-19	PROCARE WORK INJURY CENTER	945.00	26-MAR-19	945.00	Reconciled
397185	21-MAR-19	PRODATA COMPUTER SERVICES INC	5,995.00	25-MAR-19	5,995.00	Reconciled
397186	21-MAR-19	PROVOOST, TY	78.98			Negotiable
397187	21-MAR-19	RAM AIR ENGINEERING INC	6,852.76	26-MAR-19	6,852.76	Reconciled
397188	21-MAR-19	RANCHO ALISAL APTS	47.49			Negotiable
397189	21-MAR-19	RANCHO MADERAS APTS	165.98			Negotiable
397190	21-MAR-19	RCE CONSULTANTS, INC.	16,749.13			Negotiable
397191	21-MAR-19	RESPONSE ENVELOPE, INC	1,508.50	26-MAR-19	1,508.50	Reconciled
397192	21-MAR-19	RINCON TRUCK CENTER INC.	4,766.84	22-MAR-19	4,766.84	Reconciled
397193	21-MAR-19	ROYAL INDUSTRIAL SOLUTIONS	367.10	25-MAR-19	367.10	Reconciled
397194	21-MAR-19	S & J SUPPLY CO INC	5,708.60	25-MAR-19	5,708.60	Reconciled
397195	21-MAR-19	SANTA ANA BLUE PRINT	706.64	27-MAR-19	706.64	Reconciled

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397196		21-MAR-19	SANTA MARGARITA FORD		2,485.72	25-MAR-19	2,485.72	Reconciled
397197		21-MAR-19	SANTA MARIA NEIGHBORHOOD ASSN		772.65			Negotiable
397198		21-MAR-19	SCHJEI, KATHRYN		514.50	27-MAR-19	514.50	Reconciled
397199		21-MAR-19	SERRANO APARTMENTS		146.18			Negotiable
397200		21-MAR-19	SHERAFAT, AMIR		34.60			Negotiable
397201		21-MAR-19	SIEMENS INDUSTRY INC		906.18	25-MAR-19	906.18	Reconciled
397202		21-MAR-19	SILVA, PAULINE		308.84			Negotiable
397203		21-MAR-19	SIRIUS COMPUTER SOLUTIONS INC		64,593.56			Negotiable
397204		21-MAR-19	SOLARWINDS, INC		6,749.21	26-MAR-19	6,749.21	Reconciled
397205		21-MAR-19	SOUTHERN CALIFORNIA EDISON COMPANY		223,140.42	25-MAR-19	223,140.42	Reconciled
397206		21-MAR-19	SOUTHERN CALIFORNIA EDISON COMPANY		43.81	26-MAR-19	43.81	Reconciled
397207		21-MAR-19	SOUTHERN CALIFORNIA GAS COMPANY		8,904.34	27-MAR-19	8,904.34	Reconciled
397208		21-MAR-19	SPATIAL WAVE, INC.		840.00	22-MAR-19	840.00	Reconciled
397209		21-MAR-19	STONE MILLER CONSULTANTS INC		1,249.50	26-MAR-19	1,249.50	Reconciled
397210		21-MAR-19	STREAKWAVE WIRELESS, INC.		499.73	26-MAR-19	499.73	Reconciled
397211		21-MAR-19	SUEZ TREATMENT SOLUTIONS INC.		204.15	25-MAR-19	204.15	Reconciled
397212		21-MAR-19	SULZER ELECTRO- MECHANICAL SERVICES (US) INC.		9,979.41	25-MAR-19	9,979.41	Reconciled
397213		21-MAR-19	TAN, YI		25.24			Negotiable
397214		21-MAR-19	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC		67.32	28-MAR-19	67.32	Reconciled
397215		21-MAR-19	THERMO ELECTRON NORTH AMERICA LLC		4,934.00	26-MAR-19	4,934.00	Reconciled
397216		21-MAR-19	TOLENTINO, MELISSA		19.31			Negotiable
397217		21-MAR-19	TOLL BROS., INC.		163.64			Negotiable
397218		21-MAR-19	TRI COUNTY PUMP COMPANY		11,989.75	28-MAR-19	11,989.75	Reconciled
397219		21-MAR-19	TROPICAL PLAZA NURSERY INC		66,701.85			Negotiable
397220		21-MAR-19	TRUCPARCO		13.06			Negotiable

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397221		21-MAR-19	U.S. GAIN - A DIVISION OF U.S. VENTURE, INC.		47.90	25-MAR-19	47.90	Reconciled

397222	21-MAR-19	UTILITY SYSTEMS SCIENCE & SOFTWARE INC.	4,814.27	25-MAR-19	4,814.27	Reconciled
397223	21-MAR-19	VAUGHAN'S INDUSTRIAL REPAIR CO INC	5,462.85	25-MAR-19	5,462.85	Reconciled
397224	21-MAR-19	VULCAN INDUSTRIES INC	121.91	25-MAR-19	121.91	Reconciled
397225	21-MAR-19	WALTERS WHOLESALE ELECTRIC	28.07	25-MAR-19	28.07	Reconciled
397226	21-MAR-19	WAXIE'S ENTERPRISES, INC	289.87	25-MAR-19	289.87	Reconciled
397227	21-MAR-19	WECK LABORATORIES INC	3,499.00			Negotiable
397228	21-MAR-19	WEST COAST SAFETY SUPPLY INC	8,769.02	26-MAR-19	8,769.02	Reconciled
397229	21-MAR-19	WESTAMERICA COMMUNICATIONS, INC.	712.50	22-MAR-19	712.50	Reconciled
397230	21-MAR-19	WOODBIDGE WILLOWS APARTMENTS	183.36			Negotiable
397231	21-MAR-19	WU, MINSI	32.79			Negotiable
397232	21-MAR-19	WU, YING	28.26			Negotiable
397233	21-MAR-19	WU, YUTONG	391.27			Negotiable
397234	21-MAR-19	YOUNG, CORBIN	12.40			Negotiable
397235	21-MAR-19	YSI, INC	689.03	25-MAR-19	689.03	Reconciled
397236	21-MAR-19	CONSTELLATION NEWENERGY, INC.	7,488.86	28-MAR-19	7,488.86	Reconciled
397237	25-MAR-19	JCI JONES CHEMICALS INC	2,510.76	28-MAR-19	2,510.76	Reconciled
397238	25-MAR-19	RAYMOND HANDLING SOLUTIONS INC	531.00	28-MAR-19	531.00	Reconciled
397239	26-MAR-19	JOHN MICHAEL COVASPO BOX 421	173.20			Negotiable
397240	26-MAR-19	DIRECTV INC ATLANTA	133.51			Negotiable
397241	26-MAR-19	SOUTHERN CALIFORNIA EDISON 800 COMPANY	89,390.10			Negotiable
397242	27-MAR-19	LAW OFFICE OF ATOOSA VAKILI PURCHASE	3,870.00			Negotiable
397243	28-MAR-19	Aguilar, Alan C	105.90			Negotiable
397244	28-MAR-19	Cortez, Malcolm A (Malcolm)	62.64			Negotiable

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 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397245		28-MAR-19	Crowe, David M (David)		50.00			Negotiable
397246		28-MAR-19	Hornung, Phillip		197.83			Negotiable
397247		28-MAR-19	Joseph, Brandon		78.00			Negotiable
397248		28-MAR-19	Llewellyn, Shana W (Shana)		125.00	28-MAR-19	125.00	Reconciled
397249		28-MAR-19	Malloy, Steven L (Steven)		30.00			Negotiable
397250		28-MAR-19	Marcacci, Mark		110.63			Negotiable
397251		28-MAR-19	Moore, Rory M (Rory)		506.42			Negotiable
397252		28-MAR-19	Orozco, Gustavo A (Gus)		188.00			Negotiable
397253		28-MAR-19	ADVANCED CALIBRATION DESIGNS INC		1,538.00			Negotiable
397254		28-MAR-19	AEGIS ENGINEERING MANAGEMENT, INC.		21,330.00			Negotiable
397255		28-MAR-19	AHN, HYON		50.28			Negotiable
397256		28-MAR-19	AIRGAS, INC.		1,258.54			Negotiable
397257		28-MAR-19	ALL AMERICAN ASPHALT		1,657.00			Negotiable
397258		28-MAR-19	ALPHA TRAFFIC SERVICES, INC.		700.00			Negotiable
397259		28-MAR-19	AMAZON CAPITAL SERVICES, INC.		4,025.98			Negotiable
397260		28-MAR-19	ANTHONY N. LARSEN		450.00			Negotiable
397261		28-MAR-19	APEX SYSTEMS, LLC		1,190.00			Negotiable
397262		28-MAR-19	AQUA-METRIC SALES COMPANY		2,026.95			Negotiable
397263		28-MAR-19	AT&T		64.62			Negotiable
397264		28-MAR-19	AT&T		248.20			Negotiable
397265		28-MAR-19	AUTOZONE PARTS, INC.		251.03			Negotiable
397266		28-MAR-19	BDC SPECIAL WASTE		182.08			Negotiable
397267		28-MAR-19	BLACK & VEATCH CORPORATION		257,600.49			Negotiable
397268		28-MAR-19	BOKHARI, TARIQ		109.55			Negotiable
397269		28-MAR-19	BRALY, ALEXIS		308.00			Negotiable
397270		28-MAR-19	BRALY, HUGH		769.07			Negotiable
397271		28-MAR-19	BRITHINEE ELECTRIC		3,410.00			Negotiable
397272		28-MAR-19	BRITTANY APTS		283.55			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
397316		28-MAR-19	SERVICES HILL BROTHERS CHEMICAL COMPANY		3,908.37			Negotiable
397317		28-MAR-19	HOBLIK, JAN		61.52			Negotiable
397318		28-MAR-19	HOME DEPOT USA INC		738.38			Negotiable
397319		28-MAR-19	HUGHES, JEANETTE		29.93			Negotiable
397320		28-MAR-19	IDEA HALL		53,040.00			Negotiable
397321		28-MAR-19	INDUSTRIAL METAL SUPPLY CO		217.29			Negotiable
397322		28-MAR-19	INFOSYS LIMITED		24,480.00			Negotiable
397323		28-MAR-19	INORGANIC VENTURES INC		1,596.74			Negotiable
397324		28-MAR-19	IRVINE PIPE & SUPPLY INC		4,071.54			Negotiable
397325		28-MAR-19	IRVINE UNIFIED SCHOOL DISTRICT		3,842.84			Negotiable
397326		28-MAR-19	IRWD-PETTY CASH CUSTODIAN		1,450.44			Negotiable
397327		28-MAR-19	JENSEN PRECAST		4,969.43			Negotiable
397328		28-MAR-19	JH TECHNOLOGIES, INC		9,992.23			Negotiable

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 30
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397329		28-MAR-19	KEY, PEARLINE		17.24			Negotiable
397330		28-MAR-19	KIM, GINA		39.53			Negotiable
397331		28-MAR-19	KONECRANES INC		1,525.00			Negotiable
397332		28-MAR-19	KOREAN CULTURAL CENTER		2,500.00			Negotiable
397333		28-MAR-19	LANDCARE HOLDINGS, INC.		2,688.00			Negotiable
397334		28-MAR-19	LENG, MEI		30.87			Negotiable
397335		28-MAR-19	LI, JIAN		59.94			Negotiable
397336		28-MAR-19	LI, YUESONG		390.85			Negotiable
397337		28-MAR-19	LINKEDIN CORPORATION		6,756.25			Negotiable
397338		28-MAR-19	LU'S LIGHTHOUSE, INC.		3,747.69			Negotiable
397339		28-MAR-19	MACKAY, SCOT		44.54			Negotiable
397340		28-MAR-19	MAJUMDAR, JAYANTA		25.16			Negotiable
397341		28-MAR-19	MAO, TOUGH		127.78			Negotiable
397342		28-MAR-19	MC FADDEN-DALE INDUSTRIAL		637.43			Negotiable
397343		28-MAR-19	MC MASTER CARR SUPPLY CO		411.11			Negotiable
397344		28-MAR-19	MERKLE, JANIE J		20.00			Negotiable
397345		28-MAR-19	MOBILE MODULAR MANAGEMENT CORPORATION		1,212.19			Negotiable
397346		28-MAR-19	MOSS, TERRI ANN		20.47			Negotiable
397347		28-MAR-19	MR CRANE INC		1,074.60			Negotiable
397348		28-MAR-19	MUNICIPAL UNDERGROUND SERVICES INC		6,500.00			Negotiable
397349		28-MAR-19	NESS, LORRAINE		2.77			Negotiable
397350		28-MAR-19	NEWPORT NORTH APTS		486.33			Negotiable
397351		28-MAR-19	NINYO & MOORE		2,788.00			Negotiable
397352		28-MAR-19	NMG GEOTECHNICAL INC		6,155.40			Negotiable
397353		28-MAR-19	OLIN CORPORATION		18,591.14			Negotiable
397354		28-MAR-19	OMAR DANDASHI		1,280.87			Negotiable
397355		28-MAR-19	ONESOURCE DISTRIBUTORS LLC		1,043.41			Negotiable
397356		28-MAR-19	ORANGE COUNTY AUTO PARTS CO		1,134.87			Negotiable
397357		28-MAR-19	ORANGE COUNTY SANITATION DISTRICT		548,251.00			Negotiable
397358		28-MAR-19	PARK, JINSUK		107.48			Negotiable
397359		28-MAR-19	PAYNE & FEARS LLP		1,667.50			Negotiable

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 31
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397360		28-MAR-19	PELLETIER & ASSOCIATES, INC.		125.00			Negotiable
397361		28-MAR-19	PERKINELMER HEALTH SCIENCES INC		894.99			Negotiable
397362		28-MAR-19	PHAN, MONICA		246.56			Negotiable
397363		28-MAR-19	PIANET, ROMAIN		56.57			Negotiable

397364	28-MAR-19	PISANO, NINA	58.57	Negotiable
397365	28-MAR-19	POOCHIGIAN, MARK	38.59	Negotiable
397366	28-MAR-19	PRAXAIR	2,174.59	Negotiable
		DISTRIBUTION INC		
397367	28-MAR-19	PREMIER PAVING	1,667.33	Negotiable
		INC.		
397368	28-MAR-19	PRO MOBILE AUTO	600.00	Negotiable
		DETAILING		
397369	28-MAR-19	RAM AIR	12,551.37	Negotiable
		ENGINEERING INC		
397370	28-MAR-19	RANCHO MARIPOSA	34.85	Negotiable
		APTS		
397371	28-MAR-19	REEB, CLAYTON	42.78	Negotiable
397372	28-MAR-19	REGIONAL	1,610.00	Negotiable
		GOVERNMENT		
		SERVICES AUTHORITY		
397373	28-MAR-19	RINCON TRUCK	1,925.97	Negotiable
		CENTER INC.		
397374	28-MAR-19	ROSE, JACK	584.36	Negotiable
397375	28-MAR-19	ROYAL INDUSTRIAL	5,107.98	Negotiable
		SOLUTIONS		
397376	28-MAR-19	SAN LEON APTS	350.99	Negotiable
397377	28-MAR-19	SAN MARINO APTS	101.36	Negotiable
397378	28-MAR-19	SANDERS PAVING INC	17,362.00	Negotiable
397379	28-MAR-19	SANTA ANA BLUE	1,185.24	Negotiable
		PRINT		
397380	28-MAR-19	SANTA MARGARITA	431.68	Negotiable
		FORD		
397381	28-MAR-19	SCHINDLER ELEVATOR	214.92	Negotiable
		CORPORATION		
397382	28-MAR-19	SCHONE, JULIA	89.95	Negotiable
397383	28-MAR-19	SHEN, DANGIE	168.88	Negotiable
397384	28-MAR-19	SJD&B, INC.	1,348.92	Negotiable
397385	28-MAR-19	SMARTCOVER SYSTEMS	623.99	Negotiable
397386	28-MAR-19	SOUTHERN	248,122.48	Negotiable
		CALIFORNIA EDISON		
		COMPANY		
397387	28-MAR-19	SOUTHERN	86.13	Negotiable
		CALIFORNIA GAS		
		COMPANY		

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 32
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
397388		28-MAR-19	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.		27.69			Negotiable
397389		28-MAR-19	SPATIAL WAVE, INC.		5,863.76			Negotiable
397390		28-MAR-19	STEVEN ENTERPRISES INC		403.29			Negotiable
397391		28-MAR-19	STICE COMPANY, INC.		3,006.78			Negotiable
397392		28-MAR-19	STREAKWAVE WIRELESS, INC.		74.28			Negotiable
397393		28-MAR-19	SUMMIT CHEMICAL SPECIALTY PRODUCTS		11,705.76			Negotiable
397394		28-MAR-19	SUN, QIUMEI		208.80			Negotiable
397395		28-MAR-19	SUN-STAR ELECTRIC, INC.		15,945.95			Negotiable
397396		28-MAR-19	SUPPORT PRODUCT SERVICES, INC		1,816.60			Negotiable
397397		28-MAR-19	T.E. ROBERTS, INC		1,457.96			Negotiable
397398		28-MAR-19	TALLEY INC		1,046.87			Negotiable
397399		28-MAR-19	TESTAMERICA LABORATORIES, INC		573.30			Negotiable
397400		28-MAR-19	TETRA TECH, INC		14,778.00			Negotiable
397401		28-MAR-19	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC		121.27			Negotiable
397402		28-MAR-19	THE NEW YORK BLOWER COMPANY		1,942.68			Negotiable
397403		28-MAR-19	TIC-IPG-COMMON		1,078.23			Negotiable
397404		28-MAR-19	TIC-OFFICE PROPERTIES		77.08			Negotiable
397405		28-MAR-19	TIC-RETAIL PROPERTIES		83.19			Negotiable
397406		28-MAR-19	TIC-SPECTRUM OFFICE		552.12			Negotiable
397407		28-MAR-19	TOLL BROS., INC.		357.77			Negotiable
397408		28-MAR-19	TONY VALENTINE CONSTRUCTION		1,584.67			Negotiable
397409		28-MAR-19	TREE OF LIFE NURSERY		9,845.01			Negotiable
397410		28-MAR-19	TRIPAC MARKETING INC		3,160.97			Negotiable
397411		28-MAR-19	TROPICAL PLAZA NURSERY INC		7,875.00			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
13050	05-MAR-19		ANNUITY INSURANCE COMPANY					
13051	06-MAR-19		CALPERS	SACRAMENTO	1,191.58			Negotiable
			YORK INSURANCE SERVICES GROUP INC - CA		1,755.00			Negotiable
13052	11-MAR-19		ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	1,094,621.96			Negotiable
13053	11-MAR-19		BANK OF AMERICA MERRILL LYNCH	CHICAGO	36,505.04			Negotiable
13054	11-MAR-19		CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	8,599.88			Negotiable
13055	11-MAR-19		CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	9,788.80			Negotiable
13056	12-MAR-19		YORK INSURANCE SERVICES GROUP INC - CA	PAY	7,936.53			Negotiable
13057	12-MAR-19		BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	17,955.80			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All

Payment Register For 01-MAR-19 To 31-MAR-19
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 01-APR-2019 07:42
 Page: 35

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
13058		12-MAR-19	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	61,458.33			Negotiable
13059		12-MAR-19	HALUNKA, MARY	PAY	38.19			Negotiable
13060		12-MAR-19	MACGILLIVRAY, COLIN	PAY	11.52			Negotiable
13061		12-MAR-19	CHEN, SHUOWEN	PAY	51.12			Negotiable
13062		12-MAR-19	KO, ASHLEY	PAY	87.13			Negotiable
13063		12-MAR-19	CALPERS	SACRAMENTO	522,980.88			Negotiable
13064		12-MAR-19	CALPERS	SACRAMENTO	2,891.07			Negotiable
13065		13-MAR-19	MERRILL LYNCH CAPITAL SERVICES, INC	CHARLOTTE	497,397.07			Negotiable
13066		13-MAR-19	CITIGROUP GLOBAL MARKETS INC.	NEW YORK	497,397.07			Negotiable
13067		13-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	1,882.72			Negotiable
13068		13-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	8,288.15			Negotiable
13069		13-MAR-19	WALDMAN, STEPHANIE	PAY	23.10			Negotiable
13070		15-MAR-19	U.S. BANK NATIONAL ASSOCIATION	ST. LOUIS	7,104.19			Negotiable
13071		18-MAR-19	INTERNAL REVENUE SERVICE	FRESNO	237,387.21			Negotiable
13072		18-MAR-19	FRANCHISE TAX BOARD	SACRAMENTO	69,283.97			Negotiable
13073		18-MAR-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	19,285.63			Negotiable
13074		18-MAR-19	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	3,003.34			Negotiable
13075		18-MAR-19	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	147,801.09			Negotiable
13076		18-MAR-19	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	80,135.68			Negotiable
13077		18-MAR-19	U.S. BANK NATIONAL ASSOCIATION	ST. LOUIS	61,107.55			Negotiable
13078		18-MAR-19	BANK OF AMERICA	SAN FRANCISCO	60,304.14			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All

Payment Register For 01-MAR-19 To 31-MAR-19
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 01-APR-2019 07:42
 Page: 36

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
13079		18-MAR-19	U.S. BANK NATIONAL ASSOCIATION	ST. LOUIS	31,816.88			Negotiable
13080		18-MAR-19	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	50,235.62			Negotiable
13081		18-MAR-19	MUNICIPAL WATER DISTRICT OF ORANGE VALLEY	FOUNTAIN VALLEY	348,325.22			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
13082	18-MAR-19	COUNTY	CALPERS	SACRAMENTO	52,745.16			Negotiable
13083	18-MAR-19	CALPERS	CALPERS	SACRAMENTO	200,215.65			Negotiable
13084	19-MAR-19	YORK INSURANCE SERVICES GROUP INC - CA	YORK INSURANCE	PAY	2,094.86			Negotiable
13085	19-MAR-19	CALPERS	CALPERS	SACRAMENTO	1,248.05			Negotiable
13086	20-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	3,314.95			Negotiable
13087	20-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	2,989.51			Negotiable
13088	25-MAR-19	FILANC-BALFOUR BEATTY JV	FILANC-BALFOUR BEATTY JV	ACT 4427724347	379,212.21			Negotiable
13089	26-MAR-19	YORK INSURANCE SERVICES GROUP INC - CA	YORK INSURANCE	PAY	4,579.53			Negotiable
13090	26-MAR-19	BANK OF NEW YORK MELLON TRUST COMPANY NA	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	13,533.33			Negotiable
13091	26-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	6,379.79			Negotiable
13092	26-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	4,679.38			Negotiable
13093	28-MAR-19	CHARD SNYDER & ASSOCIATES, INC.	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	1,401.80			Negotiable
13094	28-MAR-19	INTERNAL REVENUE SERVICE	INTERNAL REVENUE SERVICE	FRESNO	196,159.56			Negotiable
13095	28-MAR-19	FRANCHISE TAX BOARD	FRANCHISE TAX BOARD	SACRAMENTO	60,232.29			Negotiable
13096	28-MAR-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	15,124.74			Negotiable
13097	28-MAR-19	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	3,003.34			Negotiable
13098	28-MAR-19	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	151,187.28			Negotiable

IRWD Ledger Upgrade Payment Register For 01-MAR-19 To 31-MAR-19 Report Date: 01-APR-2019 07:42
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 37
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
13099	28-MAR-19	EMPLOYEE BENEFIT SPECIALISTS, INC.	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	238.50			Negotiable
13100	28-MAR-19	EMPLOYEE BENEFIT SPECIALISTS, INC.	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	9,663.83			Negotiable
Payment Document Subtotal:					5,618,303.98			
Bank Account Subtotal :					15,180,605.58		6,299,640.22	
Report Count : 923	Report Total:				15,180,605.58	6,299,640.22		
Disbursements								

*** End of Report ***

\$ 15,180,605.58 Disbursements
 <11,289.58> Voids
 \$ 15,169,316.00 Total Disbursements and Voids

Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

March
2019

	AMOUNT	VENDOR	PURPOSE
3/1/2019	990,406.10	BANK OF AMERICA	ACH Payments for Payroll
3/15/2019	1,334,938.82	BANK OF AMERICA	ACH Payments for Payroll
3/29/2019	985,013.13	BANK OF AMERICA	ACH Payments for Payroll
	<u>\$3,310,358.05</u>		

Exhibit "F"

IRWD Gov Code 53065.5 Disclosure Report

Payment or Reimbursements for Individual charges of \$100 or more per transaction for services or product received.
01-MAR-19 to 31-MAR-19

NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Aguilar, Alan	397243	28-Mar-19	105.90	Other(Misc)	Operating Tools
Bishop, Kaitlyn	396836	14-Mar-19	140.02	Other(Misc)	Safety Shoe Allowance
Davis, Jennifer	396587	7-Mar-19	145.00	Certification Renewal	Certified Fixed Income Practitioner Certificate Renewal
Garcia, Alex	396839	14-Mar-19	280.00	Certification Renewal	CWEA Grade II Certificate Renewal
Hornung, Phillip	397246	28-Mar-19	197.83	Other(Misc)	Federal Express shipment priority overnight
Justice, Jack	396591	7-Mar-19	188.00	Membership Renewal	CWEA membership renewal
Llewellyn, Shana	397248	28-Mar-19	125.00	Other(Misc)	Safety Shoe Allowance
McBride, Damien	396844	14-Mar-19	200.00	Other(Misc)	Safety Shoe Allowance
McGehee, Joe	397040	21-Mar-19	115.00	Membership Renewal	Professional Engineers License Renewal
Moore, Rory	397251	28-Mar-19	188.00	Membership Renewal	CWEA membership renewal
Moore, Rory	397251	28-Mar-19	132.00	Certification Renewal	CWEA Collections Grade II Certificate Renewal
Moore, Rory	397251	28-Mar-19	186.42	Other(Misc)	Wireless device and battery case
Oldewage, Lars	396595	7-Mar-19	199.00	Membership Renewal	ACS membership renewal
Orozco, Gus	397252	28-Mar-19	188.00	Membership Renewal	CWEA membership renewal
Phuong, Sophia	397043	21-Mar-19	425.00	Membership Renewal	CalCPA membership renewal
Phuong, Sophia	397043	21-Mar-19	1,385.00	Registration	CalCPA Education Training Course
Schreck, Jeff	396846	14-Mar-19	135.74	Other(Misc)	Wireless case and charger
Spangenberg, Carl	396598	7-Mar-19	289.85	Lodging	AMTA 2019 Membrane Technology Conf., New Orleans, LA - February 26, 2019
Spangenberg, Carl	396598	7-Mar-19	289.85	Lodging	AMTA 2019 Membrane Technology Conf., New Orleans, LA - February 27, 2019
Torres, Richard	396600	7-Mar-19	200.00	Other(Misc)	Safety Shoe Allowance
Total Amount:			\$5,115.61		

April 22, 2019

Prepared by: C. Smithson/ Debra Pardee

Submitted by: Cheryl Clary

Approved by: Paul A. Cook

CONSENT CALENDAR

IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

SUMMARY:

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

BACKGROUND:

The proposed strategic measures document summarizes a number of operating performance, financial, customer and other key measures important to the ongoing operation of the District. These measures were selected and designed to provide a “snapshot” view of the measures that would be of interest to the Board.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

RECEIVE AND FILE.

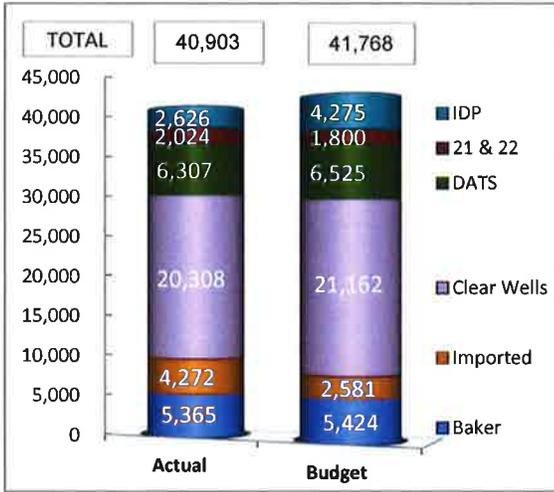
LIST OF EXHIBITS:

Exhibit “A” – March 2019 Strategic Measures

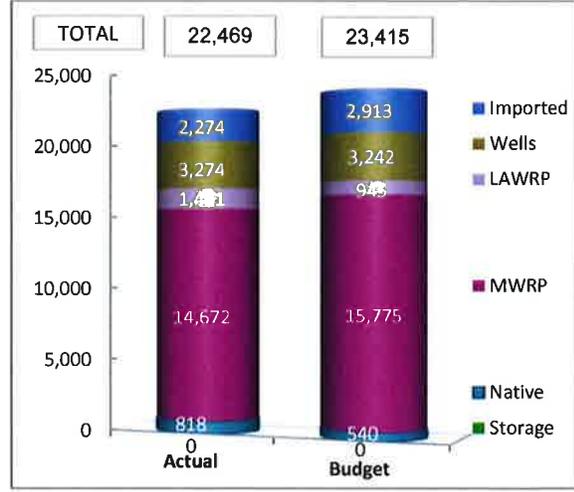
Exhibit "A"
IRVINE RANCH WATER DISTRICT

Operational Performance Measures
 Data as of March 31, 2019

Potable Water Production FYTD
 (AF)



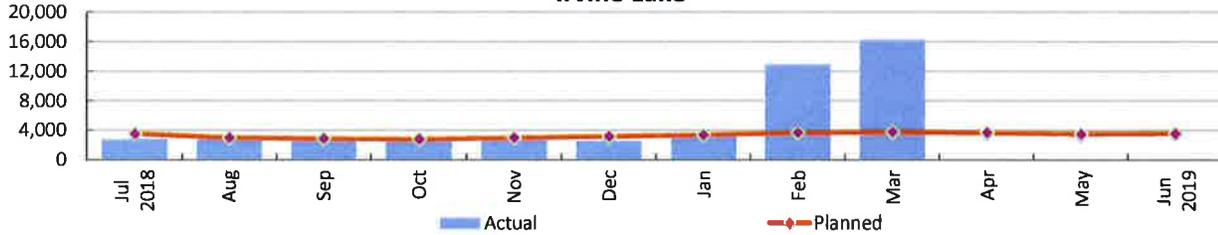
Non-Potable Water Production FYTD
 (AF)



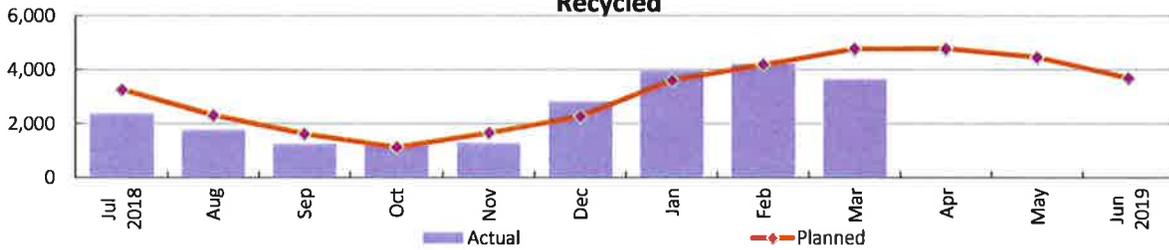
* Excess production moved to recycled reservoirs.

Non-Potable Reservoir Storage
 (AF)

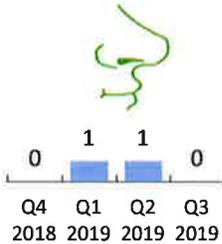
Irvine Lake



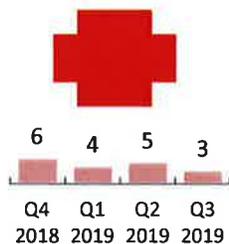
Recycled



Odor Complaints
 (FY by quarter)



OSHA Recordables
 Incidents



Regulatory Compliance
 Incidents

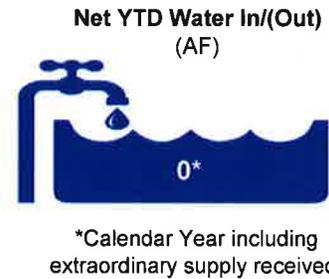
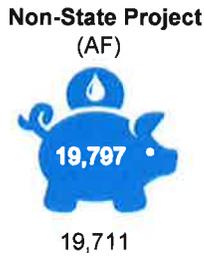
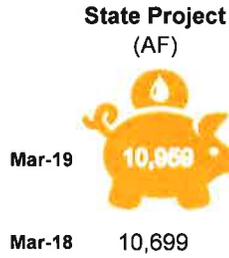
AQMD	1	0	0	0
Plants	0	0	0	0
Sewer Spills	1	2	1	1
	Q4 2018	Q1 2019	Q2 2019	Q3 2019

IRVINE RANCH WATER DISTRICT

Other Statistical Information

Data as of March 31, 2019

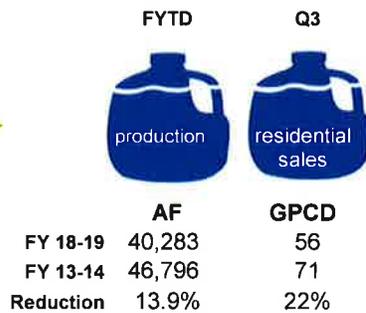
Banked Water



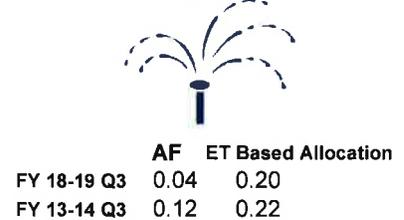
Certificates of Occupancies FYTD



Total Potable Water

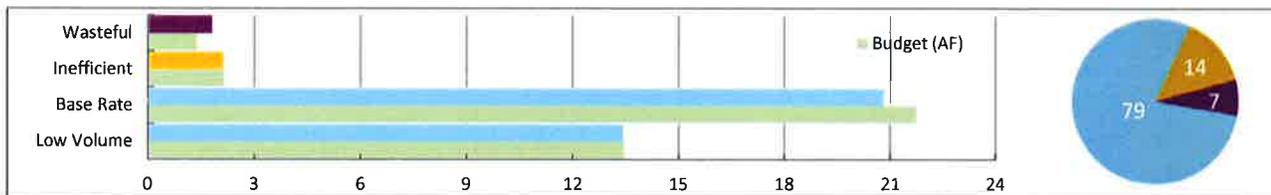


Acre-Feet Per Acre Irrigation

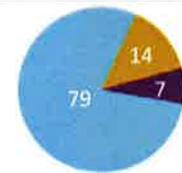


Potable Sales by Tier FYTD

(in thousands)

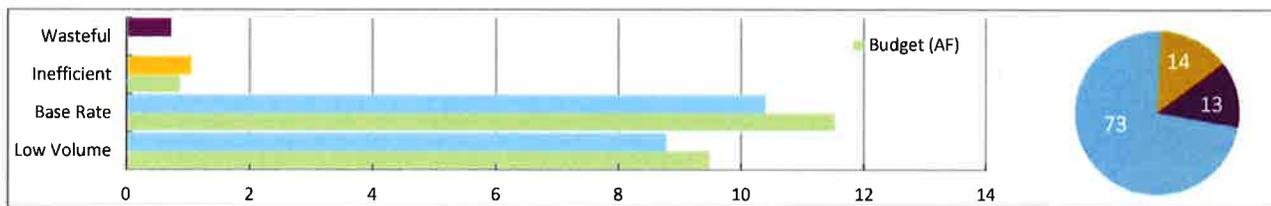


% of Customers by Tier

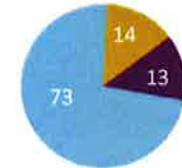


Non-Potable Sales by Tier FYTD

(in thousands)

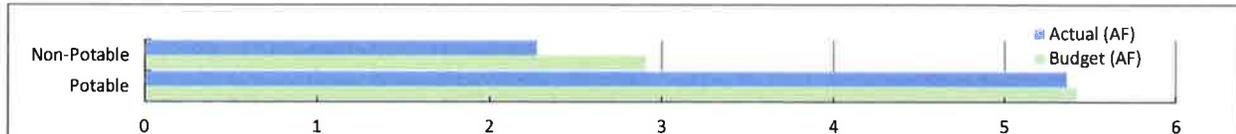


% of Customers by Tier



Imported Water Purchases FYTD

(in thousands)



Website Hits

(in thousands)



Customer Satisfaction Index**



** 12 month rolling average

April 22, 2019

Prepared by: B. Meserlian / R. Mykitta

Submitted by: W. Chambers

Approved by: Paul A. Cook 

CONSENT CALENDAR

ENTERPRISE ASSET MANAGEMENT LINEAR ASSET INTEGRATION SERVICES

SUMMARY:

Following the successful implementation of a new Enterprise Asset Management software (Maximo) in October 2017 and the completion of several add-on features in October 2018, staff is now focusing on the integration of IRWD's linear assets (pipelines, manholes, valves, service lines, etc.) into the Maximo asset registry. This integration would allow all departments to operate within a single work order system. To complete this integration, staff recommends that the Board authorize the General Manager to execute a sole source Professional Services Agreement with Spatial Wave for the Maximo Integration with GIS Assets/Mapplet Project in the amount of \$229,000.

