



SPECIAL BOARD MEETING

RAINBOW MUNICIPAL WATER DISTRICT
Tuesday, December 15, 2015
Special Meeting – Time: 1:00 p.m.

THE PURPOSE OF THE SPECIAL BOARD MEETING IS TO DISCUSS THE ATTACHED AGENDA

District Office	3707 Old Highway 395	Fallbrook, CA 92028
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Board Agenda Policies

Board of Directors Meeting Schedule Regular Board meetings are normally scheduled for the 4th Tuesday of the month with Open Session discussions starting time certain at 1:00 p.m.

Breaks It is the intent of the Board to take a ten minute break every hour and one-half during the meeting.

Public Input on Specific Agenda Items Any person of the public desiring to speak shall fill out a “Speaker’s Slip”, encouraging them to state their name, though not mandatory. Such person shall be allowed to speak during public comment time and has the option of speaking once on any agenda item when it is being discussed. Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Board President.

Agenda Posting and Materials Agendas for all regular Board of Directors’ meetings are posted at least seventy-two hours prior to the meeting on bulletin boards outside the entrance gate and the main entrance door of the District, 3707 Old Highway 395, Fallbrook, California 92028. The agendas and all background material may also be inspected at the District Office.

You may also visit us at www.rainbowmwd.com.

Time Certain Agenda items identified as “time certain” indicate the item will not be heard prior to the time indicated.

Board meetings will be recorded on CD’s as a secretarial aid. If you wish to listen to the recordings, they will be available after the draft minutes of the meeting have been prepared. There is no charge associated with copies of CD’s. Recordings will be kept for two years. Copies of public records are available as a service to the public; a charge of \$.10 per page up to 99 pages will be collected and \$.14 per page for 100 pages or more.

If you have special needs because of a disability which makes it difficult for you to participate in the meeting or you require assistance or auxiliary aids to participate in the meeting, please contact the District Secretary, (760) 728-1178, by at least noon on the Friday preceding the meeting. The District will attempt to make arrangements to accommodate your disability.

(*) - Asterisk indicates a report is attached.

Notice is hereby given that the Rainbow Municipal Water District Board of Directors will hold a Special Board Meeting at 1:00 p.m. on Tuesday, December 15, 2015 at the District Office located at 3707 Old Hwy 395, Fallbrook, CA 92028. At any time during the session, the Board of Directors Meeting may adjourn to Closed Session to consider litigation or to discuss with legal counsel matters within the attorney client privilege.

AGENDA

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL: Sanford_____ Griffiths_____ Lucy_____ Walker_____ Brazier_____**
4. **PUBLIC COMMENT RELATING TO ITEMS ON THE AGENDA**

Time Certain: 1:00 p.m.

- *5 PUBLIC HEARING TO RECONSIDER ADOPTING INCREASES IN THE RATES FOR RAINBOW MUNICIPAL WATER DISTRICT SERVICE FEES EFFECTIVE JANUARY 1, 2016 AND ORDINANCE 15-10 AUTHORIZING THE DISTRICT TO PASS THROUGH INCREASED COSTS IN PURCHASED WHOLESALE WATER, INCREASES TO THE DISTRICT'S COST OF OPERATIONS AND MAINTENANCE AND CAPITAL FACILITIES, AND ANY REDUCTION IN THE ALLOCATION OF AD VALOREM PROPERTY TAX REVENUES BY THE STATE OF CALIFORNIA**

(This agenda item is to conduct a Public Hearing to receive public comments on the proposed rate increases to become effective January 1, 2016. This agenda item is also to adopt Ordinance 15-10 that would set the new rates starting January 1, 2016 as well as authorize the District to pass through increased costs in Purchased Whole water, to pass through increases to the District's Cost of Operations and Maintenance and Capital Facilities, and to pass through any reduction in the District's property tax revenues by the State for a five year period from January 1, 2016 to December 31, 2021. These pass-through increase shall not exceed 15% per year nor shall they be more than the cost of providing water services. The Board would still be required to approve Staff recommended pass-through increases; however, a public hearing will not be required each subsequent year if the ordinance is approved and adopted.)

(Staff Recommendation: The adoption of Ordinance 15-10.)

- *6. CONSIDER REVISION TO ADMINISTRATIVE CODE SECTION 5.03.220 – ESTABLISH A RATE STABILIZATION RESERVE FUND**

(As part of the 2015 Potable Water Cost of Service Study, an evaluation was made as to whether it would be beneficial to ratepayers to establish a Rate Stabilization Fund. This topic was discussed on multiple occasions by the Budget and Finance Committee and the outcome of these discussions was to recommend to the Board that the Rate Stabilization Fund that is included in the Potable Water Cost of Service Study be implemented. The proposed policy would provide five fiscal years to bring the reserve fund from a zero balance to the target balance in order to reduce the rate impact of creating this reserve fund.)