BACKGROUND:

Enterprise Asset Management (EAM) refers to the life-cycle management of assets through its various states including planning, design, construction, commissioning, operation, maintenance, decommissioning, and replacement. An EAM system records the state and criticality of assets, identifies rehabilitation and replacement needs, and enhances the planning and scheduling of maintenance activities. Traditionally, utilities have relied on software tools known as Computerized Maintenance Management Systems (CMMS) to manage asset information and maintenance work orders. EAM systems offer such functions with a more holistic approach to asset management, providing life-cycle planning capabilities, reliability-centered maintenance scheduling, robust work-flow analysis, and ability to track Key Performance Indicators (KPIs).

Technological advances in EAM software, coupled with the performance of the District's legacy CMMS software, required a significant change to the District's asset management system. As a result, the District initiated the Enterprise Asset Management Software Implementation Project in 2011 with the goal of replacing its legacy CMMS tool with a best-in-class enterprise system. As part of this project IRWD purchased the IBM Maximo EAM software tool in December 2016, the District's vertical assets (treatment facilities, pump stations, reservoirs, etc.) were field inventoried and registered in Maximo by September 2017, and Maximo's Work and Asset Management module went live in October 2017. Maximo's scheduler module, fleet features, and building assets went live in October 2018.

Currently, all maintenance work performed by IRWD's Mechanical, Electrical, Facilities, and Fleet Services Departments are managed within the Maximo EAM system. By integrating all GIS-based linear assets into Maximo, maintenance work performed by Construction Services, Field Services, and Collections Systems would also reside in Maximo.

Consultant Selection:

Spatial Wave is a GIS-based software vendor that has supplied the District with a map viewer tool for several years, known as Mapplet. District staff utilizes the viewer to locate IRWD facilities on a map, and access pertinent asset information. Mapplet is currently linked to several other District tools and databases such as GIS (location database), Map Library (as-built database), and Oracle CC&B (customer database) to provide a single source of data and streamline information sharing. Based on this, the Mapplet product is best positioned to be the medium through which linear assets are viewed and used in Maximo. Accordingly, Spatial Wave is best positioned to integrate its Mapplet product into IRWD’s Maximo system.

Staff requested a proposal from Spatial Wave in February 2019, and conducted several scope sessions in March to finalize the integration plan and negotiate a fee. Spatial Wave’s scope of work, provided as Exhibit “A”, will generally include the following tasks:

1. Development of a linear asset development plan, which will require extensive collaboration between several departments to identify current/new business processes, integration points, and implementation requirements;
2. Integration of linear assets, which consists of the synchronization of potable, recycled, and sewer GIS data with Maximo;
3. Development of the Mapplet viewer within the Maximo system; and
4. Enabling all new improvements in the Maximo production environment, training staff, and providing Go-Live support at completion.

Staff recommends awarding a sole source Professional Services Agreement to Spatial Wave for an amount of \$229,000.

FISCAL IMPACTS:

The total cost associated with the retention of Spatial Wave’s services is attached as Exhibit “A”. The proposed agreement is based on a fixed price, with payments made based on the completion of key milestones. Projects 03566 and 03567 are included in the FY 2018-19 Capital Budget, and the existing budget is sufficient to fund the services described above.

Project No.	Current Budget	Addition <Reduction>	Total Budget
03566	\$2,682,100	\$-0-	\$2,682,100
03567	\$2,682,100	\$-0-	\$2,682,100
Total	\$5,364,200	\$-0-	\$5,364,200

ENVIRONMENTAL COMPLIANCE:

This activity is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15060 (c)(1) Preliminary Review. An activity is not subject to CEQA if the activity will not result in a direct reasonably foreseeable indirect physical change to the environment.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A SOLE SOURCE PROFESSIONAL SERVICES AGREEMENT WITH SPACIAL WAVE INC. FOR MAXIMO INTEGRATION WITH GIS ASSETS/MAPPLET IN THE AMOUNT OF \$229,000.

LIST OF EXHIBITS:

Exhibit "A" – Spatial Wave Proposal

EXHIBIT “A”



Irvine Ranch Water District

Maximo Integration with GIS Assets/Mapplet

April 9, 2019

INTRODUCTION

This Scope of Work provides the tasks, deliverables and costs for Spatial Wave (SW) to integrate IRWD's Maximo asset management system with GIS assets in Mapplet. The integration will provide a Mapplet tab in Maximo and integrate GIS assets into Maximo.

The following Scope of Work has detailed descriptions of proposed tasks; a detailed schedule; and resumes of the Spatial Wave team. As per IRWD's request, the schedule assumes project kick-off on May 1, 2019. Deliverables meeting IRWD's expectations, and Spatial Wave's assumptions, are both clearly identified to ensure smooth implementation.

PROJECT MANAGEMENT APPROACH

The project will be internally managed using Microsoft DevOps. SW will be responsible for submitting a bi-weekly progress report detailing past, present, and upcoming tasks and action items. The progress status meeting will be held every two weeks.

The project schedule will be revisited once the planning process is completed and the speed of the implementation team is established.

Our Project Manager/Principal in Charge, Ali Diba, will oversee facilitating and maintaining the overall progress of the project. He will communicate directly with the *Implementation Team Lead* and the *IT and Environment Support (System Administrator)*, who will in turn oversee the work of the rest of the Spatial Wave team.

SW will use Vibe for project document management. All documents generated during this project will be posted to Vibe. IRWD will provide access and training to SW staff on Vibe.

SCOPE OF WORK

TASK 1. DEVELOP LINEAR ASSET DEVELOPMENT PLAN

Step 1.1 Kick-off Meeting

Spatial Wave staff will meet with IRWD to discuss the Scope of Work; identify team members for IRWD and SW; begin scheduling workshops; review the overall schedule; and answer questions.

IRWD Responsibilities: Arrange and participate in the kick-off meeting.

Assumptions: None

Deliverables: None



Workshops

The following four workshops will be discussed at the Kick-Off Meeting.

Step 1.2 Workshop to Discuss Water and Recycled

Step 1.3 Workshop to Discuss Sewer

Step 1.4 Workshop to Discuss Mapplet Integration – This includes incorporation of the redlining tool within Mapplet and associated workflow.

Step 1.5 Workshop to Review Findings and to Validate GIS Changes to Support Integration

Agendas will be developed prior to each meeting. The purposes of the Workshops are to:

- A. *Determine whether Feature Classes (FCs) are complete or incomplete. Each FC will entail close examination pertinent to business process, and software functionality.*
- B. *Identify lifecycle and corresponding sync action*
- C. *Identify how an FC syncs (i.e., Asset and Location, or Location only). This will entail possible augments to existing business processes.*

IRWD Responsibilities: Arrange and participate in all workshops; make changes to GIS Feature Classes to support Maximo Integration.

Assumptions:

- SW will identify the changes to GIS Feature Classes to support Maximo Integration. SW will not be responsible for making these changes.
- SW will review and validate the changes in Step 1.5.
- SW has assumed up to 28 Feature Classes for Water, 28 for Recycled, and 20 for Sewer to be included.

Deliverables: Workshop minutes and action items for every workshop/meeting.

Step 1.6 Draft Integration Plan

IRWD Responsibilities: Review and provide feedback.

Assumptions: None

Deliverables:

- Integration Plan addressing:
 - Feature Classes to be included in the Integration.
 - GIS attributes in Maximo. Maximo Attributes in GIS.
 - Processing of life cycle changes from GIS into Maximo. Processing of life cycle changes from Maximo into GIS. Functional flow chart and supporting business process should be a portion of this integration plan. SW will create and/or update exhibits showing new/updated business processes for Linear Asset. SW will also update the Maximo requirements matrix (Excel based) based on Workshop Findings.
 - Mapplet displays and linked tables (e.g., select a valve and show completed/planned Maximo Work Orders for that valve).
 - Required system monitoring and statistics data as part of administrative interface.
 - Reporting of anomalies from the synchronization process.



- The plan will also include the findings related to CC&B for integrating meter/service line location data (SPID and/or customer address). The actual development of the CC&B Integration is not included in this scope of work.

Step 1.7 Final Integration Plan

IRWD Responsibilities: None

Assumptions: None

Deliverables: Final version based on feedback and modifications to the Draft.

TASK 2. INTEGRATE LINEAR ASSETS

This task will be implemented by the following steps:

- Step 2.1 *Develop Synchronization of Water Assets*
- Step 2.2 *Develop Synchronization of Recycled Assets*
- Step 2.3 *Develop Synchronization of Sewer Assets*
- Step 2.4 *Staging/UAT Installation*
- Step 2.5 *Documentation*

Note that in all cases above both Assets and Locations will be synchronized based on the plan developed in Task 1. The above tasks involve development of scripts for every FC to handle the lifecycle changes. For example, we will develop scripts for valves so new valves added in GIS are inserted as assets and locations into Maximo. The lifecycles will include new FC, remove FC in GIS, Decommission an asset in Maximo, etc.

IRWD Responsibilities: Ensure all conditions listed in Assumptions are met.

Assumptions:

- SW is assuming that we will install on the testing environment on one server referred to as Staging/UAT. This is the only server considered prior to installing on production.
- Environment: Maximo version 7.6.0.9, Oracle version 12C, Windows Server.
- Remote Access will be available. We understand that there may be a background check process conducted by IRWD's HR department to obtain access.

Deliverables:

- Recurring scripts for integration of Water, Recycled, and Sewer Assets.
- Installed scripts on the Staging/UAT server.
- Documentation of the scripts for each asset.

TASK 3. TESTING OF LINEAR ASSET INTEGRATION

This task will be implemented by the following steps:

- Step 3.1 *Develop Test Case, e.g., Replace Valve, Replace Line, etc.*
- Step 3.2 *Conduct Testing*
- Step 3.3 *Fix Synchronization Scripts*
- Step 3.4 *Develop Testing Report*

IRWD Responsibilities: Ensure all conditions listed in Assumptions are met.



Assumptions: Test Cases will cover all lifecycle changes of assets (e.g., replaced, abandoned, split, etc.). IRWD will conduct the UAT testing. SW will provide on-site support staff during the UAT testing.

Deliverables:

- Test plan/scripts for each feature class will include lifecycle changes testing (e.g., asset is replaced, or location is abandoned in place).
- Updated scripts based on findings from testing.
- Testing report showing the results of the tests with updated test scripts.
- All test plans and test results will be loaded in Vibe.

TASK 4. INTEGRATE MAPPLET

This task will be implemented by the following steps:

- Step 4.1 Develop Plan to Integrate Mapplet - Including Overall Testing Scenarios*
- Step 4.2 Integrate Mapplet into Maximo on Staging/UAT*
- Step 4.3 Conduct Testing and QA*
- Step 4.4 Document Test Results*

IRWD Responsibilities: Ensure agreement with all conditions listed in Assumptions. Conduct UAT Testing (with help from SW).

Assumptions:

- Mapplet Integration will include:
 - Show Asset on Map
 - Select Assets from Map
 - IRWD will be able to create WO from Mapplet (a link to WO tracking would be established) inside Maximo.
 - Show Work Orders (based on location or asset [TBD], plus all info on existing IRWD Mapplet) on Map.

Deliverables:

- Mapplet integrated into Maximo on Staging/UAT server.
- Test Mapplet connectivity to Maximo work orders.
- Test Mapplet connectivity to other data inside Maximo.
- Documentation of testing results.
- Testing report showing the results of the tests with updated test scripts.
- All test plans and test results will be loaded in Vibe.

TASK 5. LOAD PRODUCTION

This task will be implemented by the following steps, essentially mirroring Task 4:

- Step 5.1 Load Linear Assets into Production*
- Step 5.2 Integrate Mapplet into Production*
- Step 5.3 Conduct Testing and Verification*
- Step 5.4 Document containing the result of testing and verification*



IRWD Responsibilities: None

Assumptions: Repeating Task 4 process on Production.

Deliverables:

- Connect synchronization scripts between production version of Maximo and production version of SDE.
- Documentation of assets/location loaded into production version of Maximo.

TASK 6. CONDUCT TRAINING

This task will be implemented by the following steps, scheduling of which will be defined in August/September 2019:

Step 6.1 Training/Configuration Material

Step 6.2 Train GIS Staff

Step 6.3 Train Maximo Support Staff

Step 6.4 Train Users

IRWD Responsibilities: Ensure agreement with all conditions listed in Assumptions; coordinate training schedules, equipment availability, and classrooms/facilities.

Assumptions:

- Training will cover basics of configuration and detection of any issues.
- GIS Training will cover setup of new feature classes and running synchronization on demand.
- Training of Users will cover using Mapplet inside Maximo.
- IRWD will provide laptop computers connected to the test environment(s) for their various trainees and for Spatial Wave's trainer.

Deliverables:

- Training materials for GIS and Maximo administration staff.
- Training Material for end users using Mapplet inside Maximo.
- Three (3) classroom-based training sessions (average 4 hours duration each). The three training sessions will be divided into:
 - Session 1 - Train the Trainer. We anticipate training up to 10 trainers in this session. Five Laptops/Desktops connected to IRWD's intranet will be needed for every two trainees.
 - Sessions 2 and 3 – We anticipate training up to 20 users in these sessions. Ten Laptops/Desktops connected to IRWD's intranet will be needed for every two trainees.
- For each class, Spatial Wave will conduct an on-screen PowerPoint presentation and provide handouts with areas for notes.



TASK 7. GO LIVE

Step 7.1 Provide Go Live Support

Assumptions: The SW staff person will be located at IRWD Operations during this time.

Deliverables: Spatial Wave will provide onsite support for two (2) weeks after the Go Live date, from 6 am to 4:30 pm each day, excluding Fridays (IRWD day off). Arrangements may be made to cover the afternoon sessions in case 6 am is not feasible. However, we are budgeting for the 6 am – 4:30 pm daily during this week.

TASK 8. OPTIONAL TASKS NOT BUDGETED CURRENTLY

Step 8.1 Pre-Go Live - Upload of Construction WOs

This task will be used to load the existing construction work orders related to the newly loaded assets into Maximo. This task is not currently budgeted.

Step 8.2 Rolling Storerooms for Construction Trucks

This task will be used to create truck-based storerooms for keeping track of rolling inventory. This task is not currently budgeted.



PROJECT COST

Costs are based on labor rates approved by IRWD for the GIS On-Call Support Project. Staff classifications/titles have been modified to the requirements of this project.

Labor Rates

Classification	Staff Names	2018/2019 Labor Rates (\$/hr.)
Principal in Charge	Ali Diba, P.E., Ph.D.	\$240
Implementation Team Lead	Jack Thong	\$160
Mapplet inside Maximo Implementors	Nate Tran, Cameron Mortazavi	\$160
GIS Support / Synchronization Implementor	Haritha Vendra, Rahman Schionning	\$120
IT and Environment Support (System Admin)	Patrick Ryan	\$100
GIS Support / Integration Analyst	Azaad Hamidi	\$80
Administrator	--	\$60

Note that GIS Support/Synchronization is the key task involving the development of the Scripts based on the workflows identified in Task 1 and implemented in Task 2.

The Fee Schedule is on the following page.

PROJECT SCHEDULE AND DURATION

A detailed project schedule follows the Fee Schedule.

The duration of this project from kick-off to final deployment will be approximately six to seven months. This may be revised based on availability of IRWD staff and other project requirements, particularly during the Workshop and Training tasks.

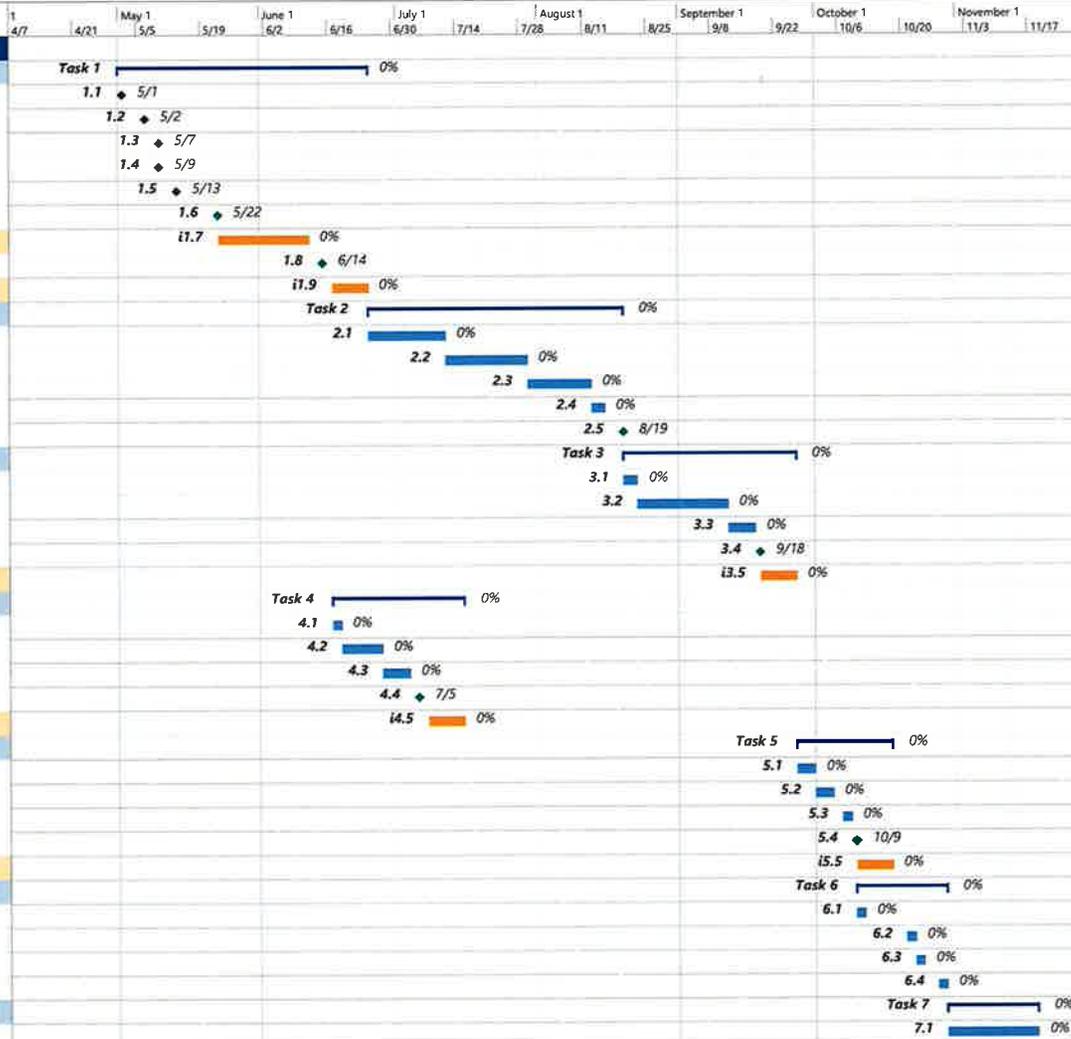


Fee Schedule

Labor Classes/Titles	Principal In Charge	Implementation Team Lead	Mapplet inside Maximo Implementors	GIS Support / Synchronization Implementor	IT & Environment Support	GIS Support / Integration Analyst		
Hourly Rates	\$240	\$160	\$160	\$120	\$100	\$80		
Staff Names	A. Diba	J. Thong	N. Tran C. Mortazavi	H. Vendra R. Schionning	P. Ryan	A. Hamidi	Cost	Hours
Task 1. Develop Linear Asset Development Plan	32	108	0	108	6	0	\$ 38,520	254
Step 1.1 Kick-off Meeting	4	8			6		\$ 2,840	18
Step 1.2 Workshop to Discuss Water and Recycled	4	16		16			\$ 5,440	36
Step 1.3 Workshop to Discuss Sewer	4	16		16			\$ 5,440	36
Step 1.4 Workshop to Discuss Mapplet Integration	2	4		4			\$ 1,600	10
Step 1.5 Workshop to Review Findings and to Validate GIS Changes to Support Integration	2	16		16			\$ 4,960	34
Step 1.6 Draft Integration Plan	8	32		40			\$ 11,840	80
Step 1.7 Final Integration Plan	8	16		16			\$ 6,400	40
Task 2. Integrate Linear Assets	18	48	136	184	24	132	\$ 68,800	542
Step 2.1 Develop Synchronization of Water Assets	4	8	40	62	8	48	\$ 20,720	170
Step 2.2 Develop Synchronization of Recycled Assets	4	8	40	62	8	48	\$ 20,720	170
Step 2.3 Develop Synchronization of Sewer Assets	4	8	40	44	8	36	\$ 17,600	140
Step 2.4 Staging/UAT Installation	4	16	16	8			\$ 7,040	44
Step 2.5 Documentation	2	8		8			\$ 2,720	18
Task 3. Testing of Linear Asset Integration	16	40	76	48	46	24	\$ 34,680	250
Step 3.1 Develop Test Case (e.g., Replace Valve, Replace Line, etc.)	4	4	16	8		8	\$ 5,760	40
Step 3.2 Conduct Testing	4	24	24	16	40	8	\$ 15,200	116
Step 3.3 Fix Synchronization Scripts	4	8	32	16	6	8	\$ 10,520	74
Step 3.4 Develop Testing Report	4	4	4	8			\$ 3,200	20
Task 4. Integrate Mapplet	20	60	76	24	10	8	\$ 31,080	198
Step 4.1 Develop Plan to Integrate Mapplet - Including Overall Testing Scenarios	8	16	4	4			\$ 5,600	32
Step 4.2 Integrate Mapplet into Maximo on Staging/UAT	4	24	60	8			\$ 15,360	96
Step 4.3 Conduct Testing and QA	4	16	8	4	10	8	\$ 6,920	50
Step 4.4 Document Test Results	4	4	4	8			\$ 3,200	20
Task 5. Load Production	14	30	38	40	6	0	\$ 19,640	128
Step 5.1 Load Linear Assets into Production	4	8	8	8	6		\$ 5,080	34
Step 5.2 Integrate Mapplet into Production	4	16	24	8			\$ 8,320	52
Step 5.3 Conduct Testing and Verification	4	4	4	16			\$ 4,160	28
Step 5.4 Document	2	2	2	8			\$ 2,080	14
Task 6. Conduct Training	32	32	0	28	14	0	\$ 17,560	106
Step 6.1 Training/Configuration Material	8	8		4	2		\$ 3,880	22
Step 6.2 Train GIS Staff	8	8		8	4		\$ 4,560	28
Step 6.3 Train Maximo Support Staff	8	8		8	4		\$ 4,560	28
Step 6.4 Train Users	8	8		8	4		\$ 4,560	28
Task 7. Go Live	4	64	24	24	8	0	\$ 18,720	124
Step 7.1 Provide Go Live Support	4	64	24	24	8		\$ 18,720	124
TOTALS	136	382	350	456	114	164	\$ 229,000	1,602

Project Schedule: Maximo Integration with GIS Assets/Mapplet

ID	Tasks & Sub-Tasks	Task & Sub-Task Descriptions	Duration	Start	Finish	1	4/7	4/21	May 1	5/5	5/19	June 1	6/2	6/16	July 1	6/30	7/14	August 1	7/28	8/11	8/25	September 1	9/8	9/22	October 1	10/6	10/20	November 1	11/3	11/17
0	0	Maximo Integration with GIS Assets/Mapplet	143 days	Wed 5/1/19	Mon 11/18/19																									
1	Task 1	Develop Linear Asset Development Plan	39 days	Wed 5/1/19	Mon 6/24/19																									
2	1.1	Kick-Off Meeting	1 day	Wed 5/1/19	Wed 5/1/19																									
3	1.2	Workshop to Discuss Water and Recycled	3 days	Thu 5/2/19	Mon 5/6/19																									
4	1.3	Workshop to Discuss Sewer	3 days	Tue 5/7/19	Thu 5/9/19																									
5	1.4	Workshop to Discuss Mapplet Integration	1 day	Thu 5/9/19	Thu 5/9/19																									
6	1.5	Workshop to Review Findings & Validate GIS Changes	1 day	Mon 5/13/19	Mon 5/13/19																									
7	1.6	Draft Integration Plan	7 days	Tue 5/14/19	Wed 5/22/19																									
8	i1.7	10-day Draft Integ. Plan Rvw. (+2 non-work Fri. +Memorial Day)	14 days	Thu 5/23/19	Tue 6/11/19																									
9	1.8	Final Integration Plan	3 days	Wed 6/12/19	Fri 6/14/19																									
10	i1.9	5-day Final Integration Plan Rvw. (+1 non-work Fri.)	6 days	Mon 6/17/19	Mon 6/24/19																									
11	Task 2	Integrate Linear Assets	39 days	Tue 6/25/19	Mon 8/19/19																									
12	2.1	Develop Synchronization of Water Assets	12 days	Tue 6/25/19	Thu 7/11/19																									
13	2.2	Develop Synchronization of Recycled Assets	12 days	Fri 7/12/19	Mon 7/29/19																									
14	2.3	Develop Synchronization of Sewer Assets	10 days	Tue 7/30/19	Mon 8/12/19																									
15	2.4	Staging/UAT Installation	3 days	Tue 8/13/19	Thu 8/15/19																									
16	2.5	Documentation	2 days	Fri 8/16/19	Mon 8/19/19																									
17	Task 3	Testing of Linear Asset Integration	28 days	Tue 8/20/19	Thu 9/26/19																									
18	3.1	Develop Test Case	3 days	Tue 8/20/19	Thu 8/22/19																									
19	3.2	Conduct Testing	14 days	Fri 8/23/19	Wed 9/11/19																									
20	3.3	Fix Synchronization Scripts	4 days	Thu 9/12/19	Tue 9/17/19																									
21	3.4	Develop Testing Report	1 day	Wed 9/18/19	Wed 9/18/19																									
22	i3.5	5-day Testing Report Rvw. (+1 non-work Fri.)	6 days	Thu 9/19/19	Thu 9/26/19																									
23	Task 4	Integrate Mapplet	20 days	Mon 6/17/19	Mon 7/15/19																									
24	4.1	Develop Plan to Integrate Mapplet (incl. Testing Scenarios)	2 days	Mon 6/17/19	Tue 6/18/19																									
25	4.2	Integrate Mapplet into Maximo on Staging/UAT	7 days	Wed 6/19/19	Thu 6/27/19																									
26	4.3	Conduct Testing and QA	4 days	Fri 6/28/19	Wed 7/3/19																									
27	4.4	Document Test Results	1 day	Fri 7/5/19	Fri 7/5/19																									
28	i4.5	5-day Test Results Review (+1 non-work Fri.)	6 days	Mon 7/8/19	Mon 7/15/19																									
29	Task 5	Load Production	15 days	Fri 9/27/19	Thu 10/17/19																									
30	5.1	Load Linear Assets into Production	2 days	Fri 9/27/19	Mon 9/30/19																									
31	5.2	Integrate Mapplet into Production	4 days	Tue 10/1/19	Fri 10/4/19																									
32	5.3	Conduct Testing and Verification	2 days	Mon 10/7/19	Tue 10/8/19																									
33	5.4	Document	1 day	Wed 10/9/19	Wed 10/9/19																									
34	i5.5	5-day Documentation Review (+1 non-work Fri.)	6 days	Thu 10/10/19	Thu 10/17/19																									
35	Task 6	Conduct Training	14 days	Thu 10/10/19	Tue 10/29/19																									
36	6.1	Training/Configuration Material	2 days	Thu 10/10/19	Fri 10/11/19																									
37	6.2	Train GIS Staff	2 days	Mon 10/21/19	Tue 10/22/19																									
38	6.3	Train Maximo Support Staff	2 days	Wed 10/23/19	Thu 10/24/19																									
39	6.4	Train Users	2 days	Mon 10/28/19	Tue 10/29/19																									
40	Task 7	Go Live	14 days	Wed 10/30/19	Mon 11/18/19																									
41	7.1	Provide Go Live Support	14 days	Wed 10/30/19	Mon 11/18/19																									



Tue 4/9/19
Percent Complete: 0%

Task Summary Sub-Task Meeting/Milestone



***SPATIAL WAVE
STAFF RESUMES***





Ali Diba | P.E., Ph.D.

Principal-In-Charge

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EXPERIENCE SUMMARY

Dr. Diba offers extensive experience in managing development of decision support and GIS enabled asset management systems.

Substantial experience in management of Geographic Information System (GIS) applications in the Microsoft Windows and Linux environment. Expert in distributed geospatially enabled database design and service oriented architecture computing. Designed and implemented several Geographic Information Systems to access large-scale databases in a service oriented architecture environment.

Lead architect in designing and developing graphical database interfaces using .NET, Python, Java, JavaScript, and Active Server Pages technologies for the inter/intranet applications. Architect of many integrated applications which deliver intelligent mapping solutions with backend database support. Fluent in .NET, Java, C, C#, SQL, Windows and UNIX shell command language and familiar with Computer Assisted Software Engineering (CASE) tools. Experienced agile technology implementer.

Worked with Object Oriented languages such as Java and C#, and hands-on experience with many database packages including MS SQL, ORACLE, Postgres, and SQLite. Extensive experience with many AMS and CMMS system including Maximo, Lucity, Infor/Hansen, and CityWorks.

KEY PROJECTS

Dr. Diba has worked with **over 50 agencies** both public and private in the California region in addressing all aspects of data management and systems integration in the GIS environment.

- **Newhall County Water District CMMS Conversion | AMS**

Directed a project to convert the Districts Asset Management System from an existing system to IBM Maximo. Conversion included loading assets, implementing purchasing and inventory, implementing preventive maintenance. The project was later expanded to include Mapplet inside Maximo and Field Mapplet Integration.

- **Elsinore Valley Municipal Water District**

Project manager and major contributing author of the EVMWD's integrated Maximo and CIS system for performing customer requests and asset management in an integrated and GIS enabled mobile solution.

- **Metropolitan Water District of Southern California | Enterprise GIS**

Helped to deploy the Metropolitan Water District (MWD) of Southern California enterprise GIS system. MWD, one of the world's largest water agencies, needed a user-friendly, Web-based enterprise GIS solution that allowed all employees to access spatial data easily and more efficiently. They selected Spatial Wave's Mapplet.NET, Mapplet Light and MapLibrary Software. As a result, there has been increased productivity across the organization by using on-demand GIS query, visualization, and mapping capabilities that quickly and efficiently generate high-stakes water resources management information.

- **City of Los Angeles Bureau of Sanitation | SANSTAR**

Project manager and implementer of the LA Bureau of Sanitation SANSTAR 311 ticket management system. The system includes a mobile solution developed by Spatial Wave that processes 3500 tickets a day, using more than 100 trucks and drivers.

- **Santa Clara Valley Water District**

Project manager and major contributing author SCVWD's Enterprise Asset Management Plan which included integration of workflows involving Maximo and the financial system.

- **City of Los Angeles Bureau of Sanitation | GIS Technology Assessment Study**

Project manager and major contributing author of the LA Bureau of Sanitation GIS Technology Assessment Study. This report produced a plan and budget to implement GIS throughout the organization.

- **South Coast Water District | Enterprise GIS Deployment and Integration**

Principal-in-Charge of the Enterprise GIS Deployment for South Coast Water District which involved integrations between GIS, CMMS, Document Management, Field GIS and Field Hardware. The work is currently ongoing as the District discovers additional areas of deployment and integrations. The Director of Public Works has presented a quantitative ROI (return on investment) at the AWWA conference in Sacramento in 2010.

- **Eastern Municipal Water District, (EGIS and Field)**

Key architect of EMWD's mobile work order management system with GIS deployment supporting many workflows including Underground Service Alerts, Meter Read and Rehabilitation, Valve Exercising and Redline processes.

- **Orange County Water District | WRMS Modernization**

Principal-in-Charge of the WRMS Oracle Modernization project for OCWD. WRMS Modernization included development of many spatially enabled user interfaces for input, export, and reporting of hydro geologic and water quality information related to OCWD's service area. This application uses state-of-the-art technology by integrating GIS and tabular data stored in WRMS.

- **Irvine Ranch Water District | Enterprise GIS**

Project manager assisting IRWD with maintaining and advancing their EGIS system. Spatial Wave also assisted Irvine Ranch Water District in upgrading from its Microsoft access-based plan check system to a system based on Spatial Wave's MapLibrary, therefore allowing the in-construction and as-built drawings to be tracked and retrieved, along with other information collected during the plan check process. PlanCheck from Spatial Wave helps manage the development of Water, Sewer, or other Infrastructure systems by tracking the process from plan submission, plan review, inspection, and GIS update of the as-built atlas. All groups involved have access to the plan and as-built information they need, including workflow information, and task assignments, as well as digital versions of the as-built drawings and in-construction plan sets.

- **Monterey County Water Resources Agency | Geographic Information System**

Project Manager for the successfully implemented Geographic Information System (GIS) using ArcInfo. This GIS is used for water resources management and related planning activities. Also developed a client/server-based system to monitor and manage groundwater extractions. The system uses MS Windows and an AIX-based ORACLE server and included tools developed in ArcInfo.

EDUCATION

- **Ph.D., Water Resources System Engineering** - University of California Los Angeles, 1997
- **Engineering Degree (Water Resources Systems Engineering)** - University of California - Los Angeles, June 1995

- ***M.S., Water Resources System Engineering*** - University of California Los Angeles, 1995
- ***B.S., Structural Engineering, University of California*** - Los Angeles, June 1979

TECHNICAL SKILLS

- **ESRI ArcGIS**
- **Microsoft Bing Maps**
- **Google Maps**
- **Oracle Spatial**
- **JAVA**
- **Unix/Linux**
- **GIS/Location based solutions**
- **Microsoft Project**



Jack Thong

Principal Software Engineer

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EXPERIENCE SUMMARY

Mr. Thong has over 17 years of experience in the creation of customized GIS solutions & Internet GIS systems, Document Management Systems, Business Automation Systems and Web based Application Development. His forte is innovative designs and approaches to complex problems combined with strong management skills.

Developed products and projects using ColdFusion Studio, Visual Studio .NET with special emphasis on GIS and database Integrations. Experience with developing Windows-Based applications DLLs, Plug-Ins, ArcGIS Extensions, ArcObjects, ArcIMS, and ArcGIS Server. Developed many custom GIS applications using .NET technology and ESRI's toolkit.

PROJECT EXPERIENCE

- **GIS & CMMS Integrations**

Lead implementer on several projects that involved integration of Enterprise GIS systems with Computerized Maintenance Management Systems (CMMS). These integrations involved workflows that were both in the office and out in the field. The most recent integrations of GIS with CMMS were for Maximo AMS which involved integration of Field Mapplet and Mapplet with Maximo.

- **MapLibrary**

Lead developer for DCSE/Spatial Wave's MapLibrary product. MapLibrary allows GIS users and service organizations to store, organize and easily retrieve GIS maps, CAD drawings, and scanned as-built drawings. MapLibrary includes a web-based user interface for submitting and searching for maps, and an administrator interface for customizing the metadata stored with the maps, constructing pre-defined queries, and configuring user profiles.

MapLibrary promotes maps as an enterprise asset and can save many hours that would otherwise be necessary to locate maps in file drawers and/or regenerate lost maps. MapLibrary includes an extension to ArcGIS 10.x that allows GIS specialists to post their maps into the library directly from the native GIS software.

For several years, MapLibrary was used by ESRI to catalog the maps submitted to the Map Gallery during its annual International User Conference. Spatial Wave customized

the application for ESRI to integrate seamlessly with their online map gallery registration system.

- **System Isolation & Shutdown Notification**

Member of Mapplet.NET developer team and helped to develop several Mapplet Extensions. System Isolation and Shutdown Notice Extension was one that eventually became a product. The System Isolation and Shutdown Notice extension enables system operators to perform network isolation analysis using system data stored in ESRI's geodatabase. The extension analyzes the geometric network component of the system geodatabase using graph algorithms to identify the key components affecting the shutdown.

- **Moffett Federal Airfield Website**

The MFA Website (MFAW) was created to meet the need for a centralized repository for uploading, storing, managing, retrieving, graphing and visualizing data and project documents. MFAW is built on a web-based relational database management system (RDBMS) and also provides Geographic Information System (GIS) capabilities.

MFAW is also integrated with a web-based project Content Management System (CMS). The MFAW was originally implemented using ASP, JSP, and ColdFusion but later was re-implemented using .NET technology. The consolidation of technology provides a significant improvement in performance, maintenance, and scalability.

EDUCATION

- **B.S. Information & Computer Science** – University of California, Irvine, CA, 1999

TECHNICAL SKILLS

- **Languages**

- .NET,
- Visual Basic
- Pascal,
- C++
- Java (JDK)
- Assembly Language
- MaxIIPlus

- **Databases**

- Oracle
- SQL Server
- MS Access

- **Operating Systems**

- Windows NT, 2000, 2003, 2008 server,
- MS Dos
- UNIX
- MacIntosh

- **Application Software**

- SQL Server Management Studio
- MS Visual Studio
- Office



Cameron Mortazavi

Senior Software Developer

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EXPERIENCE SUMMARY

Mr. Mortazavi offers eight years of experience developing Web-Based related applications for Spatial Wave and DCSE. Lead implementer on a number of projects that involved integration of Enterprise GIS systems with Computerized Maintenance Management Systems (CMMS).

KEY PROJECTS

- **Mapplet**

Mr. Mortazavi is familiar with the Mapplet functionality and integration capabilities. He has recently worked on integrating Mapplet with CC&B at IRWD.

- **Field Mapplet**

Mr. Mortazavi worked as the lead developer for DCSE/Spatial Wave's Field Mapplet product, an GIS-enabled mobile computing solution that integrates with an organization's tabular, document and GIS databased environments.

- **SanSTAR (LASAN)**

Mr. Mortazavi was key in the development of a comprehensive data management system that effectively tracked and managed the waste management programs and activities of Sanitation Department of the City of Los Angeles, improving the overall effectiveness of the City's mobility-related plans to streamline the City's 311 reports and requests.

- **Eastern Municipal Water District (EMWD)**

Mr. Mortazavi developed client-specific data reports EMWD's mobile GIS deployment supporting many workflows including Underground Service Alerts, Meter Read and Rehabilitation, Valve Exercising and Redline processes. In addition, EMWD has Spatial Wave's Mapplet Viewer solution to enable GIS view of data across departments.

- **Irvine Ranch Water District (IRWD)**

Spatial Wave also assisted Irvine Ranch Water District in upgrading from its Microsoft access-based plan check system to a system based on Spatial Wave's MapLibrary,

therefore allowing the in-construction and as-built drawings to be tracked and retrieved, along with other information collected during the plan check process.

Mr. Mortazavi developed a cloud-based data migration application for the maintenance and advancement of Irvine Ranch Water District's EGIS system, while aiding in the upgrade of a Microsoft access-based plan check system to a system based on Spatial Wave's MapLibrary, therefore allowing the in-construction and as-built drawings to be tracked and retrieved, along with other information collected during the plan check process.

EDUCATION

- **B.S. Finance | Minor in Computer Science** – *California State University Fullerton 2017*

TECHNICAL SKILLS

- **Languages:** [.NET | Visual Basic | C++ | Objective C | Swift | Javascript,| Java (JDK)]
- **Databases:** [SQL Server | MS Access]
- **Application Software:** [Office | MS Visual Studio | SQL Server Management Studio]



Nate Tran

Implementation Manager

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EXPERIENCE SUMMARY

Mr. Tran has over 15 years of experience in database design and development of web / window applications with C#, SQL server, Visual Studio dot Net, HTML and Java script. Proven experience in object-oriented design, distributed, multi-threaded applications, problem solving, complexity analysis, and debugging.

Experience in implementing many projects (web based and mobile applications) end to end implementation from scratch to production. Lead architect/developer for several major projects delivering many on time under tight schedules and have met or exceeded customer expectations.

PROJECT EXPERIENCE

- **Spatial Wave Software Suite Development**

Mr. Tran has been actively involved in integrating Spatial Wave products with IBM Maximo. He has used the Maximo APIs extensively to develop integrations between Spatial Wave products and Maximo. He used the Interface Tables API to implement GIS asset integration using Spatial Wave's GeoMerge. He used the REST API to integrate Field Mapplet Agent to process Maximo Work Orders in Field Mapplet.

- **MapLibrary**

Mr. Tran has been responsible for developing multiple aspects of Spatial Wave's MapLibrary product. MapLibrary allows GIS users and service organizations to store, organize and easily retrieve GIS maps, CAD drawings, and scanned as-built drawings. MapLibrary includes a web-based user interface for submitting and searching for maps, and an administrator interface for customizing the metadata stored with the maps, constructing pre-defined queries, and configuring user profiles. Was used by ESRI to catalog the maps submitted to the Map Gallery during its annual International User Conference. Spatial Wave customized the application for ESRI to integrate seamlessly with their online map gallery registration system.

- **Asset VTM Data Logger**

Responsible for developing multiple aspects of Spatial Wave's Asset VTM Data Logger, which allows users to easily manipulate with the data from various sensors. Data Logger provides users with ability to import the newly logged data, proceed with the data validation and manipulation, visualize different datasets, store data into the centralized database and investigate historical records.

EDUCATION

- **B.S. Information & Computer Science** – Biola University

TECHNICAL SKILLS

- **Languages**

- Python
- Visual Basic
- C++
- C#
- Javascript
- SQL

- **Databases**

- Oracle
- SQL Server
- MS Access

- **Operating Systems**

- Windows
- MS Dos
- UNIX

- **Application Software**

- SQL Server Management Studio
- MS Visual Studio
- Office



Haritha Vendra | P.E., GISP, M.S.

GIS Lead

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EXPERIENCE SUMMARY

Ms. Vendra has over 15 years of experience in GIS and hydraulic modeling. She is highly experienced in using GIS, CAD and modeling software for design and analysis.

She has analyzed data for more than 60 municipal agencies in the past several years for data conversion, migration and workflow designs. She has also presented several papers at conferences on Enterprise GIS Development.

KEY PROJECTS

▪ Irvine Ranch Water District GIS Conversion

Spatial Wave/DCSE has converted the Irvine Ranch Water District's GIS for basemap, potable water, wastewater, and recycled water from legacy GIS format and As-Builts to Geodatabase. Ms. Vendra was responsible for analyzing the District's existing data and developing a migration plan from coverage format to Geodatabase. She was also involved in the Geodatabase design. Ms. Vendra worked on developing specs for the District's editing tools. She assisted in the setup of the District's GIS environment in ArcSDE.

▪ Moulton Niguel Water District Asset Management Enabled GIS

Spatial Wave/DCSE developed an asset management enabled geodatabase for the Moulton Niguel Water District. As part of this project, DCSE also developed a robust synchronization tool that keeps the GIS data and the assets data in sync. Ms. Vendra was responsible for developing the specs of the tool, testing, and installation and training at client site.

▪ City of Simi Valley Water System GIS

Spatial Wave/DCSE assisted the City of Simi Valley with GIS data development for the water system. Ms. Vendra was responsible for conducting interactive geodatabase design sessions with the City staff. She was also responsible for data migration from shapefile format to the new geodatabase format. She provided training to the City staff who are now able to edit and maintain their GIS data in-house.

▪ City of Los Angeles – Bureau of Sanitation – Enterprise GIS

Spatial Wave/DCSE is assisting the City of Los Angeles – Bureau of Sanitation with upgrading their Enterprise Geographic Information System. Ms. Vendra was responsible for upgrading the geodatabase to the latest version of ArcGIS, and migrating the data. She also up the GIS services on the City's ArcGIS Server, and deployed them through apps on ArcGIS Online. Ms. Vendra set up access to Sewer CCTV Videos using web maps. She also provided Project documentation, training and update manual to the City for maintaining the apps in the future.

- **Camrosa Water District GIS**

Spatial Wave/DCSE converted Camrosa Water District's data to Geodatabase format, after a thorough needs assessment. Ms. Vendra was involved in the Geodatabase design and was responsible for migrating their GIS data from various CAD drawings to ArcSDE format for the District's water, wastewater, and recycled systems. She also worked on integrating the GIS data with Customer Service database. She has also installed the DCSE Edit tools at the District site and provided training to the staff.

- **City of Enid Potable Water Distribution System Hydraulic Model**

Ms. Vendra developed an all-mains hydraulic model for the City of Enid, OK. This project involves linking of GPS meter locations with the customer billing data, and developing the demands for the hydraulic model. The hydraulic model has been developed using GIS and has been calibrated using fire flow test data. Ms. Vendra also provided training and documentation on model updates.

- **City of Lomita Water Master Plan Support**

Ms. Vendra provided Master Plan support for City of Lomita that was being developed by KEC Engineers. Ms. Vendra worked on developing a hydraulic model based on the City's updated GIS, and allocated demands using billing system data, and filled in operational settings after coordinating with the City's operations staff. The model was calibrated to the fire flow test data, and analyzed to identify system improvements.

- **San Gabriel Valley Water Company – Potable System Water Model for El Monte**

Spatial Wave/DCSE developed an all-mains hydraulic model for SGVWC's Potable Water System in the El Monte area. Ms. Vendra was responsible for managing the project, model development, scenario analysis and reporting. The model highlights include over 30 plants with several pressure zones and sub-zones. Data for this project was gathered from several sources including several workshops with their operations staff to ensure every plant was modeled right. In addition, a detailed set of summer and winter controls were developed in order to simulate average winter day and average summer day. Ms. Vendra built the model, assigned demands from billing system, and calibrated the model for steady state and EPS. She also provided SGVWC with documentation on the project, and maintenance procedures to be used by the in-house modeling staff.

- **Fontana Water Company Master Plan Support**

Spatial Wave/DCSE assisted Fontana Water Company in developing the Water System Master Plan. Ms. Vendra migrated the water system master plan to InfoWater format (from H2ONet) and updated to reflect the latest system. She also updated the model to

reflect the latest pressure zones, operating conditions, and demands. Demand allocation was based on land use since the meter data was not available. The model was calibrated to fire flow reads from field, and a system capacity analysis was performed in order to identify needed improvements in the system.

- **Yorba Linda Water District**

Spatial Wave/DCSE has recently completed the conversion of water and wastewater data for Yorba Linda Water District. Ms. Vendra worked on the Geodatabase design, and coordinated the data conversion efforts. Ms. Vendra worked on establishing the standards for the project with the District feedback on the pilot area. She also performed a detailed quality control on the final converted data to ensure network connectivity, and correct pressure zone allocation.

- **Contra Costa Water District**

Spatial Wave/DCSE has converted the Contra Costa Water District's water system data in Micro station drawing format to GIS. Ms. Vendra worked on the District's Geodatabase design, and coordinated the data conversion efforts. Ms. Vendra also coordinated on communications for the project, by ensuring timely resolution of anomalies during conversion.

- **Valencia Water Company**

Spatial Wave/DCSE has converted the Valencia Water Company's water system data to Geodatabase format. Ms. Vendra coordinated the Geodatabase design and data conversion efforts. She was also responsible for scanning as-builts and linking them to GIS.

- **City of Glendale Water System GIS**

Spatial Wave/DCSE has converted the City of Glendale's water system from Shapefile format to Enterprise Geodatabase. Ms. Vendra was involved in conducting a Needs Assessment for the City. She worked on the Geodatabase design, and composed a migration plan for the data. Further to the migration of data to Geodatabase format, Ms. Vendra coordinated the efforts to update the City's GIS from various data sources (redlines, As-Builts, and work orders) She was responsible for printing 30 Atlas books at 250 scale for the City. Ms. Vendra has drafted a workflow for the City staff to update their Geodatabase in a multi-versioned environment.

EDUCATION

- **M.S., Civil Engineering - Water Resources**, University of Texas at Arlington – Arlington, December 2001
- **B.S., Civil Engineering** - Osmania University (Hyderabad, India) - May 1996

Certifications

- **InfoWater Water Distribution Modeling** (MWH Soft Inc.)

- **Master Modeler in Storm Sewer Design** (Haestad Methods Inc.)

- **Civil Engineer, California** #C 85404
- **GISP Certificate** #90290



Rahman Schionning

Senior GIS Analyst

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EXPERIENCE SUMMARY

As a lateral and analytical thinker who is quick to learn, Rahman Schionning possesses a strong work ethic with a priority for honesty and punctuality. Extensive experience with building and maintaining GIS databases, including advanced technical work providing technical support for GIS project implementation and operation, creating, testing and enhancing GIS applications, developing and administering web-based GIS applications, preparing GIS datasets, maps, database reports and specialized queries, developing and administering permitting, address and zoning databases.

PROJECT EXPERIENCE

▪ **Senior GIS Analyst Spatial Wave/DCSE**

Mr. Schionning is responsible for Geodatabase editing, Geospatial Analysis automating spatial analyses, and coordinating water utility projects and custom application designs with project managers for multiple client agencies. He is familiar with GeoMerge and set this tool up to migrate data updates between different Geodatabases.

▪ **GIS Officer: Atherton Tablelands Geographic Information Services (ATGIS)**

Participated in specific ATGIS projects as directed by the GIS Coordinator or their appointed delegate

- Provide standard and custom geospatial analysis and cartography
- Provide for town planning team's cartographic needs for new town plan
- Plan and participate in field data collection exercises
- Assist in the ongoing maintenance of Council and ATGIS datasets and accompanying metadata
- Prepare, mosaic and analyze spatial imagery using GIS software including MapInfo, ESRI and ERDAS systems
- Create workflows and formulate LiDAR data analysis techniques
- Present GIS training courses to other organization staff and give on call technical support
- Present advancements to organization staff and external clients for consideration in their workflows

- Research new software for improvement of workflows
- Develop web-map products
- Develop workflows with python scripting
- Comply with relevant standards with regard to spatial output
- Ground-truthing points of interest and road alignment for street directories.
- Other responsibilities such as testing and setting up equipment
- Fulfil obligations and responsibilities of this position as identified in the Tablelands Regional Council's "Workplace Health and Safety Manual"

EDUCATION

- **James Cook University** - Class of 2012
- **B.S. Spatial Science** – James Cook University (Cairns Campus)

TECHNICAL SKILLS

- MYOB; Arcgis/Mapinfo/Sagagis/Quantumgis – (Database Queries/Management)
- Raster & Vector Processes
- Coordinate Conversion
- GPS Data Importing
- Filtering
- DEM Splicing & Kriging
- Image & Map Processing
- Cartography
- ENVI/ERDAS Imagine - (Raster Spectral Analysis, Mosaicing, Band-Math, Ortho-Geo-Rectification etc.)
- ANZLIC Entry Tool – Metadata Editing/Creating; Adobe CS6; Autocad; Rhinoceros; Countless Other Programs & Utilities
- Windows XP, VISTA, 7, Mac OS X, Ubuntu, Hardware Replacement, PC Building, Data Recovery, Disk Partitioning, Data Management, Troubleshooting



Patrick Ryan

Implementation Manager

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EXPERIENCE SUMMARY

Mr. Ryan has experience assisting clients in the implementation of Spatial Wave's software solutions, as well as being a reporting and support specialist at Spatial Wave and DCSE. He has experience programming with C++, Python, Java, Javascript and SQL and is familiar with technologies and frameworks Visual Studios, Linux, SQL Server, Node.JS and .NET. Proficient in mentoring, problem solving, coding, debugging, and programming concepts

PROJECT EXPERIENCE

▪ Technical Implementation Manager | Spatial Wave & DCSE

Lead technical implementer on a number of projects that involved integration of Enterprise GIS systems with Computerized Maintenance Management Systems (CMMS). Provided functional and technical expertise for various implementations between Spatial Wave and clients, as well as post-implementation and onsite support

- Evaluates client needs, develops configurations that support business processes
- Defines and executes on delivery and implementation plans
- Tests and troubleshoots final system setups
- Provides training and end-user support during and after the implementation process
- Develops and manages support documentation for a centralized knowledgebase
- Configure new product installations and custom product configurations
- Remotely analyze and resolve issues relating to product suite

EDUCATION

- **B.S. Information & Computer Science** – California State University, Fullerton CA - 2017
- **B.A. Business Administration** – California State University, Fullerton CA - 2015

TECHNICAL SKILLS

- **Languages**
 - Python
 - Visual Basic
 - C++
 - C#
 - Java (JDK)
 - Javascript
 - SQL
- **Databases**
 - Oracle
 - SQL Server
 - MS Access
- **Operating Systems**
 - Windows NT, 2000, 2003, 2008 server,
 - MS Dos
 - UNIX
 - MacIntosh
- **Application Software**
 - SQL Server Management Studio
 - MS Visual Studio
 - Office



Azaad Hamidi

Technical Support Specialist

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EXPERIENCE SUMMARY

Mr. Hamidi has 3 years of experience working as a support specialist at Spatial Wave and DCSE, as well as assisting clients in the implementation of Spatial Wave's software solutions. His experience includes the debugging and testing of web applications, SSRS, developing reports, MS SQL development, writing Stored Procedure and developing and maintenance of windows applications related to Geographic Information Systems.

PROJECT EXPERIENCE

▪ Technical Support Specialist | Spatial Wave & DCSE

Technical Support Specialist on several projects that involved:

- IT Support relating to technical issues involving Spatial Wave's core product business applications and systems; as well as services for multiple client's technology environments.
- Remote monitoring and management system alerts and notifications, and respond accordingly through service tickets
- System documentation maintenance and review
- Configure new product installations and custom product configurations
- Executing on delivery and implementation plans
- Testing and troubleshooting final system setups
- Providing training and end-user support during and after client product suite implementation processes
- Remotely analyzing and resolving issues relating to product suite. .

Lead technical implementer on several projects that involved integration of Enterprise GIS systems with Computerized Maintenance Management Systems (CMMS).

Provided functional and technical expertise for various implementations between Spatial Wave and clients, as well as post-implementation and onsite support

- **Field Mapplet**

Mr. Hamidi worked as lead testing and implementation of DCSE/Spatial Wave's Field Mapplet product, an GIS-enabled mobile computing solution that integrates with an organization's tabular, document and GIS databased environments.

- **SanSTAR (LASAN)**

Mr. Hamidi was key in testing and reporting of a comprehensive data management system that effectively tracked and managed the waste management programs and activities of Sanitation Department of the City of Los Angeles, improving the overall effectiveness of the City's mobility-related plans to streamline the City's 311 reports and requests.

- **Maximo Linear Asset Synchronization**

Mr. Hamidi worked as lead implementation and custom configuration of Spatial Wave automated synchronization tool GeoMerge, to establish Linear Asset Synchronization between Maximo and GIS-enabled solutions and GIS databased environments.

EDUCATION

- **B.S. Computer Science** – California State University San Marcos (class of 2020)

TECHNICAL SKILLS

- **Languages:** [C++ | Javascript]
- **Databases:** [SQL Server | MS Access]
- **Application Software:** [Office | MS Visual Studio | SQL Server Management Studio]

April 22, 2019

Prepared by: R. Mori

Submitted by: K. Burton *KLB*

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

CONSENT CALENDAR

SERRANO CREEK OUTFALL STRUCTURE JOINT DEVELOPMENT AND REIMBURSEMENT AGREEMENT

SUMMARY:

IRWD constructed the Serrano Creek Outfall Structure (Outfall) in 2016 as part of the Baker Plant project to accommodate potential emergency overflows from the Plant. The Outfall is located on property owned by Orange County Parks (OC Parks) directly adjacent to the Baker Plant and Serrano Creek. To minimize impact on Serrano Creek and the surrounding natural environment, the Outfall was designed to also accommodate the anticipated storm drain flows from the Serrano Summit Development (Development) to eliminate the need for a second outfall structure dedicated to the Development. IRWD obtained an encroachment permit and easement from OC Parks for construction of the Outfall. The easement includes a requirement for the residential developer, Lennar Homes of California, Inc., to obtain a separate permit and easement from OC Parks prior to connection of the Development to the Outfall. OC Parks, who initially proposed the additional permitting requirement, recently determined that IRWD, as the owner of the Outfall and named party on the easement, will be required to be the applicant for the permitting efforts associated with Lennar's connection to the Outfall. As such, staff and legal counsel developed a Joint Development and Reimbursement Agreement (Agreement) between IRWD and Lennar to define the respective obligations of each party relative to the permitting process, environmental compliance activities, design and construction of improvements, monitoring requirements, and cost-sharing responsibilities. Staff recommends that the Board authorize the General Manager to execute the Agreement, subject to non-substantive changes.

BACKGROUND:

IRWD constructed the Outfall in 2016 as part of the Baker Plant project to accommodate potential emergency overflows from the Plant. The Outfall is located on property owned by OC Parks directly adjacent to the Baker Plant and Serrano Creek. To minimize impact on Serrano Creek and the surrounding natural environment, the Outfall was designed to also accommodate the anticipated storm drain flows from the Serrano Summit Development to eliminate the need for a second outfall structure dedicated to the Development. Since both the Baker Plant and the Development would benefit from the Outfall, all costs associated with its construction were shared 50%/50% between the Baker Plant and Serrano Summit projects.

IRWD obtained an encroachment permit and easement from OC Parks for construction of the Outfall. The easement includes a requirement for the Serrano Summit residential developer, Lennar, to obtain a separate permit and easement from OC Parks prior to connection of the Development to the Outfall. OC Parks, who initially proposed the additional permitting requirement, recently determined that IRWD, as the owner of the Outfall and named party on the easement, will be required to be the applicant for the permitting efforts associated with Lennar's connection to the Outfall.

Since that determination, IRWD, Lennar, OC Parks, and the County of Orange have held several discussions and meetings to discuss the requirements for Lennar's connection to the Outfall. Through those discussions, the County and OC Parks have expressed concerns associated with all future discharges through the Outfall, including those from the Baker Plant. To address those concerns and to ensure that erosion from future discharges is minimized to the greatest extent possible, Lennar and IRWD are working together to develop and implement additional improvements at the Outfall that will address and satisfy the requirements and concerns of both OC Parks and the County.

Joint Development and Reimbursement Agreement:

Staff and Lennar jointly developed a term sheet relative to the process associated with Lennar's connection to the Outfall. IRWD's legal counsel led the effort to draft the formal Agreement between IRWD and Lennar, which is attached as Exhibit "A". A summary of the primary terms included in the Agreement is provided below.

- Lennar will lead all efforts associated with the permitting process including, but not limited to, bid solicitation, consultant and contractor selection, contracting with consultants and contractors, California Environmental Quality Act (CEQA) activities, jurisdictional permitting and related approvals, preparation of cost estimates, preparation and processing of improvement plans, and construction of improvements;
- IRWD will review, comment, and approve all project documentation prior to Lennar submitting such documentation to OC Parks, the County, and any other applicable authority having jurisdiction over the work;
- Lennar will be responsible for obtaining all necessary permits and approvals from the County and any other applicable authority having jurisdiction of the work;
- Lennar will be responsible for restoring any habitat impacted by construction of the proposed improvements;
- IRWD will serve as the applicant relative to all permit applications and CEQA documentation. Lennar will be responsible for preparing all permit applications and CEQA documentation on behalf of IRWD;
- IRWD will be responsible for any monitoring and reporting obligations, including those from jurisdictional permits, resulting from the issuance of any permits associated with the proposed improvements. IRWD's monitoring responsibilities will be limited to the Outfall tributary only and will not extend into Serrano Creek;
- Lennar will be responsible for obtaining additional easement from OC Parks, as required, to accommodate the proposed improvements;
- IRWD will allow Lennar to connect to the Outfall when IRWD determines that OC Parks

approves of the proposed improvement concepts and/or plans and upon recordation of the replacement easement;

- Lennar will post payment and performance bonds in the amount of \$500,000 in favor of IRWD to ensure Lennar completes construction of the proposed improvements;
- IRWD and Lennar will share all out-of-pocket costs incurred from March 1, 2019 on a 50%/50% basis. Lennar and IRWD will each be responsible for its own internal staff costs;
- Lennar will transfer, assign, and convey any and all right, title, and interest Lennar may have in the proposed improvements to IRWD upon completion of construction; and
- Lennar and IRWD will be responsible, on a 50%/50% basis, for any post-construction costs associated with additional improvements at the Outfall requested by OC Parks or by any other applicable authority having jurisdiction over the work during the monitoring period established by OC Parks. Staff anticipates that OC Parks will establish a 10-year monitoring period.

Staff recommends that the Board authorize the General Manager to execute the Agreement between IRWD and Lennar, subject to non-substantive changes.

FISCAL IMPACTS:

Due to the preliminary status of the work, the total project cost has yet to be defined. Staff estimates that the total project cost will range between \$500,000 and \$1,000,000. Since the District is responsible for 50% of the total project cost, staff estimates that the District's share of the cost will range between \$250,000 and \$500,000. The costs will be funded by the net proceeds from the Serrano Summit land sale.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE JOINT DEVELOPMENT AND REIMBURSEMENT AGREEMENT BETWEEN IRWD AND LENNAR HOMES OF CALIFORNIA, SUBJECT TO NON-SUBSTANTIVE CHANGES.

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LIST OF EXHIBITS:

Exhibit "A" – Joint Development and Reimbursement Agreement

JOINT DEVELOPMENT AND REIMBURSEMENT AGREEMENT

(Serrano Creek Outfall Structure)

THIS JOINT DEVELOPMENT AND REIMBURSEMENT AGREEMENT (this "**Agreement**") is entered into effective as of _____, 2019 (the "**Effective Date**"), by and among IRVINE RANCH WATER DISTRICT, a California water district ("**IRWD**") and LENNAR HOMES OF CALIFORNIA, INC., a California corporation ("**Lennar**"). IRWD and Lennar may be individually referred to in this Agreement as a "**Party**" and collectively as the "**Parties**."

RECITALS

A. Prior to the Effective Date of this Agreement, IRWD and Lennar entered into that certain Purchase and Sale Agreement and Escrow Instructions dated August 28, 2017 (the "**Purchase Agreement**"), pursuant to which IRWD conveyed to Lennar that certain real property located in the City of Lake Forest ("**City**"), County of Orange ("**County**"), State of California more particularly described in **Exhibit "1"** attached hereto (the "**Lennar Property**") by Grant Deed dated September 1, 2017 and recorded in the Official Records of Orange County, California (the "**Official Records**") on September 1, 2017 as Instrument Number 2017000374689 (the "**Grant Deed**").

B. IRWD is the owner of that certain real property located adjacent to the Lennar Property, as more particularly described in **Exhibit "2"** attached hereto (the "**IRWD Property**"). The IRWD Property and the Lennar Property are referred to collectively herein as the "**Properties**."

C. Pursuant to the terms of the Grant Deed, IRWD reserved in its favor and for the benefit of the IRWD Property the Reserved Access and Utilities Easement (as defined in the Grant Deed) over that portion of the Lennar Property identified as Parcel 3 in Exhibit A to the Grant Deed ("**Parcel 3**"). Parcel 3 is shown on the plat map attached as Appendix A to **Exhibit "2"**. Prior to the Effective Date of this Agreement, IRWD constructed and currently operates a storm drain junction structure and related improvements on Parcel 3 (the "**Storm Drain Improvements**") pursuant to the Reserved Access and Utilities Easement.

D. Lennar intends to develop the Lennar Property with approximately six hundred eight (608) residential dwelling units, together with associated streets, landscaping and other improvements (the "**Lennar Project**"). IRWD is currently operating a water treatment facility commonly known as the "Baker Water Treatment Plant" on portions of the IRWD Property.

E. County previously granted to IRWD that certain Easement Deed for Pipeline and Outlet Structure within Serrano Creek Trail and PM 85-108 dated October 1, 2013 and recorded in the Official Records on November 6, 2013 as Instrument Number 2013000618220 (the "**Existing Easement**"). Pursuant to the Existing Easement, IRWD constructed and currently operates an outfall structure and related Facilities (as defined in the Existing Easement) (the "**Existing Facilities**"). The Storm Drain Improvements tie in to the Existing Facilities.

F. Lennar desires to tie its storm drain improvements for the Lennar Project into the Existing Facilities, in order to discharge stormwater from the Lennar Property into Serrano Creek. Use of the Existing Facilities by Lennar and IRWD will require the design, planning, construction and expansion of the Existing Facilities located within and/or adjacent to portions of the Serrano Creek Trail, in the area shown on **Exhibit “3”** attached hereto (collectively, the **“Project Improvements”**). The Project Improvements include the preparation of all related plans and specifications (collectively, the **“Improvement Plans”**) and the performance of all related construction work (collectively, the **“Work”**), including without limitation all such other work and improvements as may be required by the City, County, the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers and/or any other governmental or quasi-governmental entities or agencies (collectively, the **“Governmental Authorities”**).

G. The Parties intend by this Agreement to set forth the terms and conditions pursuant to which Lennar will be permitted to connect its stormwater facilities for the Lennar Project to the Storm Drain Improvements and/or to the Existing Facilities, as modified by the Project Improvements. The Parties also intend by this Agreement that Lennar shall cause the Improvement Plans to be prepared and oversee and cause the Work to be performed, and to provide for the Parties’ financial obligations to each other with respect to the Project Improvements and other matters, all in accordance with the terms and conditions herein.

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, IRWD and Lennar do hereby agree as follows:

1. BUDGET AND CONTRACTING PROCESS.

1.1 Bid Process; Bid Solicitation, Selection and Contracting. Lennar shall solicit bids from qualified consultants or contractors for each professional service or building trade for contracts for services to prepare the Improvement Plans and perform the Work (each, a **“Consultant”** or **“Contractor,”** as applicable; and, generically, a hired Consultant or Contractor shall be referred to as a **“Project Professional”**). All Project Professionals shall be subject to approval by IRWD, which approval shall not be unreasonably withheld, conditioned or delayed. For all contracts for any portion of the services or Work that the Parties anticipate will exceed \$50,000, Lennar shall obtain bids from at least three (3) Consultants or Contractors, unless IRWD agrees in writing to accept less than three (3) bids. Lennar shall keep IRWD reasonably informed of the bids received from the applicable prospective Project Professionals.

1.1.1 Selection of Project Professionals. Lennar shall identify which bids are at the lowest cost made by Consultants or Contractors (the **“Lowest Acceptable Bid”**), and make recommendations to IRWD as to which Consultants and Contractors should be accepted. If Lennar recommends a bid other than the Lowest Acceptable Bid, Lennar shall describe to IRWD the rationale for its recommendation. IRWD and Lennar shall then jointly identify and accept the Project Professionals to whom contracts shall be awarded. The bid made or negotiated by any Consultant or Contractor to whom a contract is awarded shall be referred to herein as an **“Accepted Bid.”**

1.1.2 Contracts. Contracts with the Consultant(s) preparing the Improvement Plans and the Contractor(s) performing the Work pursuant to Accepted Bids (each a **“Contract”**)

shall be written on Lennar's standard form (with such modifications as may be requested by the Consultants and/or Contractors and approved by Lennar in its reasonable discretion), which Lennar shall cause to be updated to include the following provisions (the "**Required Contract Provisions**"): (a) Lennar and IRWD shall each be co-owners of the work product created under any Contract with a Consultant and co-beneficiaries of all warranties, guaranties, indemnities and similar rights and remedies under all Contracts; (b) IRWD shall be added as an additional insured under all insurance policies required to be maintained pursuant to such Contracts as and to the extent required pursuant to the insurance obtained as described in Section 4.1 below; and (c) the Contracts shall expressly recognize the rights of IRWD to exercise IRWD's Self-Help Right (as defined in Section 3.4 below). Lennar shall deliver to IRWD copies of all fully-executed Contracts together with a certificate of insurance and additional insured endorsement in compliance with the terms of this Section. Prior to the Effective Date, Lennar entered into a Contract with Michael Baker International (the "**MBI Contract**") to perform certain design and engineering work in preparing certain of the applicable Improvement Plans. IRWD hereby approves the MBI Contract. Lennar shall use commercially reasonable efforts to cause the MBI Contract to be modified to incorporate the Required Contract Provisions therein.

1.2 Budget. After completion of the bid process set forth in Section 1.1 above, Lennar shall prepare for IRWD's review and approval a fully-completed draft Budget for the Project Improvements based upon the Accepted Bids and other cost information known by Lennar not later than fifteen (15) days prior to the scheduled commencement of the Work. The draft Budget shall set forth, among other things, the estimated costs to be incurred in the performance of the Work in conformity with the approved Improvement Plans, and will include a budget contingency line item equal to ten percent (10%) of the aggregate Budget. Any amounts in the budget contingency line item of the Budget may be used to offset a shortfall in another line item in the Budget so long as the budget contingency line item has not been exhausted and the overall Budget is not exceeded. Lennar shall provide reasonable advance written notification to IRWD when an allocation of the budget contingency is being applied against a cost exceedance in a separate line item. IRWD shall have a period of ten (10) business days after its receipt of the draft Budget to approve or disapprove the same in its reasonable discretion. The failure of IRWD to approve or disapprove the draft Budget within such ten (10) business day period shall be deemed approval by IRWD. The Parties shall negotiate in good faith to resolve any disagreements related to the draft Budget. At such time as the Parties have resolved all differences (if any) concerning the draft Budget, it, and all subsequent amendments thereto made in accordance with the terms hereof, shall constitute the final "**Budget**" for all purposes under this Agreement.