(Staff Recommendation: The establishment of a Rate Stabilization Fund.)

- *7. APPROVAL OF MINUTES**

- A. October 27, 2015 – Regular Board Meeting
- B. November 17, 2015 – Special Board Meeting

(*) - Asterisk indicates a report is attached.

BOARD ACTION ITEMS

- *8. APPROVAL OF RESOLUTION NO. 15-16 ESTABLISHING CHECK SIGNING AUTHORITY**
(The purpose of this Resolution is to establish check signing responsibilities and designate authorized signers of checks due to changes in staff members. Resolution No. 15-16 will replace Resolution No. 14.-2.)
(Staff Recommendation: Approve Resolution No. 15-16.)
- *9. DISCUSSION AND POSSIBLE ACTION TO ADOPT RESOLUTION NO. 15-17 DESIGNATING TOM KENNEDY AS CONTRACT SIGNER FOR ALL UNION BANK TRANSACTIONS**
(This Resolution replaces Resolution No. 14-11, which appointed Margaret Thomas as contract signer.)
(Staff Recommendation: Approve Resolution No. 15-17.)
- *10. DISCUSSION AND POSSIBLE APPOINTMENT OF TREASURER**
(Currently Margaret Thomas serves as the District Treasurer. Due to Ms. Thomas' retirement in early January 2016, the Board may want to take this opportunity to consider appointing a treasurer in her place.)
(Staff supports Board direction.)
- *11. DISCUSSION AND POSSIBLE ACTION TO AWARD A PROFESSIONAL SERVICES CONTRACT TO PREPARE THE WATER RECLAMATION PLANT AND RECYCLED WATER DISTRIBUTION SYSTEM PRE-DESIGN REPORT**
(On September 16, 2015 the RMWD Board approved moving forward from the master plan level feasibility of a local water reclamation plant and recycled water distribution system to develop a more detailed study. The pre-design report will consist of reviewing, confirming and refining the report done by Atkins and develop a more detailed engineering cost estimate. The pre-design report refines the technical and cost analyses done in the Master Plan so that an informed decision can be made about whether or not to proceed with the project. The pre-design report will include sufficient detail to determine the final viability of the project.)
(Staff Recommendation: Appropriate an additional \$50,000 from the Master Plan Project into the Pre-Design Water Reclamation Project and authorize staff to negotiate a contract to prepare the water reclamation plant and recycled water distributions system pre-design report not to exceed \$224,995 with Dudek.)

BOARD INFORMATION ITEMS


- *12. RECEIVE AND FILE INFORMATION ITEMS FOR OCTOBER 2015**
- A. General Manager Comments**
 - B. Communications**
 - 1. Ratepayer Letters
 - C. Construction & Maintenance Comments**
 - 1. Construction and Maintenance Report
 - 2. Valve Maintenance Report
 - 3. Garage/Shop Repair
 - D. Water Operations Comments**
 - 1. Water Operations Report
 - 2. Electrical/Telemetry Report
 - E. Wastewater Comments**
 - 1. Wastewater Report

(*) - Asterisk indicates a report is attached.

- F. Operations Comments**
 - 1. Water Quality Report
 - 2. Cross Connection Control Program Report
- G. Engineering Comments**
 - 1. Engineering Report
- H. Customer Service Comments**
 - 1. Field Customer Service Report
 - 2. Meters Report
- I. Safety Comments**
 - 1. Safety Report
- J. Human Resources Comments**
 - 1. Personnel Changes
 - 2. Organizational Chart

- 13. **LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT REGULAR BOARD MEETING**
- 14. **ADJOURNMENT - To Tuesday, January 26, 2016, at 1:00 p.m.**

ATTEST TO POSTING:



Helene Brazier
Secretary of the Board

12-7-15 @ 10:00 AM.
Date and Time of Posting
Outside Display Cases



BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

PUBLIC HEARING TO CONSIDER ADOPTING INCREASES IN THE RATES FOR RAINBOW MUNICIPAL WATER DISTRICT SERVICE FEES EFFECTIVE JANUARY 1, 2016 AND ORDINANCE 15-10 AUTHORIZING THE DISTRICT TO PASS THROUGH INCREASED COSTS IN PURCHASED WHOLESALE WATER, INCREASES TO THE DISTRICT'S COST OF OPERATIONS AND MAINTENANCE AND CAPITAL FACILITIES, AND ANY REDUCTION IN THE ALLOCATION OF AD VALOREM PROPERTY TAX REVENUES BY THE STATE OF CALIFORNIA

DESCRIPTION

This agenda item is to conduct a Public Hearing to receive public comments on the proposed rate increases, to become effective January 1, 2016.