1.3 Revisions and Change Orders. Lennar agrees that if Lennar requests or initiates any revision to the Improvement Plans, the Budget and/or the Work which would increase the cost of the Project Improvements, such additional costs shall be borne solely by Lennar, unless the revision is necessary for the successful completion of the Project Improvements and results from the existence of a condition which could not reasonably have been foreseen at the time proposals were received from the Project Professionals. IRWD's portion of the Shared Costs (as defined in Section 5.1 below) necessitated by any such necessary unforeseeable changes and for any revisions approved by IRWD which cause an increase in the cost of the Project Improvements shall be reimbursed by IRWD as provided in Section 5 below. Lennar shall provide IRWD with any proposed change orders to the applicable Contract(s), which change

orders shall be subject to IRWD's review and approval in its reasonable discretion. Each change order request submitted by Lennar to IRWD shall describe the proposed change, the reason for the change, the estimated cost of the change (whether an increase or decrease), the impact on the project completion schedules, and shall provide such additional information as IRWD may reasonably require to consider such proposed change for approval. IRWD shall provide a written response to such change order requests (i.e. approval or disapproval) within ten (10) business days after IRWD's receipt of each complete change order request. The failure of IRWD to approve or disapprove any requested approval by Lennar under this Section 1.3 within ten (10) business days after IRWD's receipt of written request by Lennar shall be deemed approval by IRWD. In the event of any disapproval by IRWD hereunder, IRWD shall deliver an explanation of such disapproval including reasonable detail to Lennar, and IRWD and Lennar shall meet and confer within three (3) business days following either Party's written request therefor and attempt in good faith to resolve any disagreement or dispute regarding the requested revision or change order.

2. IMPROVEMENT PLAN PREPARATION AND APPROVAL; PERMITTING.

2.1 Preparation and Processing of Improvement Plans. Lennar shall cause the applicable Consultant(s) to prepare the Improvement Plans for the Parties' review and approval. Prior to submitting such Improvement Plans to County or any other applicable Governmental Authority for approval, Lennar shall cause such Improvement Plans to be delivered to IRWD for review, comment and approval, which approval shall not be unreasonably withheld, conditioned or delayed. IRWD shall approve or disapprove any proposed submittals within fifteen (15) days after receipt thereof from Lennar. The failure of IRWD to approve or disapprove any requested approval by Lennar under this Section within fifteen (15) days after IRWD's receipt of written request by Lennar shall be deemed approval by IRWD. In the event of any disapproval by IRWD hereunder, IRWD shall deliver an explanation of such disapproval including reasonable detail to Lennar, and IRWD and Lennar shall meet and confer within three (3) business days following either Party's written request therefor and attempt in good faith to resolve any disagreement or dispute regarding the Improvement Plans. IRWD and Lennar shall each be entitled to review and comment to the County on any changes or amendments proposed or required by the County to such Improvement Plans. Lennar shall provide notice to IRWD, which notice may be via electronic mail, at least two (2) business days prior to any meeting with, or hearing before, the County or any other applicable Governmental Authority concerning the Improvement Plans. IRWD shall be permitted to attend any such meeting. Upon completion of processing of the Improvement Plans, Lennar shall deliver a true, correct and complete copy of such Improvement Plans to IRWD within two (2) business days following Lennar's receipt thereof.

2.2 Permits and Related Approvals; Monitoring Obligations; Replacement Easement.

2.2.1 Following the preparation of the Improvement Plans by the Consultant(s) and approval thereof by the Parties, Lennar shall, subject to the terms of this Section 2.2.1, obtain all necessary or appropriate permits and approvals for the performance of the Work from the County or other Governmental Authorities having jurisdiction over the Work. Lennar shall provide to IRWD all permit applications for IRWD's signature as the applicant and California Environmental Quality Act documentation, and IRWD agrees to reasonably cooperate with

Lennar (including signing and submitting applications as the project applicant) to obtain all necessary permits and approvals. To the extent required by the applicable permits and approvals, Lennar shall be responsible for restoring any habitat impacted by the construction of the Project Improvements, and the costs associated therewith shall constitute Shared Costs for purposes of this Agreement.

2.2.2 IRWD agrees to be responsible for any monitoring and reporting obligations imposed pursuant to the permit(s) issued by the County in connection with the Existing Facilities, as the same may be modified in connection with the permit(s) to be issued in connection with the Project Improvements (“**Monitoring Obligations**”), for the time period required by such permit(s) (the “**Monitoring Period**”). Notwithstanding anything contained in this Agreement to the contrary, the Monitoring Obligations only apply to the outlet structure tributary area as shown on **Exhibit “3”** attached hereto, and IRWD shall not be responsible for assuming any obligations for monitoring in Serrano Creek. Except as set forth in this Section 2.2.2, each Party shall be responsible for satisfying at its sole cost and expense all water quality and other obligations imposed by any Governmental Authority pursuant to the discharge permit issued to such Party by such Governmental Authority for the Storm Drain Improvements or the Existing Facilities, as modified by the Project Improvements. The obligations of the Parties pursuant to this Section 2.2.2 shall survive the Completion (as defined in Section 3.1 below) of the Work.

2.2.3 In addition to obtaining all permits and approvals necessary for the performance of the Work, the Parties acknowledge and agree that the Existing Easement must either be terminated and replaced or amended and restated to accommodate the expansion of the existing Facilities, the enlargement of the Easement Area (as such term is defined in the Existing Easement), and the construction of the Project Improvements pursuant to the Improvement Plans, all on terms reasonably acceptable to the Parties (the “**Replacement Easement**”). Lennar shall prepare all necessary applications or other documents required in order to obtain the Replacement Easement for IRWD’s signature as the applicant, and IRWD agrees to reasonably cooperate with Lennar (including signing and submitting applications or other documents as the applicant) in order to obtain the Replacement Easement, which will name IRWD as the grantee.

2.2.4 Upon the later to occur of (a) the date upon which IRWD determines in its reasonable discretion that the Improvement Plans are acceptable to the County, and (b) the recordation of the Replacement Easement in the Official Records, Lennar shall have the non-exclusive right to (i) connect to the Storm Drain Improvements at the existing junction structure within Parcel 3, and (ii) thereafter use the Storm Drain Improvements in connection with the Lennar Project. In the event that the Storm Drain Improvements require maintenance or repair due to the use of the Storm Drain Improvements by Lennar or its agents, representatives, successors or assigns (including without limitation any maintenance or repair caused by stormwater discharge from the Lennar Property), Lennar shall reimburse IRWD for IRWD’s actual costs and expenses incurred in order to perform such maintenance and repair, within thirty (30) days after request by IRWD. The reimbursement obligation of Lennar in the immediately preceding sentence shall survive the Completion of the Work.

2.3 IRWD Bonds.

2.3.1 Prior to Lennar connecting to the Storm Drain Improvements pursuant to Section 2.2.4 above, Lennar shall post payment and performance bonds in form and substance and from a surety reasonably acceptable to IRWD (the “**IRWD Bonds**”) in the amount of Five Hundred Thousand Dollars (\$500,000), subject to reduction as set forth in this Section 2.3.1 and in Section 2.3.2 below. Lennar shall post the IRWD Bonds at Lennar’s sole cost and expense and for the benefit of IRWD, and the IRWD Bonds shall remain in effect until released pursuant to Section 2.3.2 below. IRWD shall have the right to make a claim under the IRWD Bonds in the event that (a) Lennar fails to complete construction of the Project Improvements in accordance with the terms of this Agreement and IRWD exercises IRWD’s Self-Help Right pursuant to Section 3.4 below, (b) Lennar fails to pay for its portion of the Shared Costs pursuant to Section 5.2 below, or (c) Lennar fails to pay for its portion of the Additional Work pursuant to Section 6 below. Prior to commencement of the Work, Lennar shall have the right to reduce the amount of the IRWD Bonds to an amount equal to 125% of Lennar’s share (based on the Sharing Ratios, as defined in Section 5.2 below) of the total projected Shared Costs (as defined in Section 5.1 below) based on the final Budget. For purposes of example only, in the event that the total projected Shared Costs (based on the final Budget) is equal to Six Hundred Thousand Dollars (\$600,000), then the reduced amount of the IRWD Bonds would be equal to Three Hundred Seventy-Five Thousand Dollars (\$375,000) (*i.e.*, 125% of \$300,000).

2.3.2 Following the Completion of the Work and the payment of any amounts due by Lennar following the preparation of the Final Accounting pursuant to Section 5.4 below, Lennar shall have the right to reduce the amount of the IRWD Bonds to the amount of One Hundred Twenty-Five Thousand Dollars (\$125,000). Lennar shall maintain the IRWD Bonds in effect at its sole cost until the Monitoring Period has been completed, at which time IRWD shall return the IRWD Bonds to Lennar. In the event that IRWD makes a claim on the IRWD Bonds at any time pursuant to this Section 2.3, then Lennar shall, within thirty (30) days after demand by IRWD, post replacement IRWD Bonds in the amount that was in effect immediately prior to such claim.

3. PERFORMANCE OF WORK.

3.1 Construction of Project Improvements. Lennar shall cause the Contractor to commence construction of the Project Improvements as soon as practicable and shall cause such Project Improvements to be constructed diligently, in a good and workmanlike manner, in accordance with the approved Improvement Plans and with any and all applicable permits, approvals, storm water pollution protection plans, laws, rules, regulations and ordinances (including without limitation the California Labor Code and prevailing wage laws), and Lennar shall cause the Project Improvements to be diligently prosecuted until “Completion,” as hereinafter defined. “**Completion**” shall be deemed to have occurred when (a) construction of the Project Improvements have been completed in a good and workmanlike manner (including any punch list and warranty work) and in accordance with the Improvement Plans approved by the Parties and the applicable Governmental Authorities, (b) the applicable Governmental Authority has issued its final letter of acceptance or has made, to its satisfaction, final inspection of all improvements for which such Governmental Authority acceptance or satisfactory inspection is required, (c) Lennar and IRWD have inspected and approved the Project

Improvements, and (d) the Contractor has delivered to Lennar and IRWD copies of all “as built” plans for the Project Improvements.

3.2 Inspection and Monitoring Rights. IRWD shall be entitled to inspect and monitor the performance of the Work and the construction of the Project Improvements as it deems necessary to assure compliance with the Improvement Plans and the terms of this Agreement. IRWD will promptly notify Lennar in writing of any portion of the Work which appears not to conform to the Improvement Plans and the specific basis for the allegation of non-conformity. The determination as to conformity of the Project Improvements with the Improvement Plans shall be made by IRWD; provided, however, IRWD agrees not to unreasonably withhold its approval as to such conformity of the Project Improvements with the Improvement Plans. Lennar shall require the Contractor to construct the Project Improvements so that the Project Improvements conform to the Improvement Plans.

3.3 Notice of Completion. Following the initial completion of the Work, IRWD and Lennar will jointly inspect and approve the same in their reasonable discretion. Each Party shall identify and disclose to the other Party any corrective or other actions required in order to cause the Work to comply with the approved Improvement Plans. Upon Completion of the Work, Lennar shall cause to be filed promptly in the Official Records a Notice of Completion pursuant to California Civil Code Section 8182, or if applicable, the provisions of California Civil Code Section 9204. Lennar shall furnish to IRWD a duplicate copy of such Notice of Completion showing thereon the date of filing with the County Recorder.

3.4 IRWD’s Self-Help Right. In the event that (a) Lennar fails to construct and complete the Project Improvements pursuant to the terms of this Agreement, and (b) such failure continues for more than thirty (30) days following written notice from IRWD to Lennar (a “**Construction Default**”), then IRWD may elect to take over the obligation to construct the balance of the Project Improvements by delivering written notice to Lennar (“**IRWD’s Self-Help Right**”). In such event, Lennar shall assign (on a non-exclusive basis) to IRWD all Contracts that have not been fully performed as of the date of the Construction Default, and IRWD shall be entitled to make a claim on the IRWD Bonds pursuant to Section 2.3 above to pay Lennar’s portion of the Shared Costs to complete the Project Improvements.

4. INSURANCE AND INDEMNITY.

4.1 Insurance. Lennar shall cause all Project Professionals to obtain the insurance coverage described in **Exhibit “4”** attached hereto, which shall include IRWD and the other parties required to be named in such exhibit as additional insureds on all such insurance policies. As evidence of such insurance coverage, Lennar shall provide IRWD with certificates of insurance from all of such Project Professionals and insurance endorsements in forms that are reasonably acceptable to IRWD prior to commencement of construction of the Project Improvements.

4.2 Indemnity.

4.2.1 Lennar Indemnity. Lennar shall indemnify, defend (with counsel reasonably acceptable to IRWD) and hold IRWD, and its officers, agents, and employees

harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property (collectively, “**Claims**”) which may arise or may be claimed to have arisen as a result of (a) the preparation and processing of the Improvement Plans, (b) the performance of the Work, (c) the use of the Storm Drain Improvements and the Project Improvements by Lennar or its agents, representatives, successors and assigns, or (d) any other action performed by Lennar or on behalf of Lennar pursuant to this Agreement, except as set forth in Section 4.2.2 below and except for the portion, if any, of any such Claim which is determined by a court of competent jurisdiction to have been proximately caused in whole or in part by any act, omission, or negligence of IRWD, its officers, agents, or employees, or by any act or omission for which IRWD, its officers, agents, or employees are liable.

4.2.2 IRWD Indemnity. Subject to the terms and limitations of this Section, IRWD shall indemnify, defend (with counsel reasonably acceptable to Lennar) and hold Lennar, and its officers, agents, and employees harmless from any Claims to the extent arising as a result of IRWD’s initial design, construction and use of the Storm Drain Improvements and the Existing Facilities prior to the date that Lennar connects to the Storm Drain Improvements pursuant to Section 2.2.4 above, except for the portion, if any, of any such Claim which is determined by a court of competent jurisdiction to have been proximately caused in whole or in part by any act, omission, or negligence of Lennar, its officers, agents, or employees, or by any act or omission for which Lennar, its officers, agents, or employees are liable. This Section 4.2.2 shall not apply to any Claims first arising from and after the date that Lennar connects to the Storm Drain Improvements pursuant to Section 2.2.4 above.

5. SHARED COSTS, ALLOCATION, INVOICING AND DISBURSEMENT.

5.1 Definition of Shared Costs. The term “**Shared Costs**” means all out-of-pocket costs incurred from and after March 1, 2019 (the “**Shared Costs Effective Date**”) in connection with the preparation and approval of the Improvement Plans and the performance of the Work, as well as the fees and costs payable to the County or other applicable Governmental Authorities in order to obtain the required permits for the performance of the Work or the Replacement Easement. Without limiting the generality of the foregoing, Shared Costs shall include all design, engineering, and other consultants’ fees and costs, deposits, application and permit fees, amounts paid to contractors and subcontractors, inspections, the costs of insurance, equipment, machinery, labor and materials. Shared Costs shall not include administrative fees or either Party’s internal staff costs or any other costs incurred prior to the Shared Costs Effective Date.

5.2 Sharing Ratios. Lennar and IRWD shall each pay its respective share of the Shared Costs pursuant to this Section 5. The Parties’ respective allocations of the Shared Costs (the “**Sharing Ratios**”) shall be as follows: fifty percent (50%) to Lennar and fifty percent (50%) to IRWD.

5.3 Payment. Following the commencement of the Work, Lennar shall submit to IRWD on a monthly basis a detailed written statement (the “**Monthly Shared Cost Statement**”) of all Shared Costs incurred by Lennar during the prior thirty (30) day period, together with paid invoices or other backup documentation reasonably acceptable to IRWD (the “**Backup Documentation**”). Within thirty (30) days after receipt of each Monthly Shared Cost Statement and the applicable Backup Documentation, IRWD shall deliver its share of the amount due

(based on the Sharing Ratios) as set forth in the Monthly Shared Cost Statement to Lennar, subject to adjustment in the Final Accounting (as defined in Section 5.4 below). Any and all payments due hereunder which are not paid in a timely manner shall be subject to a late charge equal to five percent (5%) of the overdue amount. In addition, any and all payments due hereunder which are not paid in a timely manner shall accrue simple interest at a rate equal to the lesser of ten percent (10%) per annum or the maximum rate allowed by law, commencing on the date the applicable payments are due and payable under this Agreement and ending on the date on which the applicable payment is made in accordance with this Agreement.

5.4 Final Accounting. Within sixty (60) days after the Completion of the Work, Lennar shall prepare and submit to IRWD a final accounting (the “**Final Accounting**”) of the Shared Costs, together with Backup Documentation. Within thirty (30) days after IRWD’s receipt of the Final Accounting and Backup Documentation, IRWD shall pay Lennar the total amount of its share of the Shared Costs (based on the Sharing Ratios), less the amount of payments previously paid by IRWD. If the total of IRWD’s previous payments exceeds the total amount of IRWD’s share of the Shared Costs (based on the Sharing Ratios) reflected in the Final Accounting, Lennar shall refund the difference to IRWD within thirty (30) days after Lennar’s submittal of the Final Accounting.

5.5 Maintenance of Project Books and Records. Lennar shall keep and maintain, or cause to be kept and maintained, materially accurate financial books and records with respect to the Project Improvements in accordance with Lennar’s standard practices, and IRWD shall have access to all such books and records. The financial books and records shall include reasonable supporting documentation relative to all costs incurred for the Project Improvements and any other financial data related to the Budget and the Shared Costs. Such records shall be maintained until the second (2nd) anniversary after the Completion of all Work.

6. ADDITIONAL WORK.

In the event that the County or any other Governmental Authority with jurisdiction over the Work determines at any time during the Monitoring Period that additional work must be performed with respect to the Project Improvements (the “**Additional Work**”), then IRWD shall perform such Additional Work. In such event, the cost of such Additional Work shall be borne by the Parties in proportion to their respective Sharing Ratios in accordance with Section 5 above, and the terms of Section 5.3 above regarding payment shall apply to such Additional Work such that IRWD shall have the right to reimbursement from Lennar of an amount determined by applying the Sharing Ratios to the costs of the Additional Work.

7. RECORD DRAWINGS.

At the time of Completion of the Project Improvements, Lennar shall cause the Contractor to furnish IRWD with one (1) copy of the Contractor’s redlined set of plans (showing all revisions, manufacturer and type of valves, pipe and fittings, as applicable and as required by IRWD). Additionally, Lennar shall furnish to IRWD one (1) copy each of the compaction reports and certificates and survey notes and cut sheets, to the extent applicable.

8. CONVEYANCE OF PROJECT IMPROVEMENTS; ACCEPTANCE AND OWNERSHIP.

Effective upon the Completion of the Project Improvements, Lennar disclaims any interest in the Project Improvements and agrees to transfer, assign and convey any and all right, title, and interest Lennar may have in the Project Improvements to IRWD. Lennar shall promptly after Completion execute and deliver to IRWD an agreement in form reasonably acceptable to IRWD evidencing such transfer and conveyance (the “**Assignment Agreement**”). In addition to assigning all of Lennar’s right, title and interest in the Project Improvements, the Assignment Agreement shall include an assignment of all warranties, either express or implied, that relate to the Project Improvements, under the Contracts (which shall include manufacturers warranties and contractor's guarantee that the Project Improvements will be free from defects in workmanship and materials for a period of one (1) year from the effective date specified in the assignment agreement, together with the Contractor’s obligation to bring or restore the Project Improvements into full compliance with the Improvement Plans to the extent any portion of the Project Improvements are found not to comply with the Improvement Plans). IRWD agrees to accept the Project Improvements constructed pursuant to this Agreement upon Completion thereof in accordance with all requirements of the Improvement Plans, including any change orders approved by IRWD as provided in Section 1.3 hereof. Upon the effective date of the Assignment Agreement, IRWD shall own such Project Improvements and shall be responsible for the operation and maintenance thereof.

9. INTENTIONALLY DELETED.

10. GENERAL PROVISIONS.

10.1 Incorporation of Recitals and Exhibits. All recitals set forth at the beginning of this Agreement and all exhibits attached to and referred to in this Agreement are incorporated into and made a part of this Agreement as though fully set forth in this Agreement.

10.2 Attorneys’ Fees. In the event that any claim or dispute between the Parties hereto shall result in any litigation, judicial reference proceedings, arbitration or other dispute resolution proceeding (as application, an “**Action**”) between the Parties or with respect to the Work, the prevailing party in such dispute shall be entitled to recover from the other party, all reasonable fees, costs and expenses (whether or not allowable as “cost” items by law) actually incurred at, before and after a hearing, session, trial or on appeal, all of which shall be deemed to have accrued upon the commencement of such Action and shall be paid whether or not such Action is prosecuted to judgement. Any judgment or order entered in such Action shall contain a specific provision providing for the recovery of attorneys’ fees and costs incurred in enforcing such judgment and an award of prejudgment interest from the date of the breach at the maximum rate allowed by law. For purposes of this Section 10.2, the following terms shall have the definitions set forth hereinbelow: (a) “attorneys’ fees” shall include fees incurred in connection with (1) post judgment motions, (2) contempt proceedings, (3) garnishment, levy, and debtor and third party examinations, (4) discovery, and (5) bankruptcy litigation; and (b) “prevailing party” means the party who is determined in the proceedings to have prevailed or who prevails by dismissal, default or otherwise.

10.3 Notices. Any and all notices, demands or other communications required or desired to be given hereunder by any Party shall be in writing and shall be validly given or made to the other Party by one of the following delivery methods: (a) served personally; or (b) delivered to Federal Express or other nationally reputable overnight delivery service, prepaid. In addition, a courtesy copy of such notice, demand or other communication may be transmitted by electronic mail in portable document format or “.pdf,” but such courtesy copy shall not constitute valid delivery under this Section 10.3. If such notice, demand or other communication be served personally, service shall be conclusively deemed made at the time of such personal service. If such notice, demand or other communication be given by Federal Express or other overnight courier, such service shall be conclusively deemed given upon confirmation of delivery by such courier service. Notwithstanding the foregoing, delivery that is made after 5:00 p.m. (California time) on a business day shall be deemed received on the next following business day. Each notice, demand or other communication given pursuant to this Agreement shall be addressed as follows:

If to IRWD: Irvine Ranch Water District
Attn: Mr. Kevin Burton
15600 Sand Canyon Ave.
Irvine, California 92618
Email: burton@irwd.com

with copy to: Jackson Tidus
Attn: Andrew P. Bernstein, Esq.
2030 Main Street, 12th Floor
Irvine, California 92614
Email: abernstein@jacksontidus.law

If to Lennar: Lennar Homes of California, Inc.
Attn: Mr. Andrew Han
15131 Alton Parkway
Irvine, California 92618
Email: Andrew.Han@lennar.com

with copy to: Lennar Homes of California, Inc.
Attn: Melanie Houk, Esq.
15131 Alton Parkway, Suite 345
Irvine, California 92618
Email: Melanie.Houk@lennar.com

Any Party may change its address for purposes of this Section 10.3 by giving notice to the other Party as provided herein; provided that any such change of address shall include a physical address capable of receiving personal delivery and courier delivery of notices, and shall include a valid and current email address for such Party.

10.4 Amendments. No provision of this Agreement may be amended or added to except by an agreement in writing which is signed by the Parties hereto or their respective successors in interest and indicates that it is an amendment of this Agreement.

10.5 Time of the Essence. Time is of the essence with respect to each and every provision of this Agreement.

10.6 Further Assurances. Each of the Parties to this Agreement shall execute and deliver any and all additional papers, documents and other assurances, and shall do any and all acts and things reasonably necessary in connection with the performance of their obligations under this Agreement and to carry out the intent and agreements of the Parties to this Agreement.

10.7 Relationship of Parties. The Parties agree that their relationship is that of neighboring property owners, and that nothing contained herein shall constitute either Party the agent or legal representative of the other for any purpose whatsoever, nor shall this Agreement be deemed to create any form of business organization (including, without limitation, a joint venture or partnership) between the Parties, nor is either Party granted the right or authority to assume or create any obligation or responsibility on behalf of the other Party, nor shall either Party be in any way liable for any debt of the other.

10.8 No Beneficiaries. Except for any indemnified person's rights under any express indemnification contained in this Agreement, no parties other than IRWD and Lennar and their successors and permitted assigns shall have any rights or remedies under or by reason of this Agreement.

10.9 Assignment and Assumption. The Parties may not assign their rights or delegate their duties under this Agreement without first obtaining the other Party's written approval. In the event that either Party elects to sell all or a portion of its Property to any third party (other than a home buyer), the selling Party shall assign and require its purchaser to expressly assume the rights and obligations of the selling Party hereunder (pursuant to the terms of an assignment and assumption agreement in form and substance reasonably acceptable to the Parties) solely with respect to such portion of the real property acquired by such purchaser. In no event shall any assignment of this Agreement release or discharge a Party from any liability or obligation hereunder. Subject to the foregoing, this Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the Parties to this Agreement.

10.10 Severability. If any term, provision, condition or covenant of this Agreement or its application to any Party or circumstance shall be held, to any extent, invalid or unenforceable, then the remainder of this Agreement, or the application of such term, provision, condition or covenant to any Party or circumstances other than those as to whom or which it is held invalid or unenforceable, shall not be affected and shall be valid and enforceable to the maximum extent permitted by law.

10.11 Time Periods. The time periods provided for in this Agreement shall each be computed by excluding the first and including the last day. Except as otherwise provided in this Agreement all time periods measured by days in this Agreement shall be measured by calendar

days and, if the last day in that period falls on a Saturday, Sunday or legal holiday, then the last day of the period shall be deemed to be the next following business day.

10.12 Enforcement by IRWD. The rights granted to IRWD by Lennar under this Agreement are of a special and unique kind and character. If Lennar defaults under this Agreement, IRWD would not have any adequate remedy at law. Therefore, in addition to IRWD's Self-Help Right, IRWD's rights under this Agreement may, at IRWD's option, be enforced by an action for specific performance and such other equitable relief as is allowed under California law.

10.13 No Waiver. A waiver by either Party of a condition for the benefit of that Party, or of a default by the other Party, shall be effective only if it is in writing and shall not be construed as a waiver of any other condition or default.

10.14 Interpretation. This Agreement is made and entered into in the State of California and shall in all respects be interpreted, enforced and governed under the laws of the State of California. The language in all parts of this Agreement shall be in all cases construed as a whole according to its fair meaning and not strictly for or against either IRWD or Lennar. This Agreement has been negotiated and prepared by both IRWD and Lennar. Any rule of contract interpretation to the effect that ambiguities or uncertainties are to be interpreted against the drafting party, or the party that caused it to exist, shall not be employed in the interpretation of this Agreement or any document executed in connection with this Agreement. The use of the words "include" and/or "including" shall not imply exclusivity and shall be interpreted to mean "include(ing), without limitation" and/or "include(ing), but not limited to." The headings of this Agreement are for purposes of reference only and shall not limit or define the meaning of the provisions of this Agreement.

10.15 Entire Agreement. This Agreement constitutes the entire understanding and agreement of IRWD and Lennar regarding the subject matters set forth in this Agreement and supersedes any and all prior or contemporaneous agreements or understandings, oral or written, between the Parties regarding such matters.

10.16 Authority. Each person signing this Agreement represents and warrants that he or she has the proper authority to bind the Party on whose behalf he or she signs.

10.17 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which shall, together, constitute one and the same instrument. Signatures sent in a pdf document via email may be used in place of original signatures on this Agreement. IRWD and Lennar intend to be bound by the signatures on the pdf document, are aware that the other Party will rely on such signatures, and hereby waive any defenses to the enforcement of the terms of this Agreement based on the form of signature.

[Signatures on following page]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

“LENNAR”

LENNAR HOMES OF CALIFORNIA, INC.,
a California corporation

By: _____
Name: _____
Title: _____

“IRWD”

IRVINE RANCH WATER DISTRICT,
a California water district

By: _____
Name: _____
Title: _____

EXHIBIT LIST

EXHIBIT “1”	Legal Description of the Lennar Property
EXHIBIT “2”	Legal Description of the IRWD Property
EXHIBIT “3”	Project Improvements
EXHIBIT “4”	Insurance Requirements

EXHIBIT "1"
LEGAL DESCRIPTION OF THE LENNAR PROPERTY

PARCEL 1

Lots 1 Through 12 and lettered lots A through M, of Tract No. 17331, in the City of Lake Forest, County of Orange, State of California, as shown by map on file in Book 982, Pages 11 through 20, of Maps, in the Office of the County Recorder of said County.

PARCEL 2

That certain parcel of land situated in the City of Lake Forest, County of Orange, State of California, being those portions of Parcels 1 and 2 of Amending Map Parcel Map No. 89-218 as shown on a map thereof filed in Book 274, Pages 27 through 29 inclusive, of Parcel Maps in the Office of the County Recorder of said Orange County, described as follows:

COMMENCING at Point "A" described hereinabove; thence South 30°27'53" West 36.32 feet to a non-tangent curve concave southwesterly, a radial line of said curve from said point bears South 30°27'53" West, said point being the **TRUE POINT OF BEGINNING**; thence along said curve southeasterly 177.37 feet through a central angle of 16°20'19" to a point of compound curvature with a curve concave southwesterly and having a radius of 207.00 feet, a radial line of said curves from said point bears South 46°48'12" West; thence along said curve southeasterly 72.50 feet through a central angle of 20°03'59" to a point of reverse curvature with a curve concave northeasterly and having a radius of 259.00 feet, a radial line of said curve from said point bears North 66°52'11" East; thence along said curve southeasterly 216.72 feet through central angle of 47°56'35"; thence tangent from said curve South 71°04'24" East 5.80 feet to a point hereinafter referred to as Point "B"; thence South 18°55'36" West 16.15 feet to the beginning of a tangent curve concave northwesterly and having a radius of 38.00 feet; thence along said curve southwesterly 26.60 feet through a central angle of 40°06'07" to a point of compound curvature with a curve concave northwesterly and having a radius of 432.00 feet, a radial line of said curves from said point bears North 30°58'17" West; thence along said curve westerly 249.60 feet through a central angle of 33°06'16" to a point of reverse curvature with a curve concave southeasterly and having a radius of 85.00 feet, a radial line of said curve from said point bears South 02°07'59" West; thence along said curve westerly 50.13 feet through central angle of 33°47'31" to a point of cusp; thence tangent from said curve North 58°20'28" East 40.52; thence North 51°54'13" East 91.25 feet to the beginning of a tangent curve concave southerly and having a radius of 72.00 feet; thence along said curve northeasterly, northwesterly, westerly, southwesterly and southerly 352.93 feet through a central angle of 280°50'56" to a point of reverse curvature with a curve concave southwesterly and having a radius of 10.00 feet, a radial line of said curve from said point bears South 41°03'17" West; thence along said curve southeasterly and southerly 13.45 feet through central angle of 77°04'08"; thence tangent from said curve South 28°07'25" West 10.68 feet to the beginning of a tangent curve concave northwesterly and having a radius of 25.00 feet; thence along said curve southwesterly 13.18 feet through a central angle of 30°13'03"; thence tangent from said curve South 58°20'28" West 63.98 feet; thence North 76°39'32" West 15.01 feet; thence

North 31°39'32" West 84.35 feet to the beginning of a tangent curve concave northeasterly and having a radius of 969.50 feet; thence along said curve northwesterly 35.43 feet through a central angle of 02°05'38"; thence tangent from said curve North 29°33'54" West 65.44 feet to the beginning of a tangent curve concave southwesterly and having a radius of 830.50 feet; thence along said curve northwesterly 62.73 feet through a central angle of 04°19'41"; thence non-tangent from said curve North 55°00'48" West 7.67 feet; thence North 24°57'59" East 19.58 feet; thence North 65°02'01" West 11.47 feet to the beginning of a tangent curve concave northeasterly and having a radius of 117.50 feet; thence along said curve northwesterly 87.97 feet through a central angle of 42°53'40"; thence tangent from said curve North 22°08'21" West 30.07 feet to the beginning of a tangent curve concave southwesterly and having a radius of 75.00 feet; thence along said curve northwesterly and westerly 94.01 feet through a central angle of 71°49'00" to a point of reverse curvature with a curve concave northeasterly and having a radius of 20.00 feet, a radial line of said curve from said point bears North 03°57'21" West; thence along said curve northwesterly 21.96 feet through central angle of 62°55'29"; thence tangent from said curve North 31°01'52" West 35.47 feet; thence North 03°12'13" East 43.30 feet to the beginning of a tangent curve concave southeasterly and having a radius of 35.00 feet; thence along said curve northeasterly and easterly 52.90 feet through a central angle of 86°35'36" to a point of compound curvature with a curve concave southwesterly and having a radius of 622.00 feet, a radial line of said curves from said point bears South 00°12'11" East, said curve also being the northwesterly prolongation of said first curve described hereinabove, having a radius of 622.00 feet; thence along said northwesterly prolongation and said curve easterly and southeasterly 332.93 feet through a central angle of 30°40'04" to the **TRUE POINT OF BEGINNING**.

CONTAINING: 3.402 Acres, more or less.

PARCEL 3

That certain parcel of land situated in the City of Lake Forest, County of Orange, State of California, being that portion of Parcel 2 of Amending Map Parcel Map No. 89-218 as shown on a map thereof filed in Book 274, Pages 27 through 29 inclusive, of Parcel Maps in the Office of the County Recorder of said Orange County, described as follows:

BEGINNING at Point "B" described hereinabove in Parcel 2; thence along the southeasterly line of said Parcel 2 through the following courses:

South 18°55'36" West 16.15 feet to the beginning of a tangent curve concave northwesterly and having a radius of 38.00 feet; thence along said curve southwesterly 26.60 feet through a central angle of 40°06'07" to a point of compound curvature with a curve concave northwesterly and having a radius of 432.00 feet, a radial line of said curves from said point bears North 30°58'17" West; thence along said curve westerly 249.60 feet through a central angle of 33°06'16" to a point of reverse curvature with a curve concave southeasterly and having a radius of 85.00 feet, a radial line of said curve from said point bears South 02°07'59" West; thence along said curve westerly 50.13 feet through central angle of 33°47'31";

thence leaving said southeasterly line of previously described Parcel 2, radially from said curve South $31^{\circ}39'32''$ East 21.34 feet; thence South $58^{\circ}20'28''$ West 38.13 feet; thence South $13^{\circ}24'45''$ West 11.88 feet; thence South $31^{\circ}39'32''$ East 294.37 feet; thence North $58^{\circ}20'28''$ East 66.85 feet; thence North $59^{\circ}26'33''$ East 15.93 feet to the beginning of a tangent curve concave southeasterly and having a radius of 20.50 feet; thence along said curve easterly 9.26 feet through a central angle of $25^{\circ}53'34''$ to a point of reverse curvature with a curve concave northwesterly and having a radius of 270.73 feet, a radial line of said curve from said point bears North $04^{\circ}39'53''$ West; thence along said curve northeasterly 194.34 feet through central angle of $41^{\circ}07'42''$; thence non-tangent from said curve South $45^{\circ}41'14''$ East 14.30 feet to a point on a non-tangent curve concave southerly and having a radius of 63.83 feet, a radial line of said curve from said point bears South $26^{\circ}57'26''$ East; thence along said curve easterly and southeasterly 81.52 feet through a central angle of $73^{\circ}10'27''$; thence non-tangent from said curve North $69^{\circ}37'50''$ East 18.39 feet; thence North $77^{\circ}10'49''$ East 5.23 feet to the southeasterly boundary line of said Amending Map Parcel Map No. 89-218; thence along said southeasterly boundary line North $20^{\circ}43'20''$ East 14.58 feet; thence leaving said southeasterly boundary line North $12^{\circ}00'44''$ West 15.98 feet; thence North $62^{\circ}51'17''$ West 11.92 feet; thence North $18^{\circ}02'17''$ East 191.36 feet; thence North $63^{\circ}07'31''$ West 66.62 feet; thence North $39^{\circ}33'03''$ West 76.25 feet; thence West 72.78 feet; thence South $18^{\circ}55'36''$ West 24.00 feet; thence North $71^{\circ}04'24''$ West 46.14 feet to the **POINT OF BEGINNING**.

CONTAINING: 3.200 Acres, more or less.

EXHIBIT “2”

LEGAL DESCRIPTION OF THE IRWD PROPERTY

(See attached.)

LEGAL DESCRIPTION

That certain parcel of land situated in the City of Lake Forest, County of Orange, State of California, being Parcel 2 of Amending Parcel Map No. 89-218, filed in Book 274, Pages 27 through 29 of Parcel Maps in the Office of the County Recorder of said County.

EXCEPTING THEREFROM the following parcels of land:

- 1) That portion of said land as described in the deed to Municipal Water District of Orange County recorded January 23, 1996 as Instrument No. 19960033544 of said Official Records;
- 2) That portion of said land as described in the Irrevocable Offer of Dedication recorded May 3, 2011 as Instrument No. 2011000222167 and accepted by the City of Lake Forest per the Certificate of Acceptance of Irrevocable Offer of Dedication in Fee Simple of Real Estate Recorded May 9, 2012 as Instrument No. 2012000265051, both of said Official Records;
- 3) That portion of said land as described in the Grant Deed to Lennar Homes of California, Inc. recorded September 1, 2017 as Instrument No. 2017000374689 of said Official Records;
- 4) That portion of said land as described in the Grant Deed to the City of Lake Forest recorded March 6, 2018 as Instrument No. 2018000079566 of said Official Records.

SUBJECT TO: Covenants, conditions, reservations, restrictions, rights-of-way, and easements of record, if any.

APPENDIX "A" PLAT attached hereto and by this reference made a part hereof.

Prepared by me or under my direction:

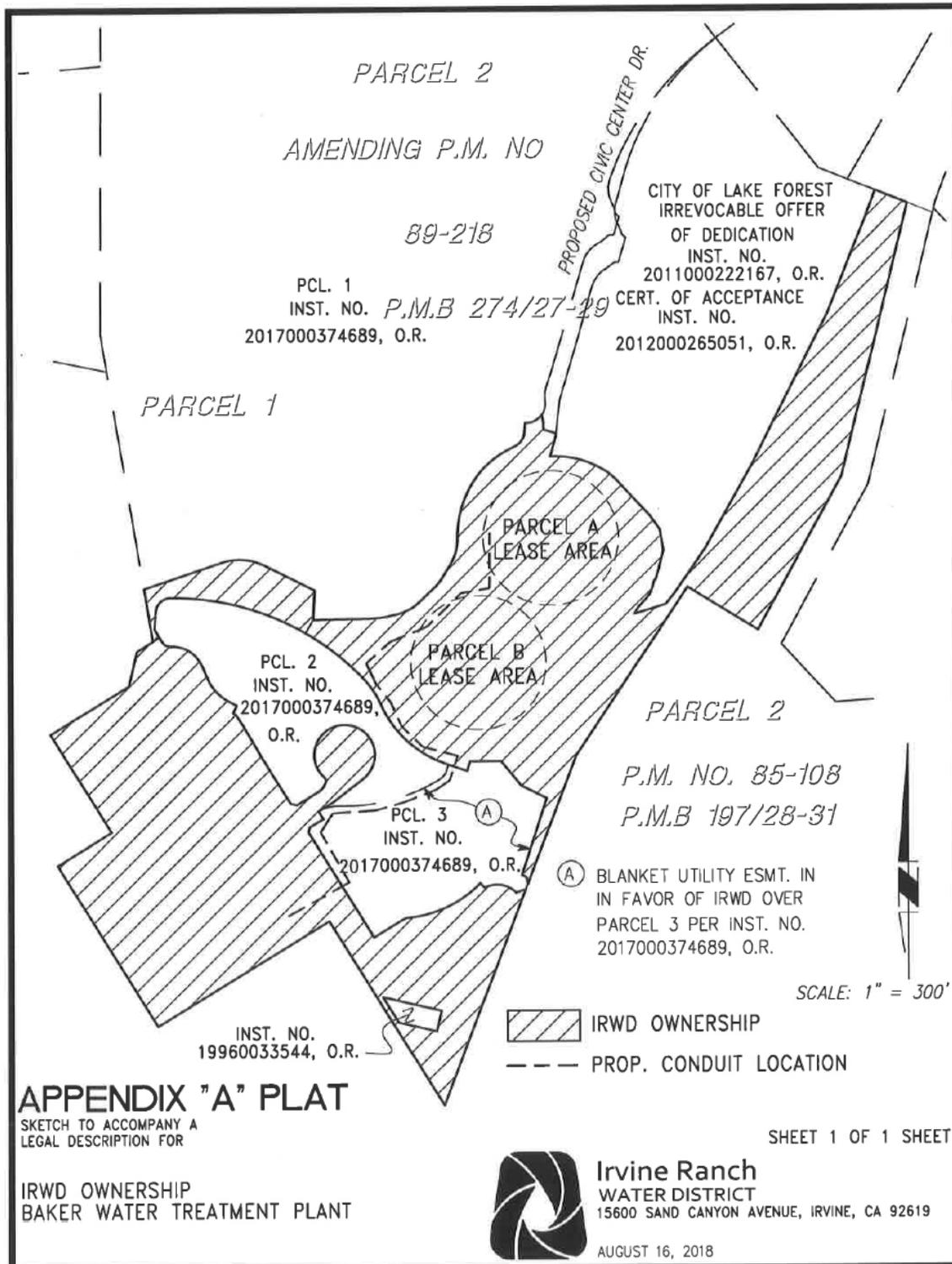
Dated: August 16, 2018

Steven L. Malloy

Steven L. Malloy, R.C.E. 31926
License expires December 31, 2018



Exhibit "2"



APPENDIX A - PLAT.DWG

Exhibit "2"

3

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 4/17/19

A-21

EXHIBIT “3”

PROJECT IMPROVEMENTS

(See attached.)

EXHIBIT 3

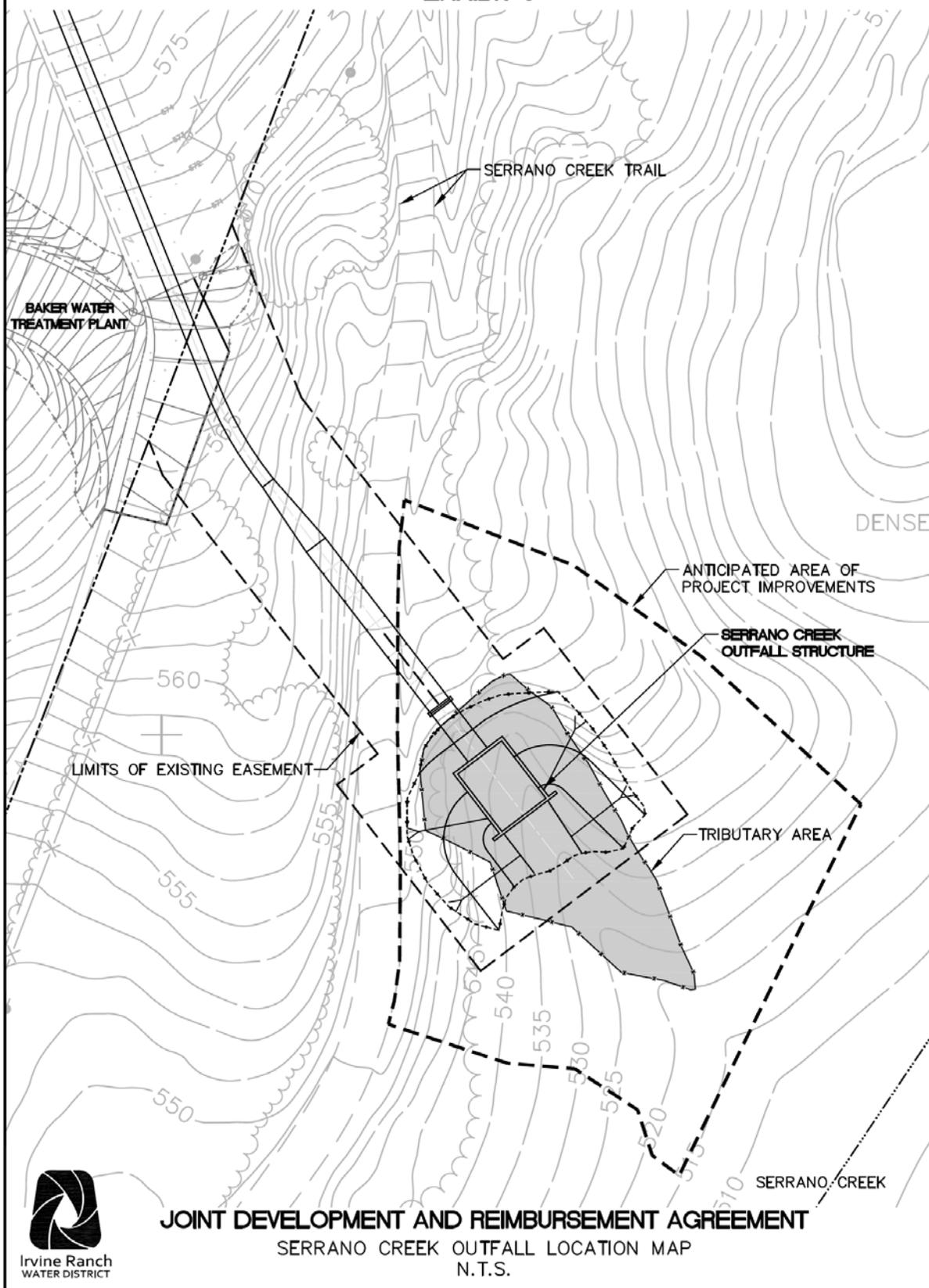


Exhibit "3"

2

9479-126547\1440238.5
4/17/19

EXHIBIT “4”

INSURANCE REQUIREMENTS

(See attached.)

INSURANCE – PROJECT PROFESSIONAL (CONSULTANTS)

During the term of the Agreement, Lennar shall require that each Consultant carry, maintain and keep in full force insurance against claims for injuries or death or damages to property that may arise from or in connection with Consultant's performance of its services pursuant to this Agreement. Such insurance shall be of the types and in the amounts set forth as follows:

Comprehensive general liability insurance with coverage limits of not less than One Million Dollars (\$1,000,000) per occurrence and aggregate, including products and operations hazard, contractual insurance, broad form property damage, independent consultants, personal injury, underground hazard, and explosion and collapse hazard where applicable.

Business automobile liability insurance for vehicles used in connection with the performance of this Agreement with minimum limits of One Million Dollars (\$1,000,000) per claimant and One Million Dollars (\$1,000,000) per incident and aggregate.

Workers' compensation insurance as required by the laws of the State of California. This requirement may be waived by IRWD upon certification by Consultant that it has no employees or individuals who are defined as "employees" under the Labor Code.

If the services includes design professional services, then in addition to the above-listed coverages, Consultant shall carry, maintain and keep in full force professional liability insurance, with limits of not less than One Million Dollars (\$1,000,000) per claim or occurrence and Two Million Dollars (\$2,000,000) aggregate limits, throughout the term of this Agreement to cover claims caused by Consultant's negligent acts, errors, or omissions of a professional nature.

Insurance coverages described above shall be afforded by insurance carriers that meet or exceed requirements for financial performance and security by having a Best's Key Guide rating of "A" or better; additionally, carriers shall have an assigned Financial Size Category of "VIII" or higher.

Lennar shall require that each Consultant provide evidence of insurance coverages on forms satisfactory to IRWD, including endorsements providing that policies cannot be canceled or reduced except on thirty (30) calendar days written notice by the insurance carrier of cancellation or non-renewal (ten (10) calendar days' notice for non-payment of premium). Industry standard forms for "certificate of insurance" from ACORD are accepted, provided that appropriate language regarding notice of non-renewal or cancellation is provided on the form. Each Consultant shall provide proof that policies of insurance required herein expiring or terminated during the term of this Agreement have been renewed or replaced with other policies providing coverage meeting the requirements hereof. Such proof will be furnished at least fourteen (14) calendar days prior to the expiration or termination of the coverages. Any deductibles or self-insured retentions must be declared to and are subject to approval by IRWD.

The general liability and automobile policies required by this Agreement shall contain an endorsement naming IRWD and its directors, officers, agents, employees, volunteers, and other entities for which IRWD's directors are the governing body as additional insureds.

The general liability and automobile insurance provided by Consultant shall be primary, and any insurance or self-insurance maintained by IRWD shall be in excess of Consultant's insurance and shall not contribute with it.

Insurance coverage required herein shall not prohibit Consultant from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against IRWD.

INSURANCE – PROJECT PROFESSIONAL (CONTRACTORS)

1.01 GENERAL

- A. Lennar shall require that Contractor's insurance coverage shall provide the following amounts of coverage, shall include additional insureds, and shall include additional information as set forth herein.
- B. Contractor shall not commence or continue to perform any Work unless they, at their own expense, have in full force and effect all required insurance. Contractor shall not permit any subcontractor to perform work on this project until the same insurance requirements have been complied with by such subcontractor.
- C. The types of insurance the Contractor shall obtain and maintain for the full period of the Agreement are worker's compensation insurance, commercial general liability insurance, and business automobile liability insurance.
- D. Insurers shall have financial and size ratings of at least an "A", VIII in accordance with the most current Best's Key Rating Guide, Property Casualty.
- E. As evidence that specified insurance coverage has been obtained for the period of the Agreement, the Contractor shall provide certificates of insurance and endorsements on the forms provided as a part of the Contract documents. No alteration or substitution of said forms will be allowed. Certified copies of insurance policies from the insurance company affording coverage shall be provided by Contractor upon request.
- F. The requirements set forth herein as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by IRWD or its insurance consultant(s) is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including but not limited to the provisions concerning indemnification.

1.02 COMMERCIAL GENERAL LIABILITY INSURANCE

- A. Lennar shall require that Contractor provide commercial general liability insurance coverage equivalent to Insurance Services Office Form CG 00 01, with limits not less than those specified herein.

- B. Included in such insurance shall be blanket contractual liability coverage and severability of interests (no cross suits exclusion).
- C. The commercial general liability insurance shall be primary and non-contributory and include as additional insureds: IRWD, the IRWD Board of Directors, IRWD's representatives, the Consultants, owners of record of all private properties on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to operations of the original named insured, their subcontractors, agents, officers, and employees in the performance of the Work.
- D. Such insurance shall have a deductible or self-insured retention not to exceed \$25,000.
- E. Bodily injury and property damage coverage shall be for not less than one million dollars (\$1,000,000) for each occurrence and for not less than two million dollars (\$2,000,000) per project aggregate.
- F. Products/Completed Operations coverage shall be for not less than two million dollars (\$2,000,000) aggregate.

1.03 AUTOMOBILE LIABILITY

- A. Lennar shall require that Contractor provide business automobile liability insurance coverage equivalent to Insurance Services Office Form CA 00 01, with limits not less than those specified herein. Business automobile liability insurance coverage shall be provided for all owned, non-owned and hired vehicles.
- B. Contractor shall carry and maintain a business automobile policy or equivalent coverage for bodily injury and property damage on all owned, non-owned and hired automobiles or other licensed highway vehicles used in the performance of the Contract. The limit shall be for not less than two million dollars (\$2,000,000) for each accident.

1.04 WORKER'S COMPENSATION INSURANCE AND EMPLOYER'S LIABILITY INSURANCE

- A. Lennar shall require that Contractor provide worker's compensation insurance coverage for no less than the statutory limits and employer's liability insurance coverage, with limits not less than those specified herein, for all persons whom Contractor employs or may employ in carrying out the Work. This insurance shall be in strict accordance with the requirements of the most current and applicable state worker's compensation insurance laws.
- B. The worker's compensation insurance shall include a waiver of right of subrogation against IRWD, the IRWD Board of Directors, IRWD's representatives, the Engineer/Architect, owners of record of all private properties

on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to operations of the original named insured, their subcontractors, agents, officers, and employees in the performance of the Work.

C. Employer's Liability Insurance shall be for not less than:

\$1,000,000 Each Accident
\$1,000,000 Each Disease – Policy Limit
\$1,000,000 Each Disease – Each Employee

1.05 CONTRACTOR'S RESPONSIBILITY NOT LIMITED BY INSURANCE

A. Nothing contained in these insurance requirements is to be construed as limiting the extent of the liability of Contractor or Contractor's sureties.

1.06 MAINTAINING INSURANCE

A. The maintenance of proper insurance in conformity with this Agreement is a material element of this Agreement. The Contract with the Contractor shall require that if at any time during the term of such Contract, including the guarantee period, or any extension, Contractor fails to maintain the required insurance in full force and effect, the Work shall be discontinued immediately and all payments due or that become due to Contractor shall be withheld until notice is received by IRWD that the required insurance has been restored to full force and effect and that the premiums have been paid for a period satisfactory to IRWD. Failure to maintain or renew coverage or to provide evidence of renewal upon request of IRWD may be treated by IRWD as a material breach of contract.

1.07 ADDITIONAL INFORMATION

A. Certificates of Insurance shall:

1. List all Endorsement forms that are part of said policy.
2. List all entities required to be named as additional insureds.
3. Include a statement that no less than 30 days written notice will be provided by certified mail to IRWD prior to any material change or cancellation of said policy.

April 22, 2019

Prepared by: C. Kessler/M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook



ACTION CALENDAR

PELICAN HILLS GOLF CLUB SEWER PIPELINE REHABILITATION BUDGET ADDITION

SUMMARY:

Sections of three sewer pipelines that bisect the Pelican Hills golf course are severely pitted, deforming or have lining failures. This project will assess the condition of the sewer pipelines, determine the cause of the failures and rehabilitate damaged or failing portions of pipelines identified in the assessment. Staff recommends that the Board authorize the addition of Project 11121 in the amount of \$531,300 to the FY 2018-19 Capital Budget for the Pelican Hills Golf Club Sewer Pipeline Rehabilitation.

BACKGROUND:

Three collection sewers traversing through the Pelican Hills Golf Club and a local sewer segment within a Pelican Hills residential community are experiencing material pitting, deformation and/or liner failure at various locations as shown in Exhibit "A". The four sewers ultimately convey flows to an Orange County Sanitation District trunk sewer within Pacific Coast Highway and include an 1,800 foot 8-inch diameter segment within the northwest portion of the golf course, a 3,100 foot 10-inch diameter segment that bisects the middle of the course, a 600 foot 8-inch diameter segment within the southeastern portion of the course, and a 200 foot 8-inch diameter segment located within a private road, Fairway Point, of the neighboring residential community just north of the golf course. The pipelines are a mix of polyvinyl chloride (PVC) and ductile iron pipe (DIP) and were constructed in 1991. In 2004, portions of the pipelines were rehabilitated with an epoxy liner.

Staff met with representatives of the Pelican Hills Golf Club to review the project and discuss possible measures to mitigate disruptions to the golf course's operations during construction. The representatives understand the project necessity and expressed their willingness to work with IRWD by allowing job walks during the design phase, offering to implement short-term hole closures, trimming trees to allow construction equipment access, and altering irrigation schedules for the areas that would be used as heavy equipment staging areas during construction.

Consultant Selection:

Staff issued a request for proposal for design engineering services related to assessing the condition of the pipelines and manholes, determining the cause of the pipeline, liner and manhole failures, and preparing rehabilitation plans to five consultants in February 2019: HydroScience Engineers, Kleinfelder, Michael Baker International, Psomas and Stantec Consulting Services. Staff received proposals from four of the firms with Stantec declining to submit. Staff completed a thorough review and evaluation of the four proposals and recommends awarding a design contract in the amount of \$91,600 to Psomas. While each firm presented a broad depth of experience and expertise relative to the project, Psomas

demonstrated exceptional understanding of the scope of work and project approach. In addition, Psomas' fee schedule provided the best value of design services for the project. A Professional Service Agreement will be issued under the authority of the General Manager.

FISCAL IMPACTS:

Staff requests the addition of Project 11121 to the FY 2018-19 Capital Budget to fund the project as shown in the following table. Funding will be provided by the replacement fund for sanitary sewer.

Project No.	Current Budget	Addition <Reduction>	Total Budget
11121	\$-0-	\$531,300	\$531,300

ENVIRONMENTAL COMPLIANCE:

This project is categorically exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301, which provides exclusion for minor alteration of public facilities.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 16, 2019.

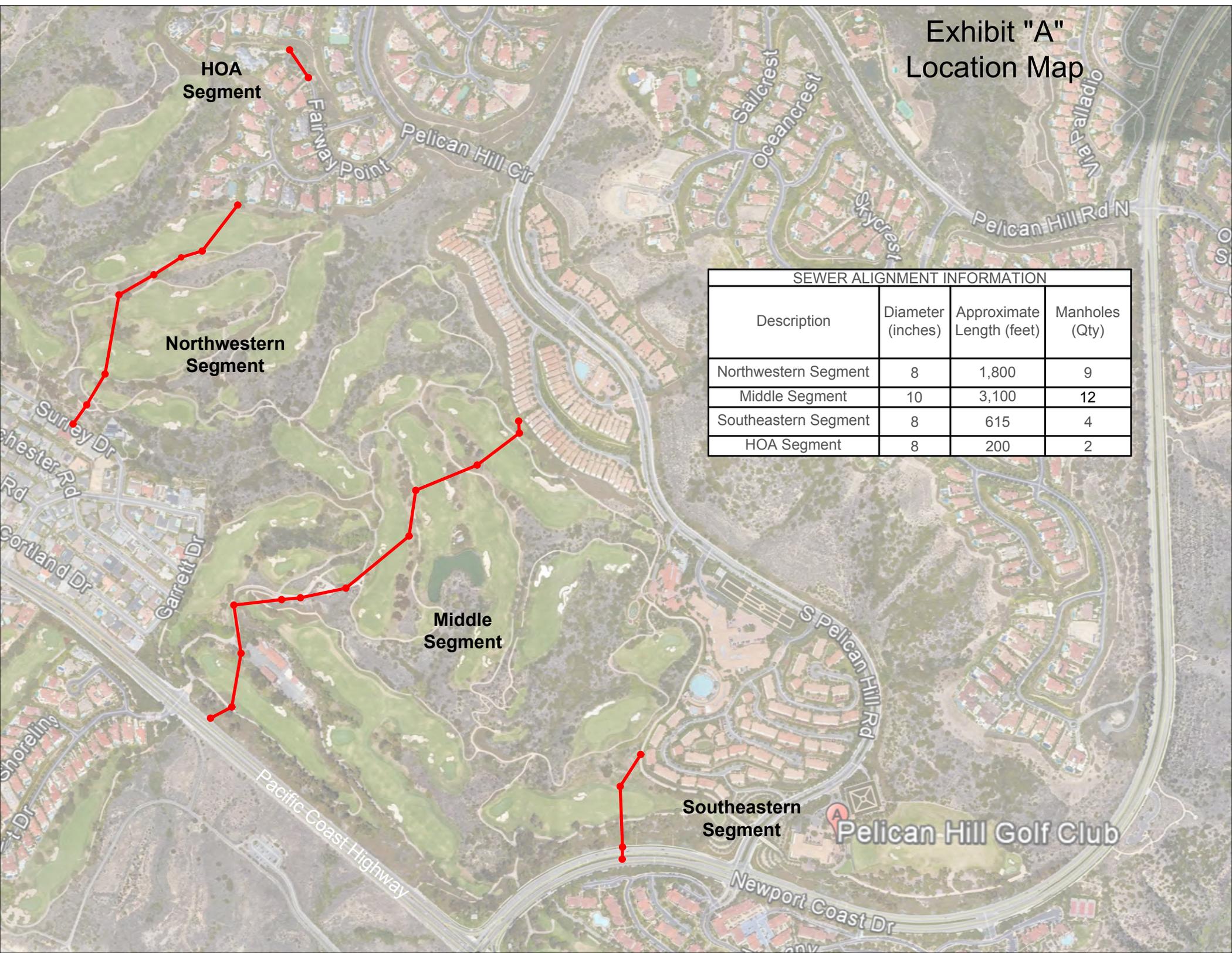
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECT 11121 IN THE AMOUNT OF \$531,300 TO THE FY 2018-19 CAPITAL BUDGET FOR THE PELICAN HILLS GOLF CLUB SEWER REHABILITATION.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "A" Location Map



SEWER ALIGNMENT INFORMATION			
Description	Diameter (inches)	Approximate Length (feet)	Manholes (Qty)
Northwestern Segment	8	1,800	9
Middle Segment	10	3,100	12
Southeastern Segment	8	615	4
HOA Segment	8	200	2

HOA Segment

Northwestern Segment

Middle Segment

Southeastern Segment

Pelican Hill Golf Club

April 22, 2019

Prepared by: T. Bonkowski/M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook 

ACTION CALENDAR

MICHELSON WATER RECYCLING PLANT BIOSOLIDS LANDSCAPING CONSTRUCTION AWARD

SUMMARY:

Physical construction of the Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Facilities (Biosolids Project) is nearing completion. This project will install site landscaping and an irrigation system around the recently constructed facilities. Staff recommends that the Board authorize the General Manager to execute a construction contract with Marina Landscape, Inc. in the amount of \$596,474 for the Michelson Water Recycling Water Plant Biosolids Landscaping project.

BACKGROUND:

The Biosolids Project will provide biosolids digestion, dewatering, energy production, and on-site sludge drying. The project includes three egg-shaped digesters; a state-of-the-art odor control system; a biogas conditioning system and power generation using micro-turbines; a fats, oil and grease receiving station; and new utility services. These facilities are being constructed on the land north of IRWD's existing Operations Center, maintenance shops, water quality laboratory, and warehouse.

Landscaping and irrigation systems are routinely not included by IRWD in major construction contracts and are awarded as separate construction contracts as the facility construction nears completion. The irrigation system components include controllers, valves, piping, fittings, rotor spray heads, and wiring; the landscaping portion of the work includes all plant material, mulch and drainage, as well as hardscape features such as concrete walkways and retaining walls. Shadetree Partnership has grown and will provide all plant material required for the implementation of this project. A location map with the proposed landscaping areas is attached as Exhibit "A".

Construction Award:

IRWD retained Kobzeff & Associates Landscape Architects for the landscape design. The plans were approved in February 2019 and the project was advertised for construction bidding to a select list of eight landscape contractors. The bid opening was held on April 11, 2019 with two contractors submitting bids: Marina Landscaping and Tropical Plaza Nursery. Marina Landscaping is the apparent low bidder with a bid amount of \$596,474; the engineer's estimate was \$652,200. The Bid Summary is attached as Exhibit "B".

FISCAL IMPACTS:

Project 04286 is included in the FY 2019-20 Capital Budget. The existing budget and expenditure authorization are sufficient to fund the construction of the project.

ENVIRONMENTAL COMPLIANCE:

The MWRP Biosolids and Energy Recovery Facilities is subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, a Supplemental Environmental Impact Report, SCH # 2011031091, was certified by IRWD on October 22, 2012. The City of Irvine Planning Commission approved a conditional use permit for the IRWD Biosolids Project on December 6, 2012.

COMMITTEE STATUS:

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

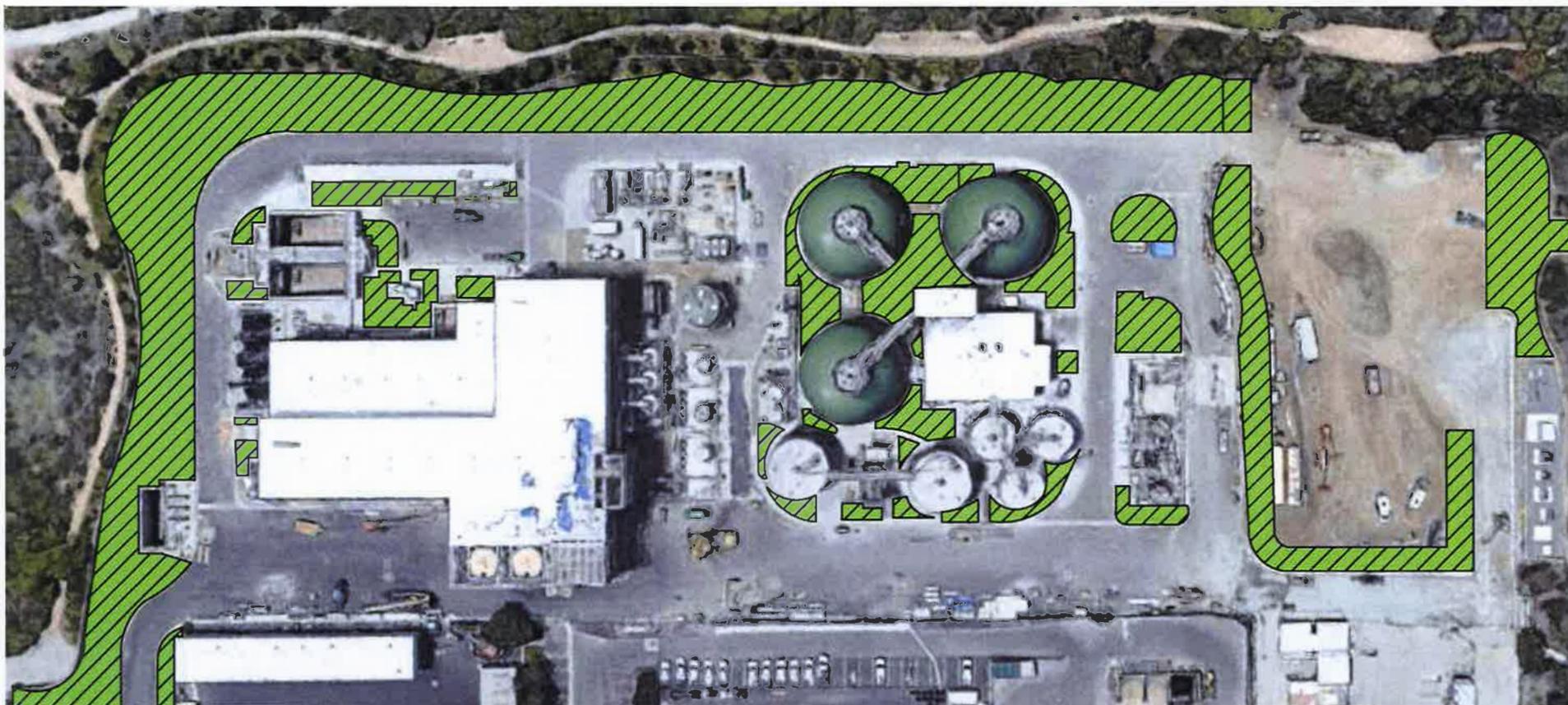
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH MARINA LANDSCAPING, INC. IN THE AMOUNT OF \$596,474 FOR THE MICHELSON RECYCLING PLANT BIOSOLIDS LANDSCAPING, PROJECT 04286.

LIST OF EXHIBITS:

Exhibit "A" – Location Map
Exhibit "B" – Bid Summary

Planned Biosolids Landscaping Areas



				Engineer's Estimate		1 Marina Landscape, Inc. Orange, CA		2 Tropical Plaza Nursery, Inc. Villa Park, CA	
Item	Description	Qty	Unit	Unit	Total	Unit	Total	Unit	Total
No.				Price	Amount	Price	Amount	Price	Amount
1	Mobilization, clearing & grubbing, demobilization, and clean up (shall not exceed 4.0% of the Contractor's bid total)	1	LS	\$26,088.00	\$26,088.00	\$23,000.00	\$23,000.00	\$48,111.00	\$48,111.00
2	Bonds & Insurance	1	LS	\$7,000.00	\$7,000.00	\$21,302.00	\$21,302.00	\$22,000.00	\$22,000.00
3	Irrigation start-up testing, trouble-shooting, calibration, and system demonstration	1	LS	\$18,000.00	\$18,000.00	\$1,000.00	\$1,000.00	\$4,000.00	\$4,000.00
4	Complete landscape irrigation system including but not limited to controllers with enclosure, master valves, remote control valves, underground boxes, ball valves, quick couplers, PVC Class 315 mainline, schedule 40 lateral lines, MPR 40-12 CV-R spray & pop-up heads, tree bubblers & any appurtenance work to insure efficient & uniform distribution as shown on Contract Documents.	1	LS	\$212,000.00	\$212,000.00	\$211,772.00	\$211,772.00	\$596,945.00	\$596,945.00
5	Complete landscape planting as shown on the Contract Documents, including but not limited to fine grading, soil preparation, planting of trees, shrubs, groundcover plants, guying and staking trees, clearing and grubbing of entire site, and weed abatement. Trees and plants are to be provided by Shadetree Partnership. Contractor is responsible for transporting the trees and plants from Shadetree Partnership nursery to MWRP job site.	1	LS	\$232,000.00	\$232,000.00	\$182,000.00	\$182,000.00	\$309,945.00	\$309,945.00
6	Complete construction and hardscape as shown on the Contract Documents, including but not limited to installation of weed control blanket with 3/4" crushed rock, 3' wide concrete walk, site concrete, cobble rock bed, gravity wall, catch basins, 3" drain pipe, and channel drains.	1	LS	\$100,000.00	\$100,000.00	\$132,000.00	\$132,000.00	\$132,799.00	\$132,799.00
7	Operation & Maintenance Manuals, Record drawings and Warranties	1	LS	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00
8	Trench & Project Safety Measures	1	LS	\$5,912.00	\$5,912.00	\$2,400.00	\$2,400.00	\$5,000.00	\$5,000.00
9	IRWD Planting Event - Total costs to include labor, materials, and equipment to assist IRWD with Planting Day Event (TBD).	1	LS	\$6,000.00	\$6,000.00	\$2,500.00	\$2,500.00	\$2,000.00	\$2,000.00
SUBTOTAL, Base Bid Items					\$609,000.00		\$577,974.00		\$1,122,800.00
Alternative Bid Items									
A-1	One-Year Service Maintenance Agreement (NOTE: The Service Maintenance Agreement will be included in the Base Bid Price and used in the evaluation of Bids. However, the service agreement will be executed 35 days after the filing of Notice of Completion of this Contract with the County of Orange. Therefore, the bid price for the service agreement will be excluded from the contract.	1	LS	\$43,200.00	\$43,200.00	\$18,500.00	\$18,500.00	\$132,000.00	\$132,000.00
SUBTOTAL, Alternative Bid Items					\$43,200.00		\$18,500.00		\$132,000.00
SUBTOTAL, Base Bid and Alternative Bid Items					\$652,200.00		\$596,474.00		\$1,254,800.00
ADDITION (+) OR									
DEDUCTION (-) *									
TOTAL AMOUNT OF BID					\$652,200.00		\$596,474.00		\$1,254,800.00
						Subcontractors:		Subcontractors:	
						Tree Demo - Treesmith Enterprises, Inc.		Electrical - RJ Electric	
						Concrete Gravity Wall - Ruiz Brothers & Associates, Inc.			