This agenda item is also to adopt Ordinance 15-10 that would set the new rates starting January 1, 2016 as well as authorize the District to pass through increased costs in Purchased Wholesale water, to pass through increases to the District's Cost of Operations and Maintenance and Capital Facilities, and to pass through any reduction in the District's property tax revenues by the State for a five year period from January 1, 2016 to December 31, 2021. These pass-through increases shall not exceed 15% per year nor shall they be more than the cost of providing water services.

The Board would still be required to approve Staff recommended pass-through increases; however, a public hearing will not be required each subsequent year if the ordinance is approved and adopted.

BACKGROUND AND SUMMARY

On April 28, 2015, the Board awarded a contract to Raftelis Financial Consultants (RFC) for the development of a financial plan, cost of service study, and development of rates to support the district's needs, to ensure revenue sufficiency and stability, and to take into account drought conditions, ease of implementation, and the procedural and substantive requirements set forth by California Constitution Article XIII D, section 6 (Prop. 218). The Board reviewed and heard presentations on the proposed rate changes at the regular board meeting held on October 27, 2015 and were presented with RFC's 2015 Water Financial Plan and Cost of Service Rates Executive Summary.

A copy of RFC's Final 2015 Water Financial Plan and Cost of Service Rates Report is attached as a reference document for the proposed rate increases. This report has been published on the District's website and available for the public's consumption since November 10, 2015.

As set forth more fully in the RFC Report, change in water rates features the following:

- Continue the process of passing through rate increases from SDCWA. These are 6% starting January 1, 2016. Subsequent increases of SDCWA costs will be determined by the SDCWA Board at future dates.

- Per the direction of the State Water Resources Control Board, our residential rate structure will have a tiered rate system with higher costs for higher usage of water. This will not apply to agricultural or commercial customers.
- Include a Demand Reduction Rate structure where the Board will have the flexibility of making small predetermined rate adjustments to offset revenue losses from either State imposed reductions in demand or those caused by natural causes such as heavy rainfall years.

PUBLIC NOTIFICATION

The preparation of the 2015 Water Financial Plan and Cost of Service Rates report was done in conjunction with the RMWD Budget and Finance Committee. A series of Committee meetings that were open to the public were held between January and October of 2015.

In addition, the Board of Directors held a publicly noticed Special Board Meeting on October 23, 2015 to review the proposed rate changes. Finally, the proposed rate changes were reviewed during the October 27, 2015 Board Meeting.

The 2015 Water Financial Plan and Cost of Service Rates Executive Summary and the presentation made to the Board on October 27, 2015 meeting have been available on the District's website since November 1, 2015. Final draft version of the report was available in print form at the October 27, 2015 Board Meeting. Based on advice from the Board at the meeting there were a few minor revisions to the report. The final version of the full report was published to the website on November 10, 2015.

Notice of today's Public Hearing, the proposed rate changes and the protest provisions was mailed by first class mail to every property owner using the most recent list of addresses provided by the County of San Diego Assessor's office. In addition, notices were mailed to ratepayers who are not the property owners of the property where service is provided (i.e., tenants who pay for water service). These notices were mailed on or before October 30, 2015. A copy of the notification is included in this board packet.

PROTESTS

The Board is prohibited from adopting any rate increase if a majority protest is submitted in writing before the end of today's Public Hearing. A majority protest is considered 50% plus 1 written protests by property owners of the identified parcels upon which the proposed rate increase is to be imposed, or any tenants directly liable for the payment of the parcel's charges. All written protests must be submitted to the Board before the close of today's Public Hearing.

There are approximately 8326 parcels subject to the District's water rate increase. As of the date of this Board Action Letter, the District has received 9 written protests in response to the proposed increase in water rates. In percentage terms, these protests represent less than 0.1 percent of parcels subject to the water rate increases. Copies of each of these protest letters are included with this board packet for the Board's reference.