April 22, 2019

Prepared by: A. Murphy/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *[Signature]*

ACTION CALENDAR

SANTIAGO CANYON PUMP STATION IMPROVEMENTS CONSULTANT SELECTION

SUMMARY:

The Santiago Canyon Pump Station Improvements will increase fire flow capacities at four pump stations in the Santiago Canyon area. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$485,400 with Lee & Ro, Inc. for engineering design services for the Santiago Canyon Pump Station Improvements.

BACKGROUND:

The 2017 Santiago Canyon Area Distribution System Analysis identified improvements required to increase fire flow in the area by adding additional storage at the Fleming Reservoir, increasing the distribution pipeline diameter within Ladd Canyon Road, and making improvements to four pump stations. Improvements related to the Fleming Reservoir and Ladd Canyon Road pipeline upgrades are being handled under separate projects. This project, Santiago Canyon Pump Station Improvements, will upgrade the Manning, Read, Shaw and Williams Pump Stations to provide a minimum fire flow of 1,000 gallons per minute for a duration of two hours. The scope of improvements at the four locations will include increasing pumping capacity, site work, piping replacement, electrical, instrumentation, and communications upgrades to varying degrees based on the requirements for each location.

Consultant Selection:

Staff received proposals from AKM Consulting Engineers, Lee & Ro, Psomas, and Stantec Consulting. Staff evaluated the proposals and recommends the selection of Lee & Ro due to its superior analysis and understanding of the project, applicable pump station design experience, and innovative proposal as shown in the Consultant Selection Matrix attached as Exhibit "A". The proposal, attached as Exhibit "B", includes scope for preliminary and final engineering design and bid phase support services commensurate with the requirements of the project. Staff found Lee & Ro's scope of work to be complete, its fee reasonable, and recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Lee & Ro in the amount of \$485,400 for engineering design services.

FISCAL IMPACTS:

Project 01398 is included in the FY 2018-19 Capital Budget. The budget is sufficient to fund the design.

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 when additional, meaningful information becomes available.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH LEE & RO, INC. IN THE AMOUNT OF \$485,400 FOR ENGINEERING DESIGN SERVICES FOR THE SANTIAGO CANYON PUMP STATION IMPROVEMENTS, PROJECT 01398.

LIST OF EXHIBITS:

Exhibit "A" – Consultant Selection Matrix
Exhibit "B" – Lee & Ro Proposal

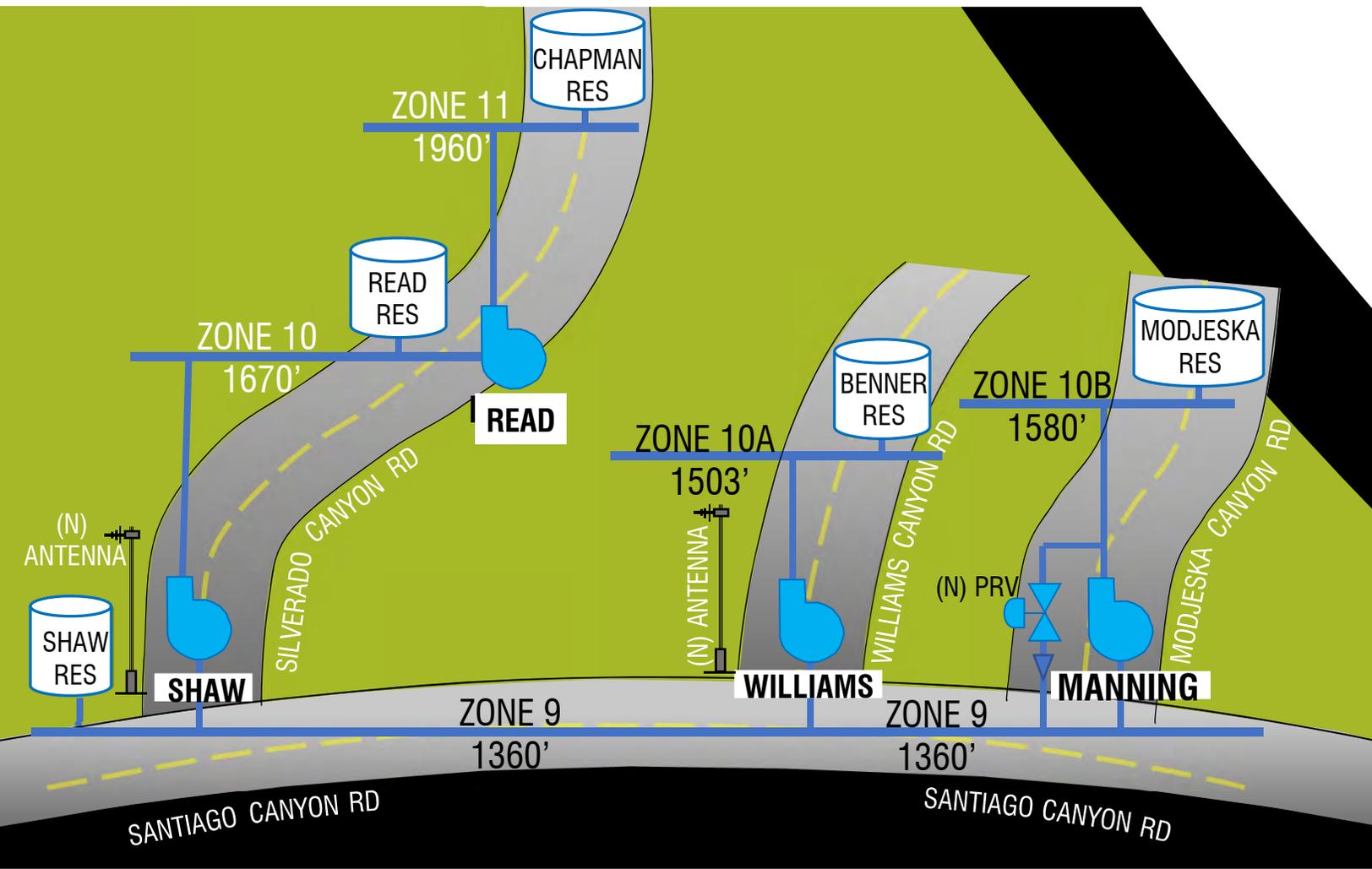
EXHIBIT "A"
Santiago Canyon Pump Station Improvements Project 01398
Consultant Selection Matrix

	Weights	AKM	Lee & Ro	Psomas	Stantec
TECHNICAL APPROACH	60%				
*Project Approach	60%	4	1	3	2
*Scope of Work	40%	4	2	3	1
		4	1	3	2
Weighted Score (Technical Approach)		4.00	1.40	3.00	1.60
EXPERIENCE	40%				
*Firm/Team	20%	4	1	3	2
*Project Manager	50%	4	1	2	3
*Project Engineer	30%	4	1	3	2
Weighted Score (Experience)		4.00	1.00	2.50	2.50
COMBINED WEIGHTED SCORE		4.00	1.24	2.80	1.96
		Man-hours	Man-hours	Man-hours	Man-hours
Task 1 -Project Management		222	118	79	336
Task 2-Preliminary Design		1489	1154	694	894
Task 3- Final Design		1981	1275	1213	2066
TOTAL Project HOURS		3692	2547	1986	3296
Sheet Count					
General		3	5	3	3
Civil /Mechanical/Structural		17	40	19	31
Electrical/Instrumentation		36	56	57	57
Total		56	101	79	91
TOTAL SHEETS					
FD HRS/SHT					
Review Meetings					
Total Meetigs					
FEE					
Project Management		\$44,042	26,165.00	15,109.00	73,360.00
Preliminary Design		\$295,308	\$247,848	\$131,838	\$192,135
Final Design		\$301,510	\$211,387	\$254,889	\$314,848
Grand Total- Preliminary and Final Design		\$640,860.00	\$485,400	\$401,836	\$580,343
Number of Drawings		56 dwgs	101 dwgs	79 dwgs	91 dwgs
Final Design Unit Prices (\$/dwg)		\$11,444	\$2,093	\$3,226	\$3,460
Professional Liability Insurance					
General Liability Insurance					
FORCED RANKINGS:		4	1	3	2
1 - First					
2 - Second					
3 - Third					



Proposal to the
**IRVINE
RANCH
WATER
DISTRICT**

PROPOSAL FOR
ENGINEERING DESIGN SERVICES FOR THE
**SANTIAGO CANYON
PUMP STATION
IMPROVEMENTS PROJECT**
MARCH 2019



March 14, 2019

Mr. Alex Murphy, Project Manager
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92618

Subject: Proposal for Engineering Design Services for the Santiago Canyon Pump Station Improvements Project

Dear Mr. Murphy:

The Irvine Ranch Water District (IRWD) is one of LEE & RO's most valued and important clients. We are excited for the opportunity to continue and expand our relationship with IRWD by being selected for the Santiago Canyon Pump Station Improvements Project (Project). LEE & RO has successfully delivered numerous pump station projects in the past specializing in condition assessment, preliminary and final design, and construction support services. We bring considerable expertise in medium and low voltage switchgear, motor control centers and pump stations related instrumentation/controls, communication and SCADA systems.

LEE & RO's team is committed to meeting the projects fast delivery schedule for Project. Our team is staffed with multi-disciplinary engineers that allows for quick coordination and decision making for projects such as this. The team will be led by ***Eric Lovering (Project Manager)***, who is a licensed "Civil" and "Electrical" Engineer with 19 years of hands on pump station experience. Through previous engagements with IRWD, Eric is familiar with your standards, expectations, culture, and desired methods of communication and collaboration. Most recently, Eric successfully managed the design for upgrades to the City of San Diego's 432 mgd Pump Station 2, adding 14 MW of both natural gas and diesel engine powered generation to a site choked with existing utilities and other constraints.

Our team has worked on several IRWD pump stations over the years, and clearly understands IRWD's processes, goals, and standards. We have carefully evaluated the project concerns and have developed approach and ideas for a speedy delivery as detailed in this proposal. Our team will allow for a smooth project and District peace of mind. The project will be complicated with the fact these systems are existing, and the flow of water must be maintained in the canyon area. Careful upfront planning will be critical to integrate temporary bypass pumping and electrical elements to facilitate the replacement of the mechanical and electrical/controls elements at each of the four pump stations.

Our team of industry leading pump station hydraulic experts will quickly narrow down the most appropriate pumps for each of the four pump stations and will clearly articulate the results in the preliminary design report. The pumps will meet daily filling demands of the reservoir, as well as the emergency fire flow requirements, all while being efficient.

Our team is committed to upgrading the stations while minimizing any impacts to the local community. LEE & RO is committed to meeting or exceeding the District's goals for reliable water service to the canyon for years to come.

Our seasoned team of engineers and quality control staff will assure constructability is built into the plans. This will allow for an economical and a well coordinate construction process.

LEE & RO appreciates the opportunity to be of service to the Irvine Ranch Water District. Please do not hesitate to call me if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dhiru Patel". The signature is fluid and cursive, with the first name "Dhiru" being more prominent than the last name "Patel".

Dhiru Patel, PE,
President
LEE & RO, Inc.

Enclosures: Four (4) Copies of Technical Proposal and One Copy of Sealed Fee Proposal

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Appendices

Appendix A Resumes

Section A:

SCOPE

LEE & RO has reviewed the detailed scope of work presented in the RFP and will adhere to the requirements. Work will be per the tasks listed below. We present our Technical Approach at the end of this Section.

TASK 1 PROJECT MANAGEMENT

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

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

For budgeting purposes, the Engineer shall budget for the following meetings at a minimum.

- C. Quality Assurance/Quality Control: The Engineer shall develop and implement proven QA/QC measures throughout the project to ensure ongoing and consistent quality control throughout all project phases.

TASK 2 PRELIMINARY DESIGN

The Engineer shall perform the following subtasks as part of the preliminary design phase. The primary goals of this task are to identify optimal pump selections, establish facility design criteria, define facility sizes and footprints, and identify the final recommended site layout. The subtasks shall be documented and compiled into a Preliminary Design Report (PDR) as summarized below.

- A. Site Survey: The Engineer shall survey each of the five locations (four pump stations and Shaw Reservoir) prepare an overall topographic map for each project location including one foot contours, specific dimensions and locations of existing utilities and location of potholes so that utility information may be incorporated into the topographic mapping and serve as the basis for design of the project.
- B. Right-of-Way: The existing property lines are shown on the record drawings. Identify any permanent easements and temporary construction easements required for the construction project, if required. IRWD will provide any legal descriptions, if required.

- The Engineer will incorporate the Right-of-Way information into the conceptual and design drawings.
- C. Utility Review: Perform utility research to locate utilities or other physical features including all IRWD utilities and any other utilities owned by other agencies and pothole up to three (3) utilities at each of the five locations for a total of fifteen (15) potholes.
- D. Geotechnical Investigation: Conduct a review of geotechnical reports and investigations for the sites. The geotechnical investigation from the Santiago Canyons Generator Project is included in Exhibit "C" and soils reports from the Manning Pump Station Generator Project are included in Exhibit "D". Based on the review of the existing report, use the previous soils analyses in the design or determine if an additional soils investigation is required.
- E. Optional Geotechnical Investigation: If necessary, conduct a geotechnical investigation at up to five sites. Drill up to a total of five (5) borings (one soil boring per site) to determine the geotechnical conditions at the four pump stations and Shaw Reservoir. Provide soils analysis for use in the design. This task will be included in the scope of work in the professional services agreement and will be authorized if needed.
- F. Hydraulic Analysis: LEE & RO will perform hydraulic analysis of the pump stations using the existing calibrated model data provided by the District. We will update the existing system hydraulic model to reflect the preliminary design options (including pump system curves and PRV selection parameters).
- G. Pumping System: The Engineer shall review the Tier 1 recommendations for pumping improvements at Manning, Read, Shaw and Williams pump stations as summarized in Exhibit "B". The increases in pumping capacity listed in Exhibit "B" are based on the recommendations for Tier 1 improvements as described in the Santiago Canyon Area Distribution System report (Exhibit "H") with additional pumping improvements at Shaw pump station to replace the older pumps at that site and to provide additional pumping capacity to reduce the fill-time for Read Reservoir. The engineer shall consider the existing conditions at each location including site constraints, distribution piping, operational constraints, and power availability in developing the recommendations for final pumping improvements to meet the capacity requirements and provide a minimum of one standby pump. The engineer should evaluate each of the pumping configurations listed in the Improvement Recommendations found in Exhibit "B". The improvements shall include the replacement of suction and discharge piping and appurtenances to accommodate the pumping improvements.
- H. Pressure Reducing Valve Station (PRV): The Engineer shall identify the type, size, and location for a new PRV between Zone 10b and Zone 9 to utilize the surplus capacity in Zone 10B to feed Zone 9 during fire events. The Engineer shall determine the target flow rate for the PRV as part of the hydraulic analysis (Subtask F).
- I. Conceptual Layout: Provide a conceptual site layout for each of the four pump stations and Shaw Reservoir. The site layout shall include the location of the existing access roads, fencing and walls, pumps and piping and generator, proposed pump, piping, related site improvements and any temporary systems required during construction. The site layout shall also include locations of existing or additional electrical transformers/panels and electrical and instrumentation conduits and the location of the new IRWD standard height (35') communications antennas at Shaw Reservoir and Williams Pump Station. The conceptual layout shall identify the property lines and any other easement locations.

- J. Electrical: Identify the existing SCE service available at each site and determine if it is sufficient based on the additional pumping capacity and new improvements. If upgrades to the electrical service are needed, evaluate a buried service and aerial drop option. This task shall include evaluation of the existing emergency generators to confirm if they are sufficiently sized to provide emergency backup power for all new improvements and recommendations for replacement emergency generators as necessary. Sites where variable frequency drives are used shall include a NEMA 4X climate controlled enclosure.
- K. Instrumentation and Communications: Review the existing instrumentation, communications equipment and programmable logic control (PLC) units at the five sites. Provide a design that will incorporate the new and existing instruments. Evaluate the existing PLCs to confirm capability to incorporate any additional input and output points or whether PLC upgrades are needed. Based on initial site visits and the proposed scope of pumping improvements, the District anticipates the potential for a complete replacement of the existing PLCs at the Manning and Williams Pump Stations. The Shaw Reservoir communication cabinet, which serves as a communications hub for other sites in Silverado Canyon including Shaw, Read, and Chapman Reservoir, will also require a replacement PLC and NEMA 4X enclosure. A new 35-foot tall tower for communications will be added at the Shaw Reservoir and Williams Pump Station to improve communications. SCADA programming for the PLCs will be provided by a third party programmer retained by IRWD. Create a preliminary process and instrumentation diagram for each pump station.
- L. Permits: The Engineer shall identify all required permits and controlling agencies as well as the required fees and anticipated permit processing times. The agencies shall include the County of Orange, Orange County Fire Authority, and any other affected utility agencies.
- M. CEQA Documentation: This project is subject to the California Environmental Quality Act (CEQA), and IRWD will prepare and file the CEQA document. Provide IRWD with data regarding construction activities that will impact the environment for IRWD to complete and file the final CEQA document. Budget \$4,000 for this task.
- N. Project Schedule: The Engineer shall submit a construction project schedule that reflects coordination items, date of completed plans, critical path issues, any long lead items, and IRWD review times.
- O. Estimates of Probable Construction Costs: The Engineer shall provide preliminary estimates of probable construction costs for the construction project.
- P. Team Meetings: The Engineer shall schedule and lead meetings with the District to assure that all design, operational and maintenance issues are addressed. The Engineer shall provide meeting minutes and action items. This will assist in determining that all technical issues are addressed and that the project stays on schedule. Anticipated meetings during preliminary design include the project kickoff meeting, a preliminary design progress meeting to review the preliminary design recommendations before submittal of the draft PDR, and a final PDR review meeting.
- Q. Technical Specifications: The Engineer shall produce an outline of the Project Manual for the construction project. The outline shall include items not already covered by the District's Construction Manual, latest edition.
- R. Preliminary Design Report (PDR): The work described above shall be summarized and compiled into a PDR. At a minimum, the PDR shall summarize the results of the

subtasks identified above along with additional design criteria identified by the Engineer during the preliminary design phase.

Eight (8) copies of the Draft PDR and one (1) electronic copy in PDF shall be submitted for review. Upon resolution and incorporation of review comments, eight (8) copies of the final PDR and one (1) electronic copy in PDF shall be submitted. The PDR shall be finalized prior to proceeding with the 60 percent design deliverable.

TASK 3 FINAL DESIGN

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

- A. Project Manual: The Engineer shall prepare a Project Manual in standard IRWD format for the Contract Documents. IRWD's front end documents shall be utilized, and the Engineer shall assess IRWD's documents to determine any needed supplemental special provisions that should be added to comply with IRWD's general provisions and front end requirements. The Project Manual shall describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities. The Project Manual shall also include the IRWD General Technical Specifications, modifications thereto, and any project specific technical specifications.
- B. Construction Plans: The Engineer shall prepare detailed construction drawings for each set of Contract Documents in the latest version of AutoCAD and using NCS V4.0 layering standards, on 24-inch x 36-inch sheets utilizing IRWD's standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, phasing, and detail connections shall be included. Construction notes shall be used (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities shall be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map shall include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards.
- C. Electrical/Instrumentation: The Engineer shall prepare an operational scheme including P&IDs, single line diagrams, control equipment list, control loop descriptions, and method of integrating the proposed facilities into IRWD's existing SCADA system. Prior to this process, the Engineer shall meet with IRWD electrical/automation staff to incorporate IRWD's standard operations, programming, and tagging requirements into the design. The Engineer shall develop and provide the operational scheme and functional descriptions (in plain English) for District review and approval. The Engineer shall coordinate obtaining power and telemetry to the project site. The Engineer shall be responsible for obtaining SCE's approval for the proposed electrical services at the site.
- D. Project Schedule: The Engineer shall maintain and consistently update the project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project. A preliminary schedule outlining the preliminary and final design phase activities shall be included in the proposal.
- E. Opinion of Probable Construction Cost: The Engineer shall prepare a detailed and itemized opinion of probable construction cost for the proposed facilities,

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which shall be updated and submitted with each of the design deliverables described below.

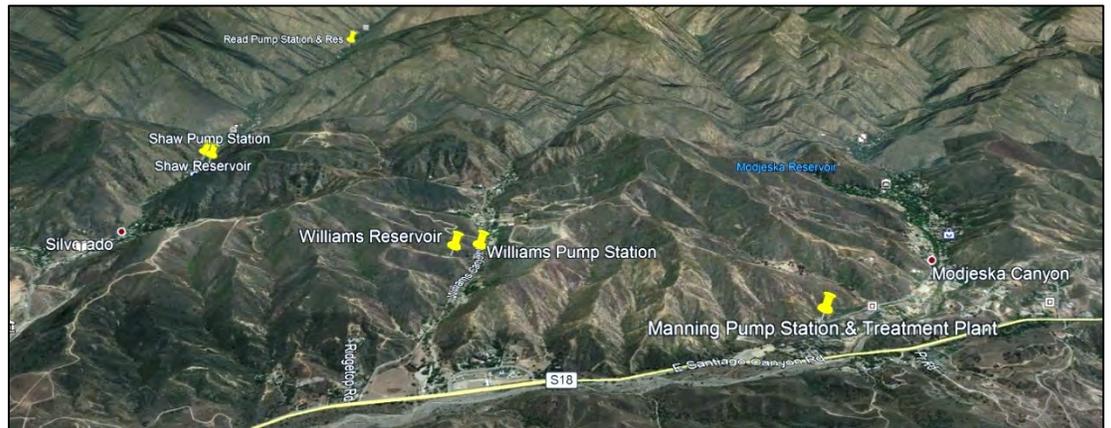
- F. Design Deliverables. Deliverables shall be made as follows:
1. Six 11"x17" and two 22"x34" bound copies of the 60 percent submittal and one CD containing a single PDF file of the entire plan set. Show civil/site, mechanical, and electrical plans. Show basic mechanical equipment, structural and architectural layouts, pipeline alignments, preliminary profiles, and existing utilities at a minimum. Provide a complete table of contents for the Project Manual.
 2. Six 11"x17" and two 22"x34" bound copies of the 90 percent submittal and one CD containing a single PDF file of the entire plan set. Show concepts of each component of the design such as civil, structural, mechanical, architectural, electrical and instrumentation. Show plan, profile, connections, details, and location of appurtenances. Plan and profile drawings and mechanical details/drawings shall be developed to a high level of detail. Provide five color coded copies of the 90 percent Project Manual, including all sections; contract documents, general provisions, special provisions, general requirements, technical specifications, and appendix.
 3. Six 11"x17" and two 22"x34" bound copies of the 100 percent submittal, one CD containing AutoCAD files for the entire plan set, and one CD containing a single PDF file of the entire plan set. Include complete plans and three color coded copies of the Project Manual, a notebook with the design calculations (including, but not limited to, mechanical, civil, structural, electrical, pipe thickness and restraint), and one CD containing all MS Word files used in the preparation of the Project Manual.
 4. One full size final stamped and signed reproducible plan set consisting of a mylar title sheet and all remaining sheets on bond paper, and one original signed Project Manual for District's signatures.
- H. Addenda Preparation and Pre-Bid Meeting: During the bidding period, the Engineer shall assist with providing information and clarification of bid documents to prospective bidders. This shall include the preparation of up to three addenda including revisions to the design plans and specifications and assistance with addressing bidder questions. At a minimum, addenda preparation activities shall include:
1. Plan Revisions: The Engineer shall budget 40 hours of appropriate staff time for plan revisions to the construction drawings.
 2. Specification Revisions: The Engineer shall budget 25 hours of appropriate staff time for revisions or additions to the project specifications.
 3. Bidder Questions: The Engineer shall budget 40 hours of appropriate staff time to address and respond to bidder questions.
 4. Pre-Bid Meeting: During the bidding period, the Engineer shall attend a two-hour pre-bid meeting. This may include a site visit with potential bidding contractor

TECHNICAL APPROACH

Our team has critically reviewed the available documents, and has started their preliminary analysis, which is further summarized in the tables on the following pages.

Presented below are site plans of the four pump stations to complement the preliminary analysis in the following tables.

GOOGLE EARTH VIEW OF THE 5 LOCATIONS



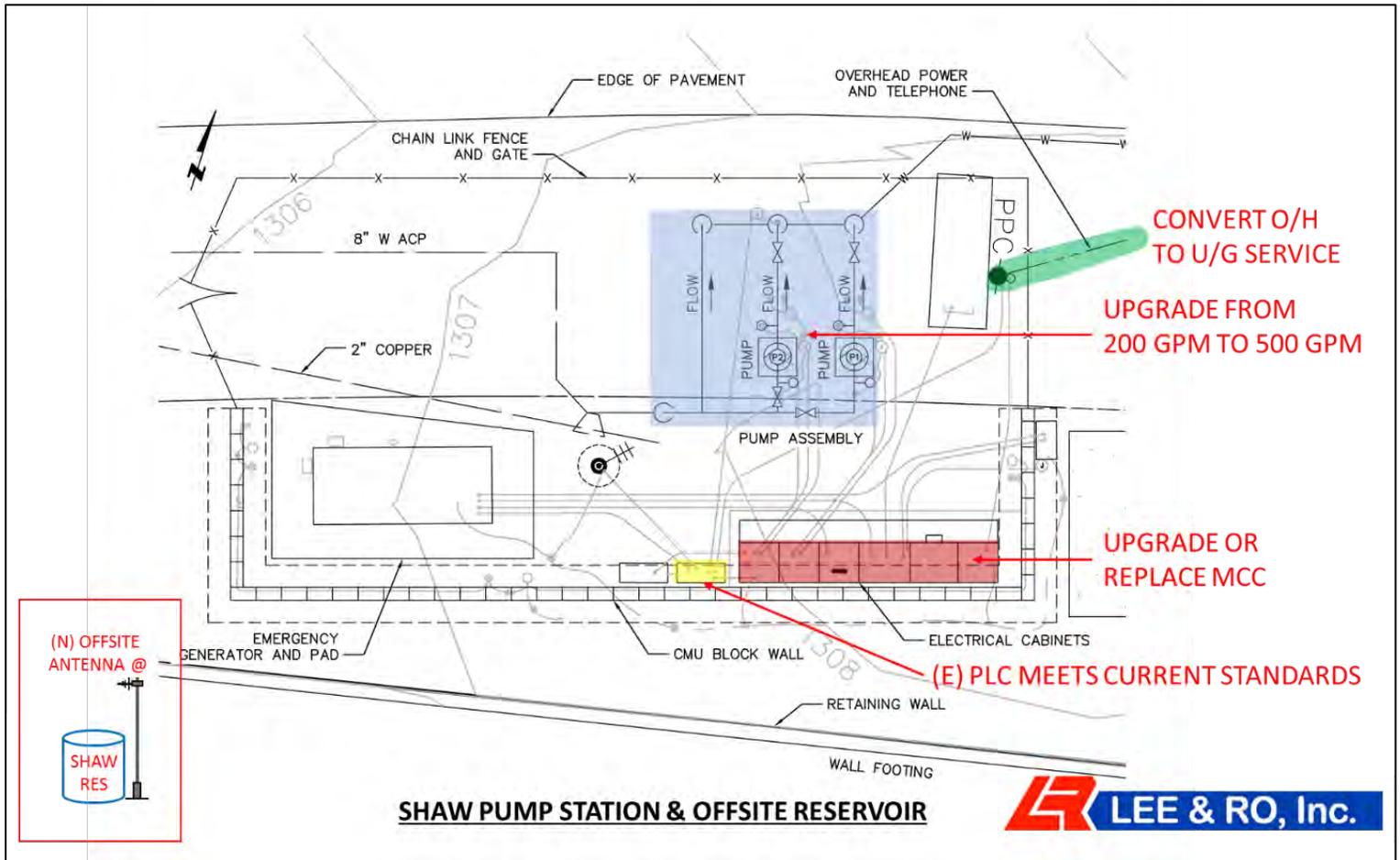
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SHAW PUMP STATION & OFFSITE RESERVOIR



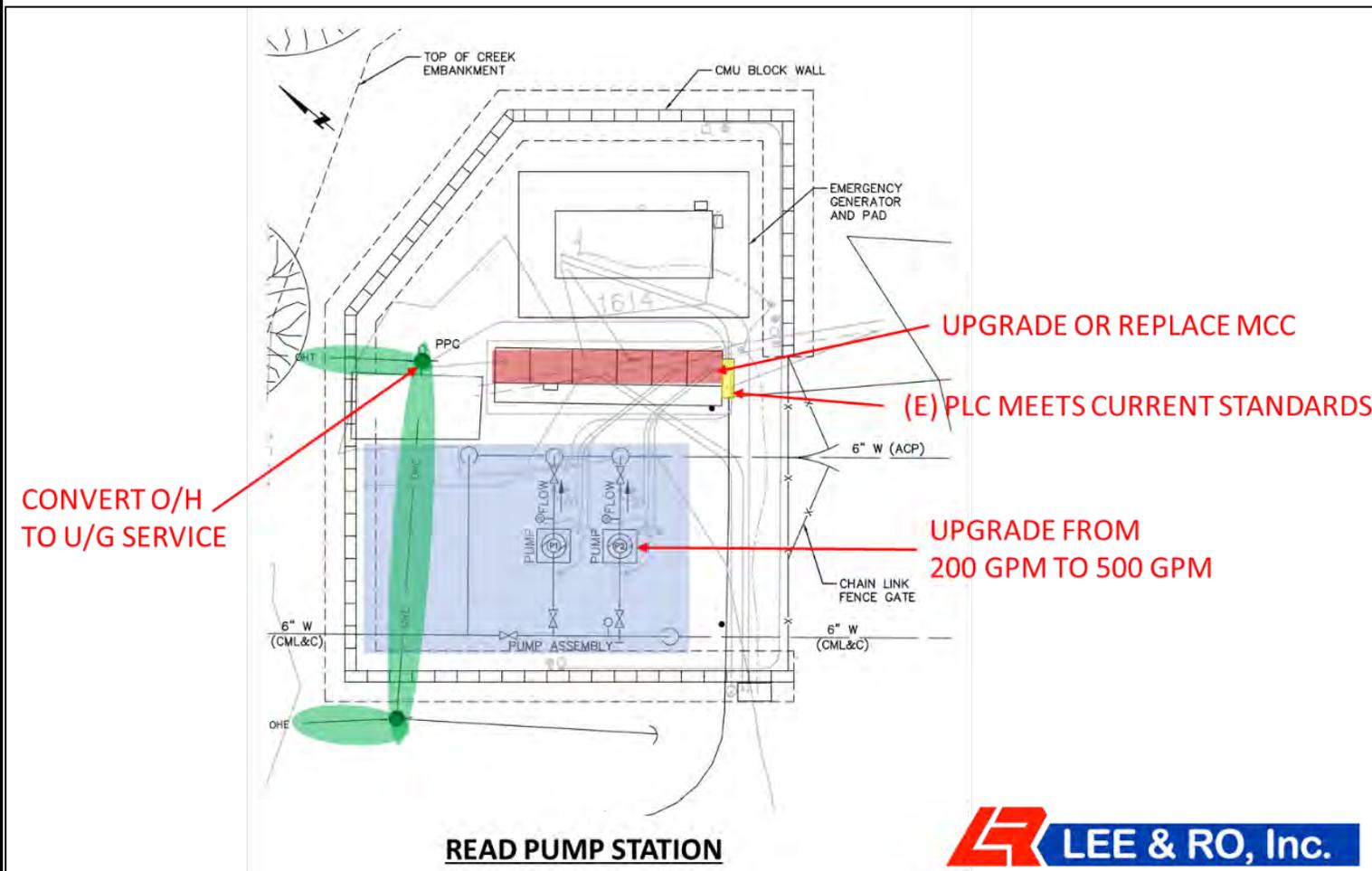
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READ PUMP STATION



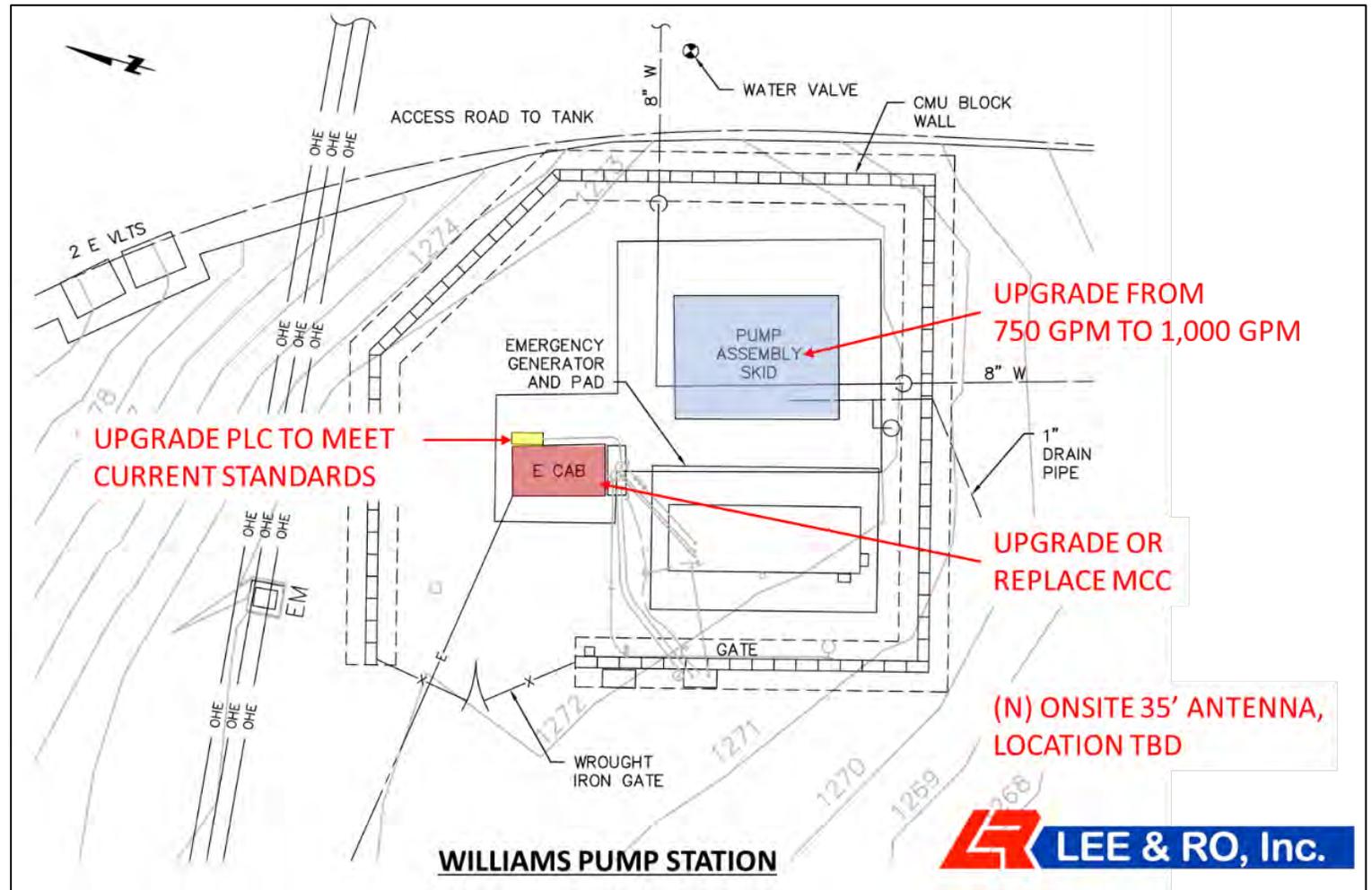
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WILLIAMS PUMP STATION