POLICY IMPACT

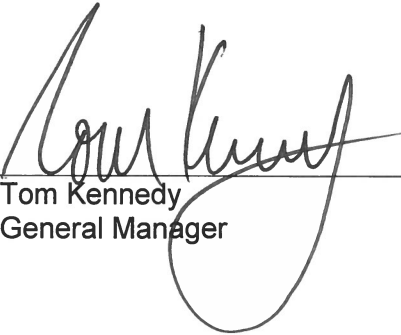
This action will adopt Ordinance 15-10 which will establish the water rates and charges in accordance with the 2015 Water Financial Plan and Cost of Service Rates report effective January 1, 2016. The adoption of this ordinance also authorizes the District to increase rates annually, each January 1 through December 31, 2021 in the amount of pass-through increases, as set forth more fully in Ordinance 15-10 and Exhibit 1 to Ordinance 15-10.

BOARD OPTIONS/FISCAL IMPACTS

The Board could choose not to adopt the new rate structure and leave the current rates as they are now. This would result in the loss of revenue required to meet the budgetary needs of the District's operations.

STAFF RECOMMENDATION

Staff recommends the adoption of Ordinance 15-10.



Tom Kennedy
General Manager

12/15/2015

ORDINANCE NO. 15-10

ORDINANCE OF THE RAINBOW MUNICIPAL WATER DISTRICT REVISING APPENDIX A OF THE RULES AND REGULATIONS REGARDING WATER SERVICE CHARGES

WHEREAS, the Rainbow Municipal Water District (“RMWD” or the “District”) Board of Directors is committed to providing reliable, high-quality water services at the most efficient costs for our ratepayers; and

WHEREAS, to meet this commitment, the District undertook an evaluation of the infrastructure needs, programs, and operations and maintenance costs of its water services for the ensuing five fiscal years; and

WHEREAS, on April 1, 2015, the Governor issued an emergency drought proclamation that included requirements for water rates that included certain conservation requirements, and on August 31, 2015, the State Water Resources Control Board issued the District a Conservation Order under California Code of Regulations, tit. 23, section 866(a)(1) which included an order that the District pursue a rate study in compliance with Proposition 218 with the goal of implementing a water rate structure that encourages conservation as well as discouraging waste or overuse; and,

WHEREAS, on or around April 28, 2015, the District retained Raftelis Financial Consultants (“RFC”), an industry-leading third party rate and fee public finance consultant, to develop a financial plan, perform a cost of service study, and develop rates that support and optimize a blend of various utility objectives, such as affordability for essential needs, revenue sufficiency and stability, drought conditions, and ease of implementation, as well as ensure compliance with California Constitution Article XIII D, section 6 (“Proposition 218”); and

WHEREAS, between January and October of 2015, the District held a series of eight meetings with the District Budget and Finance Committee to discuss the RFC study and details regarding the proposed water rate increases on the following dates: January 8, February 5, March 3, May 12, June 9, July 14, September 8, and October 13, which meetings were publicly noticed and open to the public; and

WHEREAS, the District Board of Directors held a publicly noticed Special Board Meeting on October 23, 2015 to substantively review the proposed rate changes; and

WHEREAS, the District Board of Directors reviewed and heard presentations on the proposed rate changes at a regular board meeting on October 27, 2015, and were presented with RFC’s 2015 Water Financial Plan and Cost of Service Rates Executive Summary, which presentation slides and Executive Summary were thereafter made available to the public on RMWD’s website; and

WHEREAS, the final RFC 2015 Water Financial Plan and Cost of Service Rates Report was published on RWMD’s website on November 10, 2015 for the public’s consumption; and

WHEREAS, at this point in time, based on the RFC’s recommendations and findings, together with all prior public meetings, staff reports and presentations, the Board of Directors of the RMWD hereby desires to adjust certain rates related to the provision of water service; and

WHEREAS, the Board of Directors is provided authority to establish rates and charges by California Water Code §71616 and §71670; and

WHEREAS, Proposition 218 requires that prior to imposing any increase to the water service rates, the District shall provide written notice (the "Notice") by mail of: (1) the proposed increases to such rates and charges to the record owner of each parcel upon which the rates and charges are proposed for imposition and any tenant directly liable for payment of the rates and charges; (2) the amount of the rates and charges proposed to be imposed on each parcel; (3) the basis upon which the rates and charges were calculated; (4) the reason for the rates and charges; and (5) the date, time, and location of a public hearing (the "Public Hearing") on the proposed rates and charges; and

WHEREAS, pursuant to Proposition 218, such Notice is required to be provided to the affected property owners and any tenant directly liable for the payment of the rates and charges not less than forty-five days prior to the Public Hearing on the proposed rates and charges; and

WHEREAS, the District did provide such timely Notice of the Public Hearing to the affected property owners and tenants of the proposed water service rate increases in compliance with Proposition 218 on or before October 30, 2015, and the District's Notice set forth a procedure by which property owners and tenants may submit written protests to the proposed water service fee increase; and

WHEREAS, the Public Hearing was held at the duly noticed public meeting on December 15, 2015; and

WHEREAS, at the Public Hearing the District Board of Directors heard and considered all oral testimony, written materials, and written protests concerning the establishment and imposition of the proposed rate increases for water services, and at the close of the Public Hearing the District did not receive written protests against the establishment and imposition of the proposed rate increases for water services from a majority of the affected property owners and tenants directly liable for the payment of the water service rates; and

WHEREAS, by adopting this Ordinance, the District Board of Directors hereby desires to adopt and implement the proposed rates for the water services as set forth below; and

WHEREAS, the water service rates will be adjusted effective with all water bills issued for water consumption that occurs on or after January 1, 2016.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of the Rainbow Municipal Water District as follows:

SECTION 1: The District Board of Directors finds and determines that the foregoing Recitals are true and correct and incorporates the Recitals herein.

SECTION 2: The District Board of Directors hereby finds that the administration, operation, maintenance, and improvements of the water system, which are to be funded by the water service rates set forth herein, are necessary to maintain service within the District's existing service area. The District Board of Directors further finds that such water service rates are necessary and reasonable to fund the administration, operation, maintenance, and improvements of the water system. More specifically, the changes in rates and charges established by this Ordinance are for the purposes of (a) meeting operating expenses, including employee wages and benefits, (b) purchasing and leasing of supplies, equipment and materials, (c)

meeting financial reserve needs and requirements as set forth in the District Budget, and (d) passing through wholesale water rates charged by the San Diego County Water Authority and the Metropolitan Water District of Southern California. Based on these findings, the District Board of Directors hereby determines that this Ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA).

SECTION 3: Based on RFC's recommendations and findings, together with all prior public meetings, staff reports, recommendations and presentations, as well as all oral testimony, written materials, and written protests concerning the establishment and imposition of the proposed rate increases for water services presented to the Board of Directors before the close of the duly noticed Public Hearing, the District Board of Directors hereby finds and determines that the proposed rates for water service comply substantively with Proposition 218 for the following reasons:

- a) The revenues derived from the water service rates do not exceed the funds required to provide water services;
- b) The revenues derived from the water service rates will not be used for any purpose other than that for which the fee is being imposed;
- c) The water service rates do not exceed the proportional cost of the services attributable to each parcel upon which they are imposed;
- d) The water service rates will not be imposed on a parcel unless the water services are actually used by, or immediately available to, the owner of the parcel; and
- e) The water service rates will not be imposed for general governmental services, such as police, fire, ambulance, or libraries, where service is available to the public in substantially the same manner as it is to property owners and tenants.

SECTION 4: Effective January 1, 2016, the District Board of Directors hereby adopts and implements the increases in the rates for the District's water services as set forth in the "Revised Appendix A" attached hereto as **Exhibit 1**, entitled "Water and Sewer Rates and Charges – Effective January 1, 2016 – December 31, 2021". Exhibit 1 hereby replaces in its entirety former Appendix A to the District Rules and Regulations. The rates and charges set forth in Exhibit 1 shall be applicable to all water use and other charges billed on or after January 1, 2016.

SECTION 5: Through this Ordinance, and as set forth in Exhibit 1, the District's Rules and Regulations are hereby being amended to include the following provisions:

PROSPECTIVE ANNUAL RATE INCREASES VIA PASS THROUGH CHARGES FOR WATER

To avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, the District will pass through to its customers: (1) any increases in the rates of the SDCWA Fixed Charges imposed on the District by SDCWA (an "SDCWA Fixed Pass Through"); (2) any future charges and any rate increases to any other existing charges, including imported water charges, that are imposed on the District by SDCWA (a "SDCWA Pass Through"); (3) any increases in energy costs imposed on the District by San Diego Gas and Electric ("an Energy Pass Through"); (4) future increases in the

costs of operating and maintaining the water system, including capital facilities, based on an annual inflationary adjustment in the San Diego Consumer Price Index, All Items, 1982-1984=100 for All Urban Consumers ("CPI-U") determined by the United States Department of Labor Statistics annually for the previous calendar year (an "Inflationary Pass Through"); and (5) any reduction in the allocation of ad valorem property tax revenues by the State of California ("Ad Valorem Pass Through") pursuant to Proposition 1A. Proposition 1A was approved by the voters in November 2004, with the intent of protecting the property tax revenues of local governments. Under Proposition 1A, the State of California is allowed to borrow local government property taxes on the condition that they will be paid back within 3 years. The foregoing are collectively referred to in this notice as "Pass Through Increases."