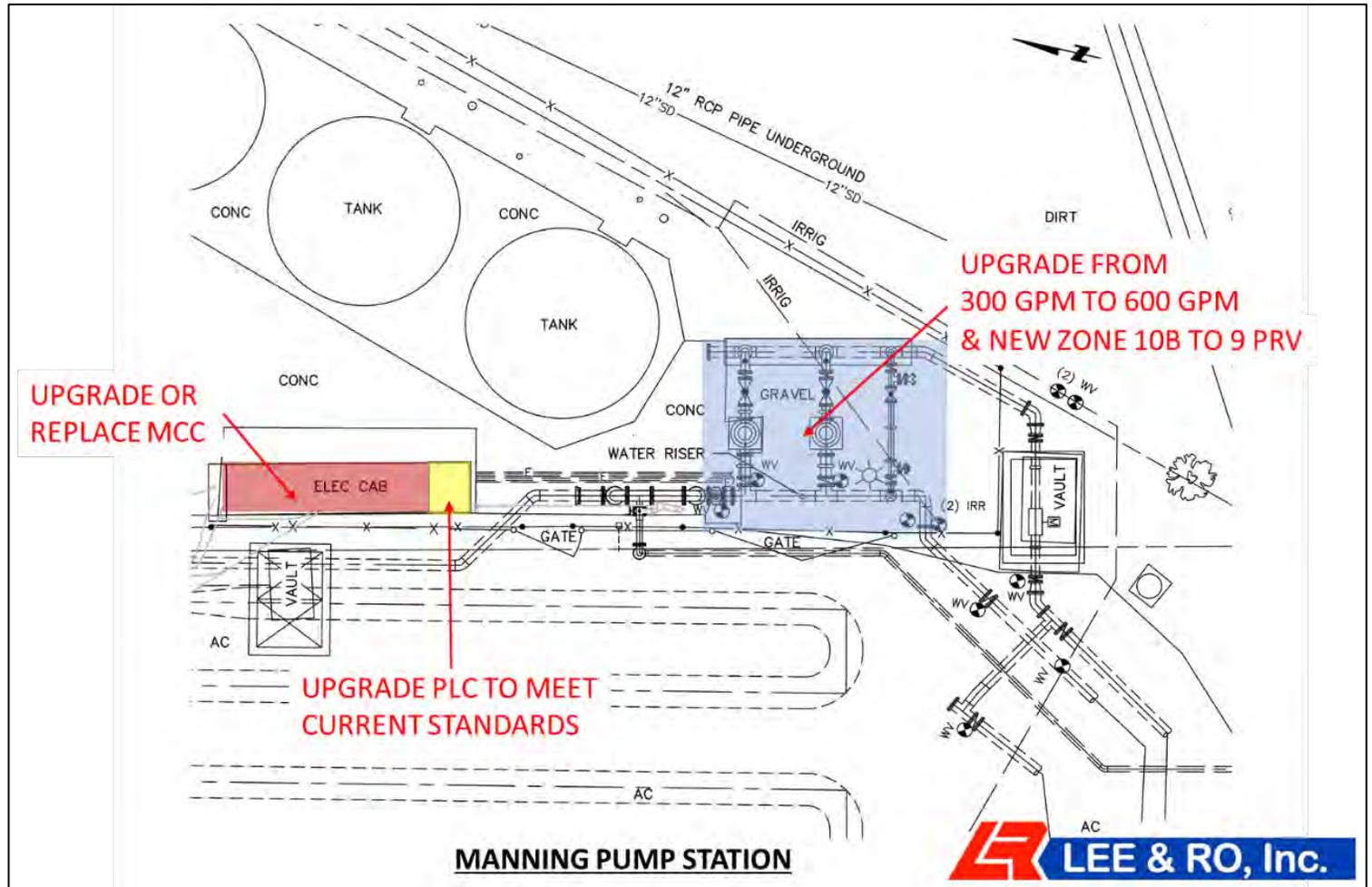
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MANNING PUMP STATION



i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				
1	Graphic/ Exhibit				
2	PS Discharge Reservoir	0.8 MG Read Res	0.15 MG Chapman Res	0.08 MG Benner Res	1.5 MG Modjeska Res
<p>SUMMARY OF HGLs & ELEVATIONS (ft): The simplified graphic above, illustrates the RFPs focus on improvements to the four pump stations shown, as well as the SCADA improvements at Shaw Reservoir.</p> <p>The tables below summarize relevant HGLs and elevations to provide a better understanding of the different Zones found throughout the Santiago Canyon distribution area. Based on this analysis, it is clear that all four pump stations have flooded suction mains and a high net positive suction head available (NPSHA) which allows for some flexibility in the pump types we will review during the preliminary design.</p>					
3	<p>Having some flexibility in the pump types will allow constructability issue to more significantly way in the decision-making process. All four sites are small, and three of the sites have vertical turbine pumps (VTPs). None of the existing pump cans are anticipated to be of sufficient size to meet the new flowrates required. Extensive site construction would be required to accommodate new VTP cans. During the preliminary design, we will review the possibility of at grade horizontal pumps which will simplify and shorten construction durations.</p> <p>Even though we are in Southern California, the sites elevations, steep canyon areas, and outdoor locations means that these sites are all susceptible to freeze. All exposed piping will need to be heat traced and wrapped in thermal blankets.</p>				
4	Discharge HGL (ft)	1670	1960	1503	1580
5	Suction HGL (ft)	↑ 1360	↑ 1670	↑ 1360	↑ 1360
6	Static Differential Between Zones (ft)	310	290	143	220
7	Est. Friction Loss at (E) Rated Flowrate (ft)	+	+	+	+
7	(E) Pump TDH @ (E) Rated Flowrate (ft)	21	25	147	230
8	(E) Pump TDH @ (E) Rated Flowrate (ft)				
9	PS Site Nominal Elevation (ft)	331	315	290	450
9	PS Site Nominal Elevation (ft)	1308	1614	1272	1250
10	NPSHA @ PS Site (ft)	84	88	120	142

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				
<p>(E) EMERGENCY WATER CAPACITY: The previous study provided in Exhibit H of the RFP analyzes the existing reservoir system capacity to supply emergency water in Santiago Canyon. The tables below summarize those results. The Chapman Reservoir (0.15 MG) and Benner Reservoir (0.08 MG), Zones 11 and 10A respectively, have very small capacities and cannot meet the storage requirements. To increase storage potentials, the large Modjeska Reservoir (1.5 MG), Zone 10B will back feed Zone 9 during emergencies through a new PRV.</p>					
11	<p>In addition to storage issues, three of the four sites cannot meet nominal Tier 1 emergency flowrate requirements. The remaining 4th pump station, Shaw, will also be increased to reduce feed time to the Read Reservoir.</p> <p>To generally summarize the project's hydraulic goals, the four pump stations will increase in pumping capacity to meet Tier 1 emergency flowrate requirements while also sized to move water that is back feed from the large storage capacity of Zone 10B into Zone 9, and then pump back to the higher Zone's 11 & 10A that have insufficient storage capacity.</p>				
12	STORAGE ANALYSIS				
13	Year 2020 thru 2035 Tier 2 Reservoir Surplus/(Deficit)	0.607 MG	(0.096) MG	(0.263) MG	0.963 MG
14	Table ES.2 Summary of Storage Requirements	(E) Surplus	Upsize PS	Upsize PS	(E) Surplus
15	Exhibit H, 4.3 Storage Recommendations <i>(Pumping recommendations due to lack of storage)</i>	No changes to PS capacity to meet storage requirements	Increase PS capacity to 500 gpm to makeup for lack of storage capacity.	Increase PS capacity to 1,000 gpm to makeup for lack of storage capacity.	No changes to PS capacity to meet storage requirements
16	FLOWRATE ANALYSIS				
17	(E) Total Capacity of Pump(s)	200 gpm	200 gpm	750 gpm	300 gpm
18	Exhibit H, 5.2 Distribution Analysis - (E) Condition, <i>(Pump-off Capacity, w/ lowest capacity hydrant)</i>	700 gpm	500 gpm	1470 gpm (excluding 1 F/H)	500 gpm
19	Exhibit H, 5.2 Distribution Analysis - (E) Condition, <i>(Pump-on Capacity, w/ lowest capacity hydrant)</i>	995 gpm	732 gpm	unknown	846 gpm
20	Exhibit H, Tier 1 Requirement	1,000 gpm	1,000 gpm	1,000 gpm	1,000 gpm
21	Exhibit H, 5.3 Fire Flow Improvement Recommendations	Increase PS Capacity. Various pipe upsizing, by others.	Increase PS Capacity. Various pipe upsizing, by others.	Increase PS Capacity. Various pipe upsizing, by others.	Increase PS Capacity. Various pipe upsizing, by others.
22	(E) Pumps	2 @ 200 gpm/ea	2 @ 200 gpm/ea	2 @ 250 gpm/ea 1 @ 500 gpm/ea	2 @ 300 gpm/ea
23	(E) Pump Type	VTP w/ Above-Grade Suction and Discharge	VTP w/ Above-Grade Suction and Discharge	Centrifugal Above-Grade Horizontal Mount	VTP w/ Below-Grade Suction and Above-Grade Discharge

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				

(N) PUMP ANALYSIS: All four sites will require increased pumping capacity. As a result of the increased size, the pumps will all require larger horse power motors that will affect the electrical supply, which is further discussed on the following page. On row 28 in the table below, we calculate the initial anticipated water-to-wire power requirements as a starting point for preliminary analysis. This calculation is based on site elevations, the static differential between zones, and estimated friction loss of the pipelines and fittings. LEE & RO's hydraulic experts will coordinate with the InfoWater modeler to assure it reflects our requirements. In particular, based on our understanding of the system, certain improvement by others is occurring on the system, now and in the future.

Increasing the flowrates will steepen the system curves, while conversely upsizing portions of the pipeline will reduce the system curves. Our analysis will assure our system will meet current configurations as well as future configurations. Once the system curve is finalized, we can reevaluate the final horse power requirements and size of the pumps accordingly.

Also, during the preliminary design, we will review different combinations of pumps for Williams and Manning Pump Station.

24 **Williams PS:** Upon initial review of Williams PS, a 2+1 configuration appears to be optimal, versus a 3+1 configuration. With three pumps, we anticipate 60 HP motors will be required and that will fortunately match the anticipated horse power of Shaw and Reed PS. This will provide some maintenance reliability with spare parts. Furthermore, the existing site only has three MCC feeds available; increasing to four feeds will require a new MCC.

Manning PS: Upon initial review of Manning PS, a 1+1 configuration appears to be optimal, versus a 2+1 configuration. Similar to the rationale above with Williams PS, the existing site only has two MCC feeds available; increasing to three feeds will require a new MCC.

During the preliminary design we will more thoroughly review other issues of pump combinations, such as efficiency with various configurations and pump types. Since these pump stations don't need to suck dry a reservoir as is the case for many of IRWD pump stations, traditional deep vertical turbine pumps are not necessarily required. And as discussed previously, the high NPSHA allows for some flexibility in the pump types we will review during the preliminary design.

Table cells highlighted in "blue", show either new conditions or LEE & RO calculated values.

25	(RFP) Total Capacity of Pump(s)	500 gpm	500 gpm	1,000 gpm	600 gpm
26	(RFP) Pump Configuration	1 Duty + 1 Standby	1 Duty + 1 Standby	2 Duty + 1 Standby or 3 Duty + 1 Standby	1 Duty + 1 Standby or 2 Duty + 1 Standby
27	(E) Pump Motor	(1) 25 HP + (1) 25 HP	(1) 40 HP + (1) 40 HP	(2) 30 HP + (1) 60 HP	(1) 50 HP + (1) 50 HP
28	(N) Total Est. Pump Motor Load Calculated Water-to-Wire, (will refine with actual Hydraulic Model)	52 HP	50 HP	92 HP	85 HP
29	(N) Anticipated Minimum Pump Motor Sizes (Rounded up to nearest available motor size)	(2) 60 HP <i>includes standby pump</i>	(2) 60 HP <i>includes standby pump</i>	(3) 60 HP or (4) 40 HP <i>includes standby pump</i>	(2) 100 HP or (3) 50 HP <i>includes standby pump</i>

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				

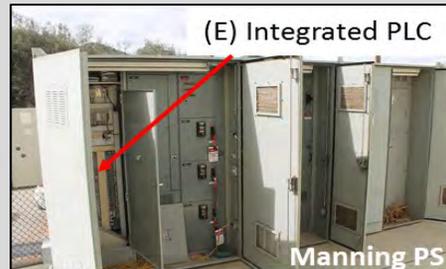
(N) MCC & POWER UTILITY ANALYSIS: Based on the new larger horse power motors required, all the MCCs will have to be extensively modified or replaced. We will coordinate with IRWD staff as to the existing condition of each MCC and decide if they are worth modifying, or if they should be replaced entirely. Site constructability for installing new verses field modifying the MCCs will be thoroughly vetted. Based on the analysis below, the existing feeder breakers and motor starters will all need to be upsized. It appears that the overall horizontal bus rating of the gear is sufficient to make modifying the MCC a possible option, assuming the buckets are large enough. If the project elects to increase the number of existing pumps, such as a 3+1 and 2+1 configuration options at Williams and Manning respectively, it does not appear that MCC modifications will be practical, and if those configurations are deemed preferred, would result in having to replace those two MCCs anyways.

Since it appears that all the sites will require extensive mechanical replacement, which will result in temporary and independent bypass pumping during construction, it may be simpler to consider replacing all the MCCs at this time. Also, field modification of MCC is difficult and costs increase for trained UL panel shop staff to field modify the gear and provide re-UL certification of such equipment. As such, our drawing list will assume that each site will include MCC replacement, but we will leave open the possibility of MCC modifications in our preliminary analysis before making a final determination.

30

Based on initial review of the system hydraulics, it appears that Williams PS should be equipped with VFDs due to the small 0.08 MG capacity of the Benner Reservoir; this will lower the number of starts and stops and better match the daily flows required. Since all of Santiago Canyon pressure zones float on reservoir HGL levels, the remaining three pump stations should be simply equipped with soft starters to fill the reservoirs.

The Manning MCC, is further encumbered with an integrated PLC in one of the sections, and as part of the SCADA requirements, this PLC will be completely replaced.



Two of the sites, Shaw and Read, have overhead utility power feeds with on-site cable down poles. These will be converted to on-site underground service. Also, Read Pump Station has on overhead telecommunication service that will also need to be converted to underground. For all the sites, we will coordinate with the utility as necessary the revised single line and motors loads to confirm the existing service is adequate.

31	(E) Pump Feeder Bkr.	70 Amp	70 Amp	unknown	100 Amp
32	(N) NEMA Motor Full Load, w/ Only Duty Pump(s) Running (Amps)	77 Amp	77 Amp	(2) x 77 = 154 Amp <i>(assumes worst case load, 2+1 config)</i>	124 Amp <i>(assumes worst case load, 1+1 config)</i>
33	(N) Breaker Size Each	100 Amp	100 Amp	100 Amp	150 Amp
34	(E) MCC Horizontal Bus Rating	225 Amp	300 Amp	unknown	400 Amp
35	(E) Motor Starter	SSRV	SSRV	unknown	SSRV
36	(E) Motor Starter Sizes	unknown	unknown	unknown	Nema 3
37	(N) Starters	Soft Start	Soft Start	VFD	Soft Start
38	(E) Electric Utility Feed	(E) Cable Down Pole On-site	(E) Cable Down Pole On-site. Also (E) OH Telecomm.	(E) Underground Service	(E) Underground Service
39	(N) Electric Utility Feed	(N) Underground Service	(N) Underground Utility & Telcomm. Service	Coordinate with utility new service loads	Coordinate with utility new service loads

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				

(N) GENERATOR ANALYSIS: The existing generators appear to have been previously sized by CAT to not only run the duty pump(s), but also the standby pump. Since this project requires upsizing all the pumps, it can be seen in the tables below, that the existing generators can easily handle the proposed size for the new duty pump(s). Based on our analysis, the existing generators are sufficiently sized to meet the projects requirements. Depending on the final starting step-load analysis, we may need to incorporate a permissive to not allow the designated standby pump to operate.

41	(LRI) NEMA Calculated Emergency Loads w/ <u>All</u> (E) Pumps Running (Duty & Standby)	45 KW	67 KW	97 KW	82 KW
42	(E) Generator Emergency Load (per CAT Submittal)	43 KW <i>(Assumed (2) 25 HP Motors and Ancillary Loads)</i>	43 KW <i>(CAT assumed (2) 25 HP Motors and Ancillary Loads, but they are (E) 40 HP motors.)</i>	not provided	101 KW <i>(Assumed (2) 60 HP Motors and Ancillary Loads)</i>
43	(LRI) NEMA Calculated Emergency Load w/ Only (N) Duty Pump(s) Running and Ancillary Loads	52 KW	52 KW	97 KW	82 KW
44	(E) Generator Capacity	100 KW	100 KW	150 KW	150 KW

SITE PHOTOS FOR REFERENCE



SHAW PS



Williams PS



READ PS



Manning PS

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				
<p>(N) MECHANICAL PIPING ANALYSIS: Each of the four pump station sites have a completely different layout and configuration. In addition, each site will generally have the suction and discharge piping, along with all the laterals and apparatus replaced with new. The sites with buried mains, have tees that appear to be too small to meet the projects needs, thus, they will need to be dug up and replaced. Once complete, all four sites will be very similar in configuration and meet all of IRWD's current standards.</p>					
48	<p>To facilitate all the work, it appears that the best solution will be to have a completely independent temporary bypass system to assure the reservoirs are maintained full. Some of the sites are crowded, and will take careful planning and coordination to assure the temporary bypassing pumping is safe and reliable. Bypassing pumping will be a major part of the focus during the preliminary design.</p>				
49	(E) Suction Main @ Pump Station Site	10"-DI Above-Grade Main	6"-DI Above-Grade <i>(via bridge)</i>	8" Above-Grade Main	8"-ACP Below-Grade w/ 6" Laterals
50	(E) Discharge Main @ Pump Station Site	8"-CI Class 200 Below-Grade Main w/ 4"-DI Laterals	8"-CML&C Above & Above-Grade Mains, <i>(via bridge)</i> w/ 4"-DI Laterals	6" Above-Grade Main w/ 4" & 6" Laterals	8"-ACP Below-Grade w/ 4"-DI Laterals
51	(E) Suction Main w/ (N) Higher Flowrates, Velocity (fps)	2.04	5.67	6.38	3.83
52	(E) Discharge Main w/ (N) Higher Flowrates, Velocity (fps)	3.19	3.19	11.35	3.83
53	53 54 (E) Suction Lateral w/ (N) Higher Flowrates, Velocity (fps)	3.19	12.77	12.77	6.81
54				5.67	
55	55 56 (E) Discharge Lateral w/ (N) Higher Flowrates, Velocity (fps)	12.77	12.77	12.77	15.32
56				5.67	
57	(N) Suction Main @ Pump Station Site	Suction main is adequate, but should be replace with new.	Suction main is adequate, but should be replace with new.	Suction main is too small and must be replaced.	Must dig up suction manifold since the laterals are too small.
58	(N) Pumps	Must dig up VTP pump barrels to replace with larger barrels or utilize at grade horizontal pumps.	Must dig up VTP pump barrels to replace with larger barrels or utilize at grade horizontal pumps.	Replace (E) skid mounted units with either (N) VTPs or similar at grade horizontal pumps.	Must dig up VTP pump barrels to replace with larger barrels or utilize at grade horizontal pumps.
59	(N) Discharge Main @ Pump Station Site	Must dig up discharge manifold since the laterals are too small.	Must dig up discharge manifold since the laterals are too small.	Provide (N) discharge main.	Must dig up discharge manifold since the laterals are too small.

i		Shaw PS	Read PS	Williams PS	Manning PS
ii	Pumps to Zone	10	11	10A	10B
iii	Site Photo				
60	<p>(N) SCADA & MISCELLANEOUS ANALYSIS: The Shaw Reservoir will need a new PLC, as well as Williams and Manning Pump Stations. Shaw and Read Pump Stations have recently installed PLCs, which may require minor modifications to accept any required field I/O.</p> <p>New 35' tall antennas will be designed for Shaw Reservoir and Williams Pump Station.</p>				
61	PLC	<p>1. At nearby Shaw Reservoir, replace PLC to meet current IRWD Standards.</p> <p>2. Shaw PS meets current IRWD standards. Modify if necessary to accept (N) field I/O.</p>	Meets Current IRWD Standards. Modify if necessary to accept (N) field I/O.	Upgrade PLC to New IRWD Standards	Upgrade PLC to New IRWD Standards
62	Miscellaneous	(N) 35' Antenna @ nearby Shaw Reservoir	New Pad Mounted Transformers	(N) 35' Antenna	(N) PRV and flowrate TBD

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ANTICIPATED DRAWING LIST:

LEE & RO has developed a preliminary list of drawings demonstrating the anticipated level of effort. We estimate approximately ~102 drawings will be required for this project.

ANTICIPATED DRAWING LIST

Legend:

	Common Sheet(s) and Effort
	Unique Sheets or Effort
-	No Work Anticipated

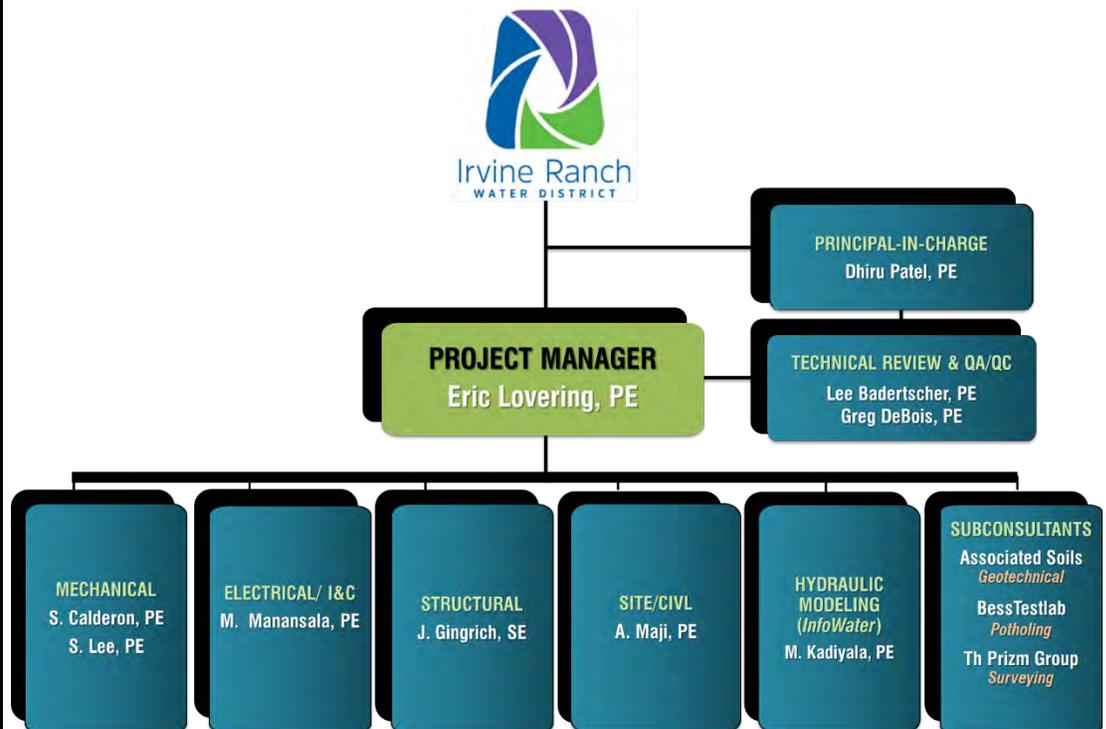
Dwg(s)	Descriptions	Shaw Reservoir	Shaw PS	Read PS	Williams PS	Manning PS
GENERAL						
G-1	TITLE SHEET			X		
G-2	LOCATION & VICINITY MAPS & DRAWING INDEX			X		
G-3	GENERAL NOTES - 1			X		
G-4	GENERAL NOTES - 2			X		
G-5	SYMBOLS & ABBREVIATIONS			X		
DEMOLITION						
D-1 to 4	SITE DEMOLITION PLAN	X	X	X	X	X
D-5	DEMOLITION DETAILS - 1			X		
D-6	DEMOLITION DETAILS - 2			X		
D-7	MISCELLANEOUS DEMOLITION DETAILS			X		
D-8 to 11	ELECTRICAL DEMOLITION DETAILS	X	X	X	X	X
TEMPORARY FACILITIES						
T-1 to 4	TEMPORARY SITE PUMPING PLAN AND DETAILS	-	X	X	X	X
T-5 to 8	TEMPORARY ELECTRICAL PLAN AND DETAILS	-	X	X	X	X
T-9	TEMPORARY COMMUNICATIONS PLAN			X		
CIVIL						
C-1 to 5	SITE PLAN	-	X	X	X	X
C-6	CIVIL DETAILS - 1				X	
C-7	CIVIL DETAILS - 2				X	
MECHANICAL						
M-1	MECHANICAL MATERIALS LIST & GENERAL NOTES	-			X	
M-2 to 5	MECHANICAL PLAN	-	X	X	X	X
M-6 to 9	MECHANICAL SECTIONS	-	X	X	X	X
M-10	MECHANICAL DETAILS - 1				X	
M-11	MECHANICAL DETAILS - 2				X	
M-12	MECHANICAL DETAILS - 3				X	
M-13	MECHANICAL DETAILS - 4				X	
ELECTRICAL						
E-1	ELECTRICAL SYMBOLS & ABBREVIATIONS			X		
E-2 to 6	ELECTRICAL SITE PLAN	X	X	X	X	X
E-7 to 8	UTILITY UNDERGROUNDING PLAN & DETAILS	-	X	X	-	-
E-9 to 12	ELECTRICAL 480V SINGLE LINE & 120V PP DIAGRAM	-	X	X	X	X
E-13 to 16	ELECTRICAL EQUIPMENT ELEVATIONS	-	X	X	X	X
E-17 to 21	SITE SPECIFIC ELECTRICAL DETAILS	X	X	X	X	X
E-22	GENERAL ELECTRICAL DETAILS			X		
E-23	CONTROL SCHEMATIC - VARIABLE SPEED PUMPS	-	-	-	X	-
E-24	CONTROL SCHEMATIC - CONSTANT SPEED PUMPS	-		X	-	
E-25	UPS PANEL POWER DISTRIBUTION AND CONTROLS			X		

Dwg(s)	Descriptions	Shaw Reservoir	Shaw PS	Read PS	Williams PS	Manning PS
ELECTRICAL						
E-26	PLC PANEL LAYOUT		-	-		X
E-27	CONTROL PANEL POWER WIRING - 1		-	-		X
E-28	CONTROL PANEL POWER WIRING - 2		-	-		X
E-29	CONTROL PANEL I/O WIRING - 1		-	-		X
E-30	CONTROL PANEL I/O WIRING - 2		-	-		X
E-31	CONTROL PANEL I/O WIRING - 3		-	-		X
E-32	CONTROL PANEL I/O WIRING - 4		-	-		X
E-33	CONTROL PANEL I/O WIRING - 5		-	-		X
E-34	CONTROL PANEL I/O WIRING - 6		-	-		X
E-35	CONTROL PANEL I/O WIRING - 7		-	-		X
E-36	CONTROL PANEL I/O WIRING - 8		-	-		X
E-37	CONTROL PANEL I/O WIRING - 9		-	-		X
E-38	CONTROL PANEL I/O WIRING - 10		-	-		X
E-39	CONTROL PANEL I/O WIRING - 11		-	-		X
E-40	CONTROL PANEL I/O WIRING - 12		-	-		X
E-41 to 42	PLC PANEL LAYOUT MODIFICATIONS	-	X	X	-	-
E-43 to 44	CONTROL PANEL I/O MODIFICATIONS - 1	-	X	X	-	-
E-45 to 46	CONTROL PANEL I/O MODIFICATIONS - 2	-	X	X	-	-
E-47	COMMUNICATION MODIFICATIONS			X		
E-48 to 49	COMMUNICATIONS WIRING	X	-	-	X	-
E-50	ELECTRICAL DETAILS			X		
E-51	ELECTRICAL CABLE AND CONDUIT SCHEDULE - 1			X		
E-52	ELECTRICAL CABLE AND CONDUIT SCHEDULE - 2			X		
INSTRUMENTATION						
I-1	INSTRUMENTATION SYMBOLS & ABBREVIATIONS			X		
I-2	PROCESS & INSTRUMENTATION DIAGRAM - PUMPS	-			X	
I-3	COMMUNICATION BLOCK DIAGRAM			X		
I-4	INSTRUMENTATION DETAILS - 1			X		
TOTAL NO. OF DRAWINGS: <i>(Note, actual drawings sheet count may be less if there is room on the sheets to combine information. Matrix tables will be used to account for equipment's unique tag numbers, number of pumps, etcetera to allow for common electrical and instrumentation sheets when appropriate.</i>		102				

Section B: TEAM

LEE & RO proposes a project team as shown in the organization chart below, which indicates the roles and responsibilities of key team members. Brief credentials of the proposed staff are described below. The full resumes of the proposed LEE & RO staff are arranged in alphabetical order and located in **Appendix A**.

ORGANIZATION CHART



LEE & RO understands this job presents numerous challenges to work through multiple layouts, multiple facilities, multiple users/stakeholders must be distilled into a cohesive, sensible design that works for everyone. An extended preliminary design phase will be necessary to develop and collect opinions, negotiate space and processes, and build consensus amongst stakeholders. At the end of preliminary design, technical challenges and schedule constraints will drive an expedited final design. During construction, keeping the existing facility in operation will require careful sequencing. LEE & RO has built a team to solve these problems.

The Project Team will be led by **Eric Lovering, PE**. Eric has worked on numerous IRWD pump station projects and is familiar with IRWD's standards, expectations, and culture. In addition to closely managing project schedule and budget, Eric will leverage his multidisciplinary expertise to get involved with the detail design for the entire facility, and continuously manage quality and design coordination.

Sal Calderon, PE, will serve as the Lead Mechanical Engineer. Sal has significant pump station experience. He brings a track record of over 20 years of delivering projects to the Orange County area throughout over 30 years of engineering

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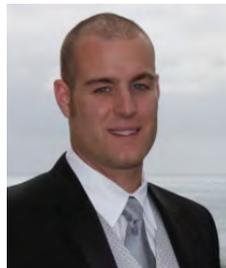
experience. Throughout his career Sal has been a project manager, technical advisor, design manager, start-up & commissioning engineer, and most importantly a troubleshooter.

Eric and Sal will be supported by a multidisciplinary team of LEE & RO engineers who are also introduced below. For their full resumes, please see **Appendix A**.

To meet the hydraulics needs of this project we've assigned **Murthy Kadiyala, PE**, our hydraulics modeling engineer. Murthy Kadiyala has performed numerous hydraulic analyses using water distribution system software such as H2ONet, Infowater and WaterGEMS. In addition to running steady state and fire flow analyses, he helped select several deep water well and booster pumps to match the system performance. A set of system curves generated at the pump station, representing the maximum and minimum system head conditions, help define the system operating point which form the basis for pump selection. With his experience of the system operations, realistic boundary conditions will be defined in setting practical limits.

For subconsultant support services, we've invited proven subconsultants that have worked with LEE & RO on IRWD projects: Bess Testlab (potholing), The Prizm Group (surveying), and Associated Soils Engineering (geotechnical).

TEAM BIOS



ERIC LOVERING, PE
PROJECT MANAGER
SAN DIEGO OFFICE

Eric Lovering is a California licensed "Civil" and "Electrical"

Engineer with 19 years of experience. Eric core competencies include hydraulics, civil, mechanical, and electrical engineering including instrumentation & controls (I&C), programmable logic controllers (PLCs) and SCADA systems. As lead mechanical/electrical engineer and as project manager, Eric has successfully completed many design, construction, start-up and commissioning of water, recycled water, and wastewater facilities. Eric has worked on numerous IRWD pump stations, including Santiago Hills II and Hidden Canyon (PA18).

Recently, Eric was the project manager for two complex, high profile projects: San Diego County Water Authority's Miramar Pump Station Rehabilitation Project--a full rehabilitation of a 60 cfs raw water pump station and valve structures; and the City of San Diego's Pump Station 2 Reliability Upgrade and Power Generation Project, which added 14 MW of onsite power generation to the City's largest pump station to improve station reliability.

Eric combines high level, multi-disciplinary technical proficiency with a methodical, systematic approach to problem solving. Eric enjoys and excels at the challenge of managing the most technically demanding and complex jobs and has the track record to prove it.

Relevant Project Experience

Planning Area 18 Zone 3 to 4 Domestic Water and Zone B to C Recycled Water Booster Pump Station, Irvine Ranch Water District, Irvine. Project Manager for engineering design services for combined domestic water and recycled water pump stations. The \$2.3 million domestic water pump station consists of four 15 HP and two 100 HP VFDs pumps including standby pumps with a combined total capacity of 2,170 gpm and the \$1.8 million recycled water pump station consists of four 15HP variable frequency drive pumps with a combined total capacity of 475 gpm. The project included a PDR, final design services, and bid and construction phase

LICENSES

Professional Civil Engineer, CA# C70807
Professional Electrical Engineer CA# E18727

EDUCATION

BS, Aeronautical Engineering, UC Davis

19 YEARS OF EXPERIENCE

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services. Design components included hydraulic analysis and pump layout and selection, site layout, perimeter wall and access, masonry building, mechanical equipment and yard piping, and I&C. Final design included preparation of a Project Manual describing sequencing and tie-ins to existing facilities, permit coordination, surge analysis, and all civil, structural, mechanical, HVAC, architectural, and electrical and instrumentation plans.

Turtle Rock Zone B+ Recycled Water Flow Control System Modifications, IRWD. Project Manager for \$1.5 million in improvements to the recycled water pumping station. Performed comprehensive analysis including distribution system modeling and surge analysis for the system and implemented a number of system improvements: removed two small pumps (75 and 50 hp sizes); modified time of use (TOU) operations so that the pumps do not operate during SCE's on-peak charge periods; replaced existing PLC system and variable frequency drives for two 100 hp pumps; and converted an existing pressure reducing station from a back-up Zone B connection to a primary Zone D connection to provide anticipated recycled water demands.

Foothill Zone 6A Booster Pump Station, IRWD. Project Manager for the design and construction support for a \$ 2 million domestic water booster pump station rehabilitation and expansion. The project added a 100 hp booster pump, replaced PLC and controls, a new building HVAC system and a restroom and sewer, new acoustic treatment, new flowmeter, and modified the main pump header.