Any SDCWA Fixed Pass Through will only impact the rates of the SDCWA Fixed Charges. Any SDCWA Pass Through, any Inflationary Pass Through, Energy Pass Through, and any Ad Valorem Pass Through will impact the rates of the Meter Charge, Commodity Charge, and the Fire Meter Service Charge. The District may annually implement the Pass Through Increases for a five-year period commencing January 1, 2016, through December 31, 2021, provided, however, that (1) any increase to the rates described above as a result of any SDCWA Pass Through, Energy Pass Through, Inflationary Pass Through, or Ad Valorem Pass Through shall not exceed 15% per year; and (2) in no event shall such rates be increased by more than the cost of providing water service.

SECTION 6: The District Board of Directors hereby authorizes and directs the District General Manager to (a) implement and take all actions necessary to effectuate the rates for water services as set forth herein and in Exhibit 1; (b) annually amend, with the Board's prior approval, the District's Water Service Rates each January 1, beginning January 1, 2016 through December 31, 2021, to include the Pass Through Increases set forth herein and in Exhibit 1; and (c) file a Notice of Exemption with the County Clerk for San Diego County within five (5) working days of the date of the adoption of this Ordinance.

SECTION 7: If any section, subsection, subdivision, sentence, clause, or phrase in this Ordinance or any part thereof is for any reason held to be unconstitutional or invalid, ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance or any part thereof. The District Board of Directors hereby declares that it would have adopted each section irrespective of the fact that any one or more subsections, subdivisions, sentences, clauses, or phrases be declared unconstitutional, invalid, or ineffective.

SECTION 8: This Ordinance shall supersede all other previous District Board of Directors resolutions and ordinances that may conflict with, or be contrary to, this Ordinance.

SECTION 9: This Ordinance amends Ordinance 13-09 dated November 19, 2013 as of January 1, 2016; the rates prescribed by Ordinance 13-09 shall remain in effect through December 31, 2015.

PASSED AND ADOPTED at a special meeting of the Board of Directors of Rainbow Municipal Water District held on the 15th day of December 2015 by the following roll call vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Dennis Sanford, President
Board of Directors

ATTEST:

Dawn Washburn
Board Secretary

RAINBOW MUNICIPAL WATER DISTRICT

Revised Appendix A

Water and Sewer Rates and Charges

EFFECTIVE January 1, 2016 – December 31, 2021

Adopted by Ordinance No. 15-10

(***) Denotes Change to from Previous Schedule

WATER COMMODITY CHARGE

A. BASIC COMMODITY CHARGE

(Basic rate for all water delivered through the water meter)

<u>Service Category</u>	<u>Water Rate</u>
Single Family Residential– first 10 units each month	\$3.31 / 100 cf ***
Single Family Residential – 11 -26 Units each month.	\$3.48 / 100 cf ***
Single Family Residential – Over 26 Units each month.	\$3.81 / 100 cf ***
Multi-Family Residential – all units	\$3.40 / 100 cf ***
Commercial – all units	\$3.51 / 100 cf ***
Agricultural w/ Residence– first 10 units each month	\$3.31 / 100 cf ***
Agricultural w/ Residence – 11 -26 Units each month.	\$3.48 / 100 cf ***
Agricultural w/ Residence – Over 26 Units each month.	\$3.24 / 100 cf ***
Agricultural w/o Residence – all units	\$3.24 / 100 cf ***
Institutional – all units	\$3.58 / 100 cf ***
Construction – all units	\$4.30 / 100 cf ***

Transitional Special Agricultural Water Rates (TSAWR)

TSAWR Domestic - first 10 units each month	\$3.31 / 100 cf ***
TSAWR Domestic – 11 to 26 units each month	\$3.48 / 100 cf ***
TSAWR Domestic – Over 26 units each month	\$2.77 / 100 cf ***
TSAWR Commercial – all units	\$2.77 / 100 cf ***

B. PUMPING ZONE CHARGES

<u>Service Area</u>	<u>Amount</u>
Monthly fixed charge for all zones	\$9.51 per meter ***
1 - Rainbow Heights	\$0.77 / 100 cf ***
2 - Improvement District U-1	\$0.48 / 100 cf ***
3 - Vallecitos	\$0.27 / 100 cf ***
4 - Northside	\$0.09 / 100 cf ***
5 - Morro	\$0.14 / 100 cf ***
6 - Huntley	\$0.55 / 100 cf ***
7 - Magee	\$2.53 / 100 cf ***

C. WATER ALLOCATION PENALTY RATES

The Water Allocation Penalty charges shall apply only to TSAWR customers in the event that the San Diego County Water Authority (SDCWA) establishes mandatory TSAWR allocation cutbacks. During a TSAWR allocation, SDCWA will establish an allocation reduction percentage. Each TSAWR customer will be issued a baseline allocation that is calculated from a base year defined by SDCWA and this allocation will be reduced by the SDCWA defined reduction percentage.

A penalty of \$3.31 per unit will be charged to TSAWR customers who use greater than their reduced allocation but less than their baseline allocation. A penalty of \$6.62 per unit will be charged to TSAWR customers who use more than their baseline allocation.

FIXED ACCOUNT CHARGES

A. METER SERVICES CHARGES

RMWD Monthly Fixed O&M Charges for Single Family Residential, Multi-Family Residential, Commercial, and Institutional

<u>Meter Size</u>	<u>Monthly Charge</u>
5/8 "	\$ 23.82***
3/4 "	\$ 23.82***
1"	\$ 37.20***
1 1/2"	\$ 70.64***
2"	\$ 110.78***
3"	\$ 237.78***
4"	\$ 425.15***
6"	\$ 873.31***

NOTE: Locked or sealed meters are assessed a charge equal to the above monthly charge for the appropriate sized meter.

5-10

RMWD Monthly Fixed O&M Charges for Agricultural w/Residence, Agricultural w/o residence, TSAWR Domestic, and TSAWR Commercial

<u>Meter Size</u>	<u>Monthly Charge</u>
5/8 "	\$ 43.26***
3/4 "	\$ 43.26***
1"	\$ 69.59***
1 1/2"	\$ 135.44***
2"	\$ 214.45***
3"	\$ 464.64***
4"	\$ 833.36***
6"	\$ 1,715.63***

NOTE: Locked or sealed meters are assessed a charge equal to the above monthly charge for the appropriate sized meter.

SDCWA Fixed Pass Through Charges

Charge is assessed by the San Diego County Water Authority and passed through directly by RMWD to all meter customers. These charges are in addition to RMWD Monthly Fixed O&M Charges

Monthly SDCWA Fixed Pass Through Charge for Single Family Residential, Multi-Family Residential, Agricultural w/ residence, Agricultural w/o Residence, Commercial, and Institutional

<u>Meter Size</u>	<u>Monthly Charge</u>
5/8 "	\$ 35.02***
3/4 "	\$ 35.02***
1"	\$ 58.37***
1 1/2"	\$ 116.75***
2"	\$ 186.79***
3"	\$ 408.61***
4"	\$ 735.50***
6"	\$ 1,517.71***

Monthly SDCWA Fixed Pass Through Charge for TSAWR Domestic, and TSAWR Commercial

<u>Meter Size</u>	<u>Monthly Charge</u>
5/8 "	\$ 17.05***
3/4 "	\$ 17.05***
1"	\$ 28.42***
1 1/2"	\$ 56.84***
2"	\$ 90.94***
3"	\$ 198.93***
4"	\$ 358.08***
6"	\$ 738.90***

B. OTHER FIXED ACCOUNT CHARGES

(Additional charges added to the basic meter service charge to reflect other special service conditions.)

Backflow device annual inspection fee

<u>Meter Size</u>	<u>Monthly Charge</u>
5/8 "	\$ 3.75
3/4 "	\$ 3.75
1"	\$ 3.75
1 1/2"	\$ 4.50
2"	\$ 5.00
3"	\$ 7.50
4"	\$ 10.00
6"	\$ 15.00

<u>Service Conditions</u>	<u>Monthly Charge</u>
Bypass Meter (for detector check systems) or Fire Service Only Meters	\$10.00
Fire Standby Charge (Vista Valley Area) (Applicable to properties under the jurisdiction of the Vista Fire Department. See Resolution No. 85-24)	\$ 5.00

5-12

MISCELLANEOUS CHARGES

A. CONSTRUCTION METERS

Deposit	\$1,825.00
Installation Fee	\$ 115.00
Relocation Fee	\$ 50.00
Meter Service Fee (3" O & M)	\$ 237.78 ***
Water Commodity Charge	\$4.30 / 100 ccf***

B. OTHER CHARGES

Unpaid Bills (delinquency)	5% of unpaid balance-1st mo. 1 1/2% of unpaid balance per month thereafter.
Returned Check Charge	\$30.00
Tax Roll Fee (Accounts collected through SD County Assessor's Office)	\$45.00
48-hour Lock Off Notice	\$40.00
Service Turn-on Fee	\$50.00
After hours Turn-on-Fee	\$75.00
Cut Padlock Fee	\$22.00
Meter Testing Charge	\$ 50.00 (1" or smaller)
(testing for 3" and greater is outsourced)	\$ 71.00 (1 1/2" or 2") \$225.00 (3" or 4") \$225.00 (6")

WATER CAPACITY CHARGES

The SDCWA charge is collected by RMWD forwarded quarterly to the SDCWA.