Miramar Pump Station Rehabilitation and Upgrading Project, San Diego County Water Authority, San Diego. Project Manager for upgrading of an 80 cfs (51.7 mgd) capacity potable water pump station delivering water from the Miramar Water Treatment Plant to member agencies. The scope of work includes comprehensive condition assessment and hydraulic & surge analysis. This \$5 million upgrade project includes replacement of pumps, seismic reinforcement, forced air ventilation, replacement of all existing 2.3 kV electrical equipment with 4.16 kV system, addition of automatic pump controls, SCADA integration, noise control, and site improvements.

Recycled Water Pump Station at Chlorine Contact Basin No. 2 (CCB-2), City of Riverside Water Quality Control Plant. Project Engineer; project included conversion of unused CCB-2 to Recycled Water Pump Station, new recycled water pipeline, flowmeter vault, new electrical equipment building, abandonment of the existing Pump Station No. 21 and removal of existing submersible recycled water pumps at CCB-3. The new pump station was designed to be expandable up to 22 MGD to handle future needs. A new electrical building is constructed at the east corner of the existing CCB-2. The conditioned electrical room is designed to accommodate five variable frequency drives, a motor control center and a programmable logic controller panel. Main power to the new recycled water pump station MCC is provided from the Tertiary Electrical Room switchgear located south of CCB-2. The pump station connects to a new recycled water pipeline to facilitate servicing both internal and external recycled water users.

Main Switchgear Building, Weymouth Water Treatment Plant. Project Mechanical/HVAC Engineer for design of a new 5,000 square feet main switchgear building housing 12kV and 4.16kV switchgear, two 1,000 kW emergency generators, and other electrical equipment. Responsible for engineering and design of mechanical, HVAC and building piping and plumbing.

Electrodialysis Demineralization (EDR) Facility Expansion, Design-Build Project, North City Water Reclamation Plant, City of San Diego. Project Manager for this \$2 million project. The City of San Diego was producing 5.5 mgd (21,000 m³/day) of 300 mg/l TDS EDR water utilizing five General Electric EDR units and produced up to 12 mgd of recycled water by blending. The scope of work for this project included adding EDR No. 6 and designing an expansion to the EDR Facility. The new EDRs required expansion of the infrastructure including piping & valves, electrical and control systems, and structures housing the EDR units, in addition to modifications to the existing EDR units and related piping and controls.

Pump Station 2 (PS2) Power Reliability and Force Main Surge Protection Project, City of San Diego. Project Manager responsible for planning, alternative analysis, preliminary and final design for a \$56 million pump station upgrading project. PS2 has a pumping capacity of 432 mgd and

houses six 2,250 HP electric motor driven pumps and two 2,400 HP engine driven pumps. This project is to replace two engine driven pumps with 2,250 HP motor driven pumps, install two 3,000 kW natural gas engine driven generators (prime power), and two 4,000 kW diesel engine driven emergency generators in an 8,000 sq. ft. and 40 ft. high building (providing a total of 14 megawatt of power). The project included extensive modification, reconfiguration, and upgrading of electrical systems. The project also included force main hydraulic study and mitigation of hydraulic surge on 72-inch and 84-inch diameter dual force mains to the Point Loma Treatment Plant. The new generation system will power 2,500 HP sewage pumps and mitigates damaging hydraulic surge on the force mains. Project challenge`s included permitting with the San Diego County Air Pollution Control District, power feed arrangement with SDG&E, meeting EPA Class I Reliability requirements, and development a tall large tall building on a very tight and constrained site adjacent to Mission Bay right next to the San Diego Airport.

Edwards Hill Booster Pump Station, City of Huntington Beach. Lead Assessment Engineer for a comprehensive assessment and design documents. The existing pump station has four 1,500 gpm and three 1,250 gpm capacity pumps, each driven by an electric motor-natural gas engine through a right-angle gear. We assessed the existing stations numerous operating problems such as vibration, noise, excessive heat, capacity and flow control, and electrical deficiencies. The assessment evaluated the condition of pumps, motors, motor control center, cost effectiveness of replacement vs. refurbishment of existing equipment and suction & discharge piping, pump and system hydraulics under various operating scenarios, upgrades for electrical facilities including standby power, energy management options to obtain a lower carbon footprint, and prepared specifications for the City's pre-purchase of new switchboards, MCC, and VFDs.

Bitter Point Pumping Station, Orange County Sanitation District. Assistant Project Manager and lead design engineer for a new \$21 million, 40 mgd capacity, wastewater pumping station along Pacific Coast Highway in Newport Beach. Responsible for pumps, mechanical piping, HVAC, and overall pumping station design and layout. Pump station design included an ogee ramp style self-cleaning wetwell in which in-house software was developed to analytically model the wetwell. Physical modeling was also provided to confirm the analytical results. Advanced pipe hydraulic analysis software was employed to ensure proper pump selection. Pump station design includes five 200hp centrifugal pumps, large diameter piping, 1,250kW generator set with hospital grade enclosure, chemical dosing station, and large ductwork to maintain Class I, Division II conditioned space. Worked extensively with permit agencies such as Caltrans, City of Newport Beach, and the California Coastal Commission and other agencies for permitting and contractual negotiations. Project location is a low-lying wetland area and advanced shoring techniques were used with no dewatering and vibration down to a depth of 75 feet. This shoring technique protected expensive homes from possible settling damage along Pacific Coast Highway.

14th Street and A Street Pump Stations, Orange County Sanitation District. Project Engineer for construction phase services including preparation of O&M manuals for two wastewater pumping stations located on Balboa Blvd. in the Newport Bay. Because the stations are located in the affluent Bay near the shore, the construction was especially difficult and expensive. The 14th Street station is located at a newly purchased commercial property. The 14th Street Station has a capacity of 1,800 gpm with three pumps, all driven through variable frequency drives. The A Street Station is located at a commercial property right next to the existing station. The station has a capacity of 900 gpm with three pumps, all driven through variable frequency drives.

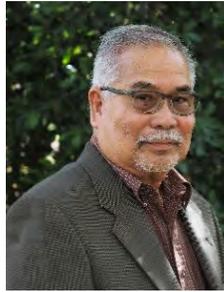
Sewer Pump Station 77A Generator Replacement, City of San Diego. Project Manager for the replacement of the City of San Diego's Sewer Pump Station 77A aging existing generator. The new 1,000 KW generator set provides power for up to 1,000 HP of pumping loads and ancillary loads to meet EPA required peak and wet weather flows. Project components included the 1,000-kW generator, 1,000-gallon diesel fuel tank, fuel piping, exhaust piping, battery chargers, instrumentation & controls, and coordination with the fire department, City plan check and APCD. The work included an electrical load analysis, integration of existing GE switchgear to allow paralleling with the utility, and automatic transfer upon loss of power.

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SALVADOR CALDERON, PE
LEAD MECHANICAL ENGINEER
CITY OF INDUSTRY OFFICE

Salvador Calderon is a California licensed mechanical engineer with over 30 years of diversified public works and mechanical systems engineering and construction experience. He has completed numerous planning studies,

preliminary design, final design and construction management of water and wastewater pump stations, water & wastewater treatment plants, energy recovery systems (cogeneration), institutional & industrial HVAC, and energy management systems such as chiller plants and thermal storage. He has engineered large pumping systems (motor & engine sizes up to 2,500 HP), standby power generation facilities (sizes up to 15 MW), and large diameter pipelines.

Sal is also an experienced construction manager and has dealt with deep excavation, groundwater control, and various shoring systems including silent piling. Sal has considerable experience with condition assessment of aging structures and mechanical systems and development of rehabilitation methods. He has extensive constructability review experience for pump station and plant projects and prepared numerous facility start-up and commissioning plans and led commissioning of many pump station and treatment projects.

Relevant Project Experience

Hyperion Secondary Effluent Pumping Station (HSEPS) Expansion Project, Hyperion Treatment Plant (HTP), West Basin Municipal Water District (WBMWD), Carson. Project Manager for \$11 million pumping capacity expansion project (from 70 to 90 mgd) including a connection of 60-inch secondary effluent supply pipe to the pressurized HTP's secondary effluent channel (wet tapping) and addition of two new 20 MGD pumps (190 feet of TDH), each driven by 800 HP, 4,160V motor and VFD. Work includes CFD modeling of pump intake system to satisfy the Hydraulic Institute's requirements; construction of a 40 feet deep vertical structure in a tight site for installation of the additional vertical turbine pumps; mitigation of construction impact at the El Segundo Water Recycling Plant and HTP (minimum shutdown period); connection of 48" pump effluent header to the Existing 60-inch Pressure Main in Vista Del Mar, a busy highway; and addition of a 3,000 kW emergency generator with a fuel storage system.

Three Wastewater Pump Stations (Bitter Point, 14th Street and A Street Pump Stations), Orange County Sanitation District. Project Manager for the planning, preliminary & final design and construction phase engineering services for three pump stations with an aggregate construction cost of \$34 million. The project sites were in the City of Newport Beach. Major project challenges included hydraulics, tight sites with deep underground construction, liquefaction potential near tidal zone, and architectural blending of station structures with affluent community setting, and regulatory coordination with Caltrans, the California Coastal Commission, and City of Newport Beach. The projects included environmental documentation, dry and wet weather flow measurements, preparation of preliminary design reports, preparation of drawings and specifications, and construction support services. The pumping station capacities range from 800 gpm (A Street), 2,000 gpm (14th Street) and 25,000 gpm (Bitter Point) and all pumps are driven through variable frequency drives.

Newhope-Placentia Trunk Sewer Replacement Project, Orange County Sanitation District. Project Manager for planning, design, and construction support services for an \$75 million trunk sewer replacement project. Scope of work includes hydraulic modeling, extensive geotechnical and underground utilities engineering, permitting, easement acquisition, and public outreach. The project includes new wastewater trunk sewers through the Cities of Fullerton and Anaheim to upsize and replace the existing 55-year-old sewer. The new replacement sewer is 38,300 feet,

LICENSE

Professional Mechanical Engineer,
CA # M019623; AZ # 28306

EDUCATION

BS, Mechanical Engineering, University of
Santo Thomas, Magna Cum Laude

30 YEARS OF EXPERIENCE

long, located in State College Blvd., varying from 36-inch to 54-inch in diameter. The new sewer will provide flow diversion from Treatment Plant No. 2 to Plant No. 1 for additional water recycling. The project includes trenchless construction to cross railroads, Fwy 91, Craig Regional Park, and several major east-west thoroughfares. The project also involves many stakeholders including cities of Fullerton and Anaheim, Caltrans, Calstate Fullerton, and Anaheim Stadium.

Earl Schmidt Intake Pump Station Settlement Investigation and Corrective Action, Castaic Lake Water Agency. Project Manager for a corrective action. The station has six 500 pumps. In less than a year of operation after construction, a leak was discovered on the 54-inch pump discharge manifold. Additionally, due to excessive vibration and settlement of discharge header, the pump bearings kept failing. The Agency removed the pumps from service. Investigation revealed that defective construction created differential settlement which, in turn, resulted in the pumps and discharge headers being badly misaligned. This \$1.2 million corrective action project included reconstruction of the buried pump header and reinstallation of individual pump discharges to the header with flexible couplings.

Sand Canyon Pump Station Pump Station (SCPS) Reliability Upgrades, Castaic Lake Water Agency. Project Manager for a fatal flaw/reliability analysis and final design of an emergency power generation facility. SCPS, built in 2006, has six 900 hp vertical turbine pumps. An in-depth reliability engineering analysis recommended a 1,750-kW standby generator cooled by the product water. The \$4.5 million project constructed included architectural, landscaping, structural, mechanical/electrical/plumbing (MEP), security and communications, and civil/paving/grading design elements.

San Vicente Booster Pump Station Upgrading Project, City of Santa Monica. Project Manager for \$2.5 million upgrading of an underground pumping station below 25th Street in a quiet and affluent neighborhood. The station services the 5-million-gallon capacity concrete reservoir under the median along the San Vicente Boulevard. The 7,500 gpm capacity pump station is equipped with six pumps of varied sizes (four 150 hp and two 40 hp sizes). The City plans to expand use of this station, and this project upgrades the mechanical and electrical system reliability and also provides a new 750 kW emergency generator.

Stone Canyon Membrane Filtration and Pumping Plant, Department of Water & Power, City of Los Angeles. Project Manager for mechanical, HVAC, plumbing, and emergency power generation systems for a \$25 million membrane filtration plant for the Stone Canyon Reservoir. Scope of services included design, permitting and construction support for mechanical/HVAC, civil, electrical, instrumentation and structural disciplines for this major water storage facility upgrade project. It involved extensive architectural and landscape design interaction to meet aesthetics and local community requirements.

Rehabilitation of 36-inch Bitter Point Force Main, Newport Beach, Orange County Sanitation District. Project Manager for study of various rehabilitation methods and design of HDPE liners for 36- and 42-inch diameter, 5,000 linear feet of ductile iron sewage force mains and rehabilitation of manholes. This \$2 million project, located in the City of Newport Beach along the Pacific Coast Highway, required extensive coordination with various agencies. Other projects included placement of a new sewer force main lateral to redirect flow and replace an existing sewer line and new sewer manhole installations.

Pederson Reservoir Seismic Upgrade and Rehabilitation, City of Thousand Oaks. Project Manager for the condition assessment, seismic evaluation and structural retrofit of the 3 MG capacity partially buried concrete reservoir. The seismic evaluation identified structural deficiencies that must be addressed to meet the current seismic loads requirements under the 2010 California Building Code. The condition assessment concluded that the existing structure, with strategic modifications and retrofits, is still capable of providing service for another 25 years with proper maintenance and periodic inspections. The project designed included seismic reinforcing of the columns and joints.

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SAM LEE, PE
MECHANICAL ENGINEER
CITY OF INDUSTRY OFFICE

Sam Lee has 14 years of diversified civil, mechanical and process engineering and design experience with water

and wastewater treatment and pump station projects. His experience includes facility investigation and evaluation, condition assessment, preparation of as-built background drawings through verification of existing facility dimensions, CAD based equipment and piping layout, engineering analysis and final design, and construction phase engineering services for wastewater and water treatment plants and pump stations including emergency generators and other auxiliary equipment. Through a variety treatment plant engineering & design projects, Sam has acquired diverse design skills as well as project coordination skills with electrical and structural design engineers. His construction phase engineering experience includes shop drawing and equipment submittal reviews, RFI processing, preparation of as built drawings, and coordination with resident engineering staff

- **Earl Schmidt Intake Pump Station Modifications Project, Castaic Lake Water Agency (CLWA).**
- **Newhope-Placentia Trunk Sewer Replacement Project, Orange County Sanitation District.**
- **Earl Schmidt Filtration Plant Washwater and Sludge System Improvements, Castaic Lake Water Agency.**

LICENSE

Professional Civil Engineer, CA #C78939

EDUCATION

MS, Environmental Engineering, University of Southern California

14 YEARS OF EXPERIENCE



MARIO MANANSALA, PE
ELECTRICAL/ I&C
CITY OF INDUSTRY OFFICE

Mario Manansala is an electrical engineer with over 40 years' experience in designing electrical power distribution systems;

preparing construction bid documents, including plans and specifications; performing electrical calculations in support of the electrical plans; coordinating construction activities to ensure projects are fully completed in an efficient manner; performing field inspections to ensure work is performed in accordance with the design intent; and developing and implementing test procedures so that the design requirements of the installation are met. He has broad knowledge of NEC, IEEE, UL, and NFPA codes and standards applicable to electrical system design and operation. Having worked with several electrical manufacturers such as Westinghouse, ABB and Klockner Moeller, he has a long practical experience with the industrial application of electrical equipment. His recent relevant projects include:

- **Mills Electrical Improvements, Metropolitan Water District of Southern California**
- **Metropolitan Water District Palos Verdes Reservoir.**
- **Metropolitan Water District Mills Water Treatment Plant Electrical Improvements.**

LICENSE

Professional Electrical Engineer: California (1991), Arizona (1995), and Philippines (1975)

EDUCATION

BSEE, Electrical Engineering University of the Philippines

40 YEARS OF EXPERIENCE

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JAMES GINGRICH, PE STRUCTURAL ENGINEER

CITY OF INDUSTRY OFFICE

James Gingrich is a California registered structural engineer with more than 30 years of structural analysis, engineering, design, constructability analysis, value engineering, project coordination and construction management experience. He has been the structural project manager, QA/QC reviewer, and lead structural engineer for planning, investigation and condition assessment, preparation of preliminary & final design, seismic analysis and upgrading, and construction phase engineering services for a wide variety of masonry concrete and steel structures for water conveyance and pumping facilities, water storage, treatment and distribution facility projects for Metropolitan Water District (MWD) of Southern California. His experience and expertise include rehabilitation & retrofit engineering & designs for existing facilities. His representative experience includes lead designer for the Lake Matthew Outlet Facilities, Colorado River Aqueduct Pumping Plant Seismic Upgrades, and Oxidation Retrofit (Ozone Disinfection) Projects for MWD's Mills, Jensen, Weymouth, Skinner, and Diemer Water Treatment Plants.

LICENSE

Professional Civil Engineer, CA #C34701
Professional Structural Engineer,
CA #S3023

EDUCATION

B.S. Civil Engineering (Structural Option), California
State Polytechnic University, Pomona

30 YEARS OF EXPERIENCE

- **Wastewater Pump Stations, Coachella Valley Water District, Palm Desert..**
- **Oxidation Retrofit Projects (ORPs) at Five Water Treatment Plants, Metropolitan Water District of Southern California (MWD).**
- **Hauck Mesa Reservoir, Pipeline and Surge Protection Project, San Diego County Water Authority.**
- **Filter Building and Filter Complex Seismic Upgrades, Weymouth Water Treatment Plant, MWD.**



AMRITENDU MAJI, PE PROJECT MANAGER

CITY OF INDUSTRY OFFICE

Amritendu Maji is a Civil Engineer and Project Manager with over 20 years of progressive experience in the planning, design, construction, and administration of public works projects. He has been responsible for preparing plans and specifications, construction cost estimates, bid documents, and permit applications for site development, roadways, water & wastewater conveyance and distribution facilities including pipelines, pump stations and reservoirs, and stormwater and flood control facilities. He has considerable experience in hydraulics and hydraulic modeling, as well as preparation of feasibility studies and technical reports. He has provided constructability review and QA/QC of technical reports, plans & specifications, construction cost estimates, and other bid documents. He has provided construction administration and support services including construction site visits, conducting progress meetings, review of shop drawings, responding to RFIs, analysis & preparation of change orders, start-up & commissioning and review & approval of contractors' pay requests and project closeout. He also has considerable experience in the preparation of permits including the Federal Section 404 (Clean Water Act) for work in wetlands, Section 408 (Rivers and Harbors Act) for federally constructed structures like levees and floodwalls, and permits from the State Transportation and Development offices for work in and around State and Federal Highways etc

LICENSE

Civil Engineer, CA #87036;
Louisiana #28553; Mississippi #15273

EDUCATION

University of Arizona, MS Engineering Mechanics
University of Southern Illinois, MS Civil Engineering
Jadavpur University, BS Civil Engineering

20 YEARS OF EXPERIENCE

- **Pump Station 2 (PS2) Power Reliability Upgrade and Power Generation Project, City of San Diego.**
- **Pump Station 65 Upgrade, City of San Diego.**
- **Hauck Mesa, San Diego County Water Authority**

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MURTHY KADIYALA, PE, PLS

SITE/CIVIL ENGINEER
CITY OF INDUSTRY OFFICE

As a licensed civil engineer and professional land surveyor, Murthy Kadiyala has 15 years of

municipal civil and infrastructure engineering, design, project management and construction experience in water and wastewater conveyance systems including trunk sewers, force mains, and water transmission mains, storage tanks and pump stations. Murthy has extensive experience with hydraulics, hydrology, and modeling with H2ONet, InfoWater, WaterCAD, SewerCAD, and ArcGIS. He also has high-level skills in AutoCAD Civil 3D, TerraModel and MicroStation applications. Murthy is a licensed surveyor with experience in property boundary legal analysis and land surveying. He has also served in the responsible role of a water and wastewater plan checker for many years. His knowledge of the service connections to private developments including land title and encumbrances has enabled him to resolve potential issues early in the design process. Murthy has engineered water and wastewater conveyance projects which require extensive permitting, right-of-way acquisition and analysis, traffic and noise mitigation, and public relations. Murthy has engineering experience with trenchless construction including micro-tunneling and jack and bore.

- **Water and Wastewater System Analysis, Naval Base San Diego.**
- **Newhope Trunk Sewer, Orange County Sanitation District (OCSD).**
- **Regional Force Main and Recycled Water Construction, Jurupa Community Services District, Jurupa Valley**
- **Irrigation Main Replacement Project, Coachella Valley Water District, Palm Desert.**
- **Sanitary Sewer Capital Improvement Program, Edgemont Community Services District (ECS), Moreno Valley**

LICENSE

Professional Civil Engineer, C73472
Professional Land Surveyor, L9180

EDUCATION

B.E. Civil Engineering, Osmania University,
Hyderabad, India 2002

M.S. Civil Engineering, Michigan State University, East
Lansing, Michigan 2004

15 YEARS OF EXPERIENCE



LEE BADERTSCHER, PE

TECHNICAL ADVISOR &
QA/QC ENGINEER

CITY OF INDUSTRY OFFICE

Lee Badertscher brings 30 years of experience in planning, design, and construction of

public water infrastructure projects including pump stations, treatment plants, and pipelines. Lee is a California state registered professional engineer in three (3) engineering disciplines - "Civil," "Electrical," and "Control Systems (Instrumentation)." Lee is a design engineer, project manager, QA/QC engineer, and electrical & instrumentation and control (I&C) engineer. Lee has hands on engineering, design, and construction experience with complex pumping stations and water and wastewater treatment plants including chemical handling systems (ammonia, chlorine gas and hypochlorite, ferric chloride, caustic, sulfuric acids, etc.). As civil engineer, he was responsible for hydraulic and surge analysis and designed large diameter pipelines (transmission mains, storm drains and sewers) including pipe & pipe joints and joint restraining systems. As electrical and I&C engineer, Lee has been responsible for P&IDs, control logic and instrument loop diagrams, power & lighting design, motor control centers, SCADA, fire & security alarms and other related systems.

- **Collection System Pumping Plants Rehabilitation and Generator Replacement Project (TOS 21 CIP 7181, 7182, 7183, 7186), Bureau of Engineering, City of Los Angeles.**
- **Steven Anderson (Ellis Avenue) Pump Station, Orange County Sanitation District, Fountain Valley.**
- **Yorba Linda Blvd. Booster Station and Pipeline Project, Yorba Linda Water District, Yorba Linda.**
- **Hyperion Secondary Effluent Pumping Station (HSEPS) Expansion Project, Hyperion**

LICENSE

Civil Engineer, California, No. C43789; Utah, No. 3789
Control Systems Engineer, California, No. CS7297
Electrical Engineer, California, No. E19641

EDUCATION

BS, Civil Engineering, Utah State University

30 YEARS OF EXPERIENCE



GREG DEBOIS, PE
TECHNICAL ADVISOR &
QA/QC ENGINEER

WALNUT CREEK OFFICE

Greg DeBois' experience includes 30 years working in the public works and

water infrastructure industry as electrical engineer, project manager, and construction engineer. As a licensed professional electrical engineer, Greg performed and led system analysis & planning studies, engineering, design, construction management, and start-up and commission services for numerous water and wastewater infrastructure projects including treatment plants, pump stations, and emergency power generation facilities. He has extensive coordination experience with utilities as his experience includes having worked as a distribution engineer for the Pacific Gas and Electric in Northern California. He has in-depth knowledge of power distribution and lighting systems, motor controls and variable frequency drives, PLC controls, SCADA, arc-flash analysis, electrical system condition assessment, ETAP, load flow and short-circuit analysis, and protective device coordination studies. Also, Greg has hands-on experience in retrofitting existing power systems with new switchgear and motor control centers with updated control systems.

- **Pacheco Pumping Plant Rehabilitation and Motor Drive Replacement Project, Santa Clara Valley Water District, San Jose.**
- **Colorado River Aqueduct (CRA) Pumping Plants 230kV Line Reactors and 6.9kV Bus Bracing, Metropolitan Water District (MWD) of So. Ca..**
- **Pump Station 2 (PS2) Reliability Improvements, City of San Diego.**

LICENSE/REGISTRATION

Professional Electrical Engineer, CA #E14298
NCEES Registration Certification

EDUCATION

BS, Electrical Engineering, San Francisco State University

AS, Electronics, Santa Rosa Junior College

30 YEARS OF EXPERIENCE



DHIRU PATEL, PE
PRINCIPAL-IN-CHARGE
CITY OF INDUSTRY OFFICE

Dhiru Patel has over 30 years of water and wastewater facilities engineering, project management and business management experience. He

has managed and overseen projects involving study, PDR, final design and construction support phases for distribution, conveyance, treatment and supporting facilities for water/wastewater/water reclamation projects. He has extensive experience with project management, plant, and process engineering studies, preliminary engineering, final design, construction engineering support, troubleshooting, and operations and maintenance (O&M) support for water and wastewater treatment facilities. As the Principal-in-Charge for this contract, Dhiru will have corporate responsibility for the entire project team's performance.

- **Hyperion Secondary Effluent Pumping Station (HSEPS) Expansion Project, Hyperion Treatment Plant (HTP), West Basin Municipal Water District (WBMWD), Carson**
- **Beachwood Wastewater Pump Station Upgrades and Force Main Replacement, City of Burbank.**
- **Collection System Pumping Plants Rehabilitation and Generator Replacement Project (TOS 21 CIP 7181, 7182, 7183, 7186), Bureau of Engineering, City of Los Angeles.**
- **Yorba Linda Blvd. Booster Station and Pipeline Project, Yorba Linda Water District, Yorba Linda**

LICENSE

Professional Chemical Engineer, State of California
#CH4264

Certified Permitting Professional, SCAQMD

EDUCATION

M.S. Chemical Engineering, University of Southern California, Los Angeles, CA

B.S. Chemical Engineering, Indian Institute of Technology, Bombay, India

30 YEARS OF EXPERIENCE

IRVINE
RANCH
WATER
DISTRICT

SANTIAGO
CANYON

PUMP
STATION

IMPROVEMENTS
PROJECT

SUBCONSULTANTS

BESS TESTLAB, INC. (BTL)

POTHOLING

BTL provides a full range of Subsurface Utility Engineering (SUE) including underground utility locating services to mitigate buried utility related risks associated with the design and construction of infrastructure projects. Specifically, BTL provides utility locating, concrete scanning, electromagnetic pipe locating, CCTV pipe inspection, ground penetrating radar (GPR), vacuum excavation and utility mapping services.

ASSOCIATED SOILS ENGINEERING

GEOTECHNICAL

ASE, incorporated in 1974 in the State of California, has provided geotechnical design, material testing, and construction testing services for over four decades in Southern California and can use the vast experience, information and data gathered over the years to provide quick and cost-effective geotechnical solutions to a wide variety of public works construction projects. ASE has provided geotechnical engineering services on many of LEE & RO's projects since 2000. ASE is very familiar with the geology of the Southern California areas through their previous geotechnical investigation work.

THE PRIZM GROUP

SURVEYING

The Prizm Group (TPG) is owned and managed by Vincent Kleppe, who has been a Licensed Land Surveyor and registered Civil Engineer for 20 years. The dual licensure of the principal has allowed TPG to provide services in both disciplines which has resulted in a thorough understanding of the need for complete and accurate field surveys. Their survey equipment includes robotic total stations, RTK, GPS equipment, and Leica HDS 3D laser scanners.

AVAILABILITY

AVAILABILITY MATRIX

KEY PERSONNEL	ROLE	% OF TIME COMMITTED ON PROJECT	OFFICE LOCATION
Eric Lovering, PE	Project Manager	65	San Diego
Sal Calderon, PE	Lead Mechanical	50	City of Industry
Sam Lee, PE	Mechanical	65	City of Industry
Mario Manansala, PE	Elec. and I & C	65	City of Industry
James Gingrich, PE	Structural	50	City of Industry
Amritendu Maji, PE	Civil / Site	50	City of Industry
Murthy Kadiyala, PE	Hydraulics Modeling (InfoWater)	35	City of Industry
Lee Badertscher, PE	Technical Advisor (QA/QC)	10	City of Industry
Greg DeBois, PE	Technical Advisor (QA/QC)	10	Walnut Creek
Dhiru Patel, PE	Principal in Charge	5	City of Industry

Section D: SCHEDULE

LEE & RO self-performs a majority of the necessary engineering and design work, including the civil, mechanical, structural, architectural, electrical, and instrumentation & controls engineering disciplines. With all of these discipline engineers under one roof, our production efforts are very efficient, precluding unnecessary schedule delays. In addition, based on LEE & RO's current backlog, all LEE & RO team members are immediately available for work on this project.

We have reviewed the schedule provided by the District in Section III of the RFP and we are confident that LEE & RO can meet the District's stated milestone dates as shown in **Exhibit D-1**. We understand that IRWD's November 2019 target date for Construction Bidding is *firm* and that considerable time will need to be spent in preliminary design.

Internal design schedule controls including schedule tracking, progress reporting, and integrated financial and project management systems will ensure that delivery milestones are being met, and that IRWD is always informed of our current progress. Another key method of reducing design delays is the thoughtful mobilization of our subconsultants so that they can avoid scheduling conflicts, and their work can build on each other's project deliverables.

EXHIBIT D-1: PROJECT MILESTONE SCHEDULE

MILESTONE	DATE
Notice of Award (Design)	April 23, 2019
Kick-Off Meeting	April 30, 2019
Draft PDR Submittal	June 11, 2019
Final PDR Submittal	July 9, 2019
60% Design Submittal	August 13, 2019
90% Design Submittal	September 17, 2019
100% Design Submittal	October 8, 2019
Plans Approved	October 22, 2019
Bid Opening and Notice of Award (Construction)	November 2019

April 22, 2019
Prepared by: K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook 

ACTION CALENDAR

ONE-YEAR EXTENSION OF JACKSON RANCH AGRICULTURAL LEASE

SUMMARY:

In March 2014, the Committee approved terms for a farm lease of IRWD's Jackson Ranch property, located in Kings County, to Adee Honey Farms. A lease based on the approved terms was executed with Adee Honey Farms on May 15, 2014, for a five-year period ending May 15, 2019. Staff is discussing with a neighboring landowner a possible long-term farm lease or crop share program that could provide higher lease values to IRWD. Until a long-term arrangement can be made for the Jackson Ranch, staff recommends that the Board authorize the General Manager to execute Amendment No. 1 to the Agricultural Lease with Adee Honey Farms to extend the term of the lease for an additional one-year period to May 15, 2020.

BACKGROUND:

On May 15, 2014, IRWD leased all 883 acres of IRWD's Jackson Ranch in Kings County to Adee Honey Farms. The lease was executed based on terms approved by the Committee in March 2014. The primary use of the property by Adee has been farming a portion of the land for bee foraging with the remaining acres being fallowed. The lease has been in effect for a five-year term and includes an option for an extension that could be implemented upon mutual written agreement. The lease with Adee will end on May 15, 2019, and the lessee has indicated that they are agreeable to a one-year extension.

Recently, staff and a neighboring landowner have discussed executing a long-term farm lease or crop share arrangement on the property. These discussions are ongoing and are expected to take additional time. The extension of the existing lease with Adee for a one-year period will provide additional time for these discussions as well as time for the evaluation of other future options for the property that are consistent with IRWD's water banking program.

Terms of Existing Agricultural Lease:

The existing lease with Adee includes rental rates for forage crops, row crops and fallowed acres, each adjusted 2.5% per year. Under the lease, IRWD provides for up to 235 acre-feet (AF) per year of water to be used on the property, of which the lessee uses approximately 200 AF per year. Adee pays the actual cost of water (based on a three-year average) including banking costs, which is currently charged at \$307 per AF. The lessee is also required to keep the property maintained such that all areas are free of weeds and pests.

Staff recommends that IRWD enter into an amendment to the agricultural lease with Adee providing a one-year extension with all other terms and provisions to remain in effect. The existing rental rate includes an escalation, and lessee pays the actual cost of water. Amendment No. 1 to the existing agricultural lease, reviewed by IRWD legal counsel, is included as Exhibit "A".

FISCAL IMPACTS:

Income from agricultural leases at the Jackson Ranch provides an offset to the cost of the water delivered to IRWD's service area from the District's Jackson Ranch unbalanced exchange program.

ENVIRONMENTAL COMPLIANCE:

The Jackson Ranch Water Allocation Project Negative Declaration was prepared and circulated for public review in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Section 21000 et. seq. and the state CEQA guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. A Notice of Determination for the final Negative Declaration for the purchase of the property was filed with Kings County on January 14, 2010.

COMMITTEE STATUS:

This item was reviewed by the Supply Reliability Programs Committee on April 18, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 1 TO AGRICULTURAL LEASE WITH ADEE HONEY FARMS TO EXTEND THE TERM OF THE LEASE FOR AN ADDITIONAL ONE-YEAR PERIOD TO MAY 15, 2020.

LIST OF EXHIBITS:

Exhibit "A" – Draft Amendment No. 1 to Agricultural Lease

EXHIBIT "A"

DRAFT

AMENDMENT NO. 1 TO AGRICULTURAL LEASE

This AMENDMENT NO. 1 TO AGRICULTURAL LEASE (the "**Amendment**") is dated April __, 2019 ("**Effective Date**") and is between IRVINE RANCH WATER DISTRICT ("**Lessor**") and ADEE HONEY FARMS, a South Dakota partnership ("**Lessee**").

Lessor and Lessee entered into an *Agricultural Lease* dated May 15, 2014 (the "**Lease**"), which expires by its terms on May 14, 2019. Lessor and Lessee intend by this Amendment to extend the term of the Lease and make certain other changes in the provisions of the Lease.

Lessor and Lessee therefore amend the Lease as follows:

1. Term Extensions:

1.1 **Extension:** The term of the Lease, as set forth in Section 2 of the Lease, is hereby extended by one (1) year, from May 15, 2019 to May 14, 2020, subject to the same terms and conditions as set forth in the Lease, except as modified herein.

1.2 **Additional Term:** Upon the written approval of the Lessor's General Manager, the term of the Lease may be extended for an additional one (1) year period, from May 15, 2020 to May 14, 2021 (the "**Additional Term**"), provided that Lessee gives to Lessor, and Lessor actually receives on a date which is prior to the close of business on November 1, 2019, a written notice of Lessee's request to extend the Lease for the Additional Term.

2. Mechanics' Liens: Section 9 of the Lease is hereby amended to require a lien release bond in an amount equal to 125% of the amount of the claim of the lien. Section 9 is further amended to replace "Civil Code §3143" with "Civil Code §8424."

3. Deleted Language: Section 33 of the Lease is hereby deleted and of no further force or effect.

4. Lease Provisions To Remain In Effect: Except as modified in this Amendment, all terms and provisions of the Lease shall be and remain in full force and effect.

The Parties are signing this Amendment as of the Effective Date.

IRVINE RANCH WATER DISTRICT

ADEE HONEY FARMS

By: _____
Paul A. Cook, General Manager

By: _____
Bret Adee, Partner

Approved as to Form:

By: _____
District Counsel