<u>Meter Size</u>	<u>Water Capacity Charge</u>	<u>SDWCA Fee</u>	<u>SDCWA Treatment Charge</u>
3/4 "	\$ 10,075	\$ N/A	\$ N/A
1"	\$ 13,097	\$ 7,490***	\$ 190***
1 1/2"	\$ 20,150	\$ 14,043***	\$ 357***
2"	\$ 35,262	\$ 24,341***	\$ 619***

3"	\$ 60,449	\$ 44,938***	\$ 1,142 ***
4"	\$ 100,748	\$ 76,768 ***	\$ 1,952 ***
6"	\$ 171,272	\$ 140,430 ***	\$ 3,570 ***

SEWER CHARGES

A. Commercial Customers

Sewer Service Monthly Charge \$75.50 per EDU

Residential and Multi-family Customers

Rate is based on the lowest month of water used in the previous fiscal year. New homes with no usage history default to 5 units per month for the first year.

1 Unit	\$28.70 per EDU
2Units	\$35.70
3 Units	\$42.50
4 Units	\$49.50
5 Units	\$56.20
6 Units	\$63.20
7 Units	\$63.20
8 Units	\$63.20
9 Units	\$63.20
10 Units	\$63.20
11 Units or greater	\$75.50
Commercial	\$75.50

B. Unconnected Service Monthly Charge \$41.67 per EDU

C. EDU description and assessment

Single Family Residence on Individual Parcel	1.0 EDU
Apartment, Condominium or Duplex Each Apartment, Condominium or Duplex	1.0 EDU
Mobile home Parks - Each Mobile home Space, Each Office, Service Bldg. or Accessory Bldg. or Restroom	0.80 EDU
Motel or Hotel	
Each Living Unit with Kitchen	0.80 EDU
Each Living Unit without Kitchen	0.40 EDU

5-14

Commercial Business - Retail shop or Offices Equipped with Restroom, Up to 1,000 sf.	1.20 EDU
Commercial Business – Each additional 1,000 sf. of gross floor space or part thereof.	0.80 EDU
Automobile Service Stations	
A. Providing RV holding tank disposal station	2.00 EDU
B. Four (4) or under Gas Pumps	0.80 EDU
C. Over four (4) Gas Pumps	1.00 EDU
Church, Fraternal Lodge or similar auditorium for each unit of seating capacity for 200 persons.	1.0 EDU
Bakery	1.0 EDU
Theater - 200 seating capacity	1.40 EDU
Hospital - per bed	0.40 EDU
Convalescent Hospital - Boarding Home - per bed	0.40 EDU
Labor Camp, Per Bed	0.10 EDU
Mortuary	1.20 EDU
Car Wash	1.20 EDU
Grocery Store	1.20 EDU
Self Service Laundry - each washing machine	0.40 EDU
Swimming Pool - with restrooms	1.20 EDU
Spas - with restrooms	1.20 EDU
Country Clubs with common restroom facilities Each additional shower unit, wash closet and/or fixture.	1.0 EDU
Restaurant – Base (Using non-disposable tableware Per each seven (7) seats or part thereof	2.70 EDU 1.20 EDU
Restaurants—Base (Using disposable tableware) Per each twenty-one (21) seats or part thereof	1.20 EDU 1.20 EDU
Schools (Public or Private)	
Elementary Per each 60 students	1.20 EDU
Junior High School Per each 40 students	1.20 EDU
High School Per each 30 students	1.20 EDU

PROSPECTIVE ANNUAL RATE INCREASES VIA PASS THROUGH CHARGES FOR WATER

To avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, the District will pass through to its customers: (1) any increases in the rates of the SDCWA Fixed Charges imposed on the District by SDCWA (an "SDCWA Fixed Pass Through"); (2) any future charges and any rate increases to any other existing charges, including imported water charges, that are imposed on the District by SDCWA (a "SDCWA Pass Through"); (3) any increases in energy costs imposed on the District by San Diego Gas and Electric ("an Energy Pass Through"); (4) future increases in the costs of operating and maintaining the water system, including capital facilities, based on an annual inflationary adjustment in the San Diego Consumer Price Index, All Items, 1982-1984=100 for All Urban Consumers ("CPI-U") determined by the United States Department of Labor Statistics annually for the previous calendar year (an "Inflationary Pass Through"); and (5) any reduction in the allocation of ad valorem property tax revenues by the State of California ("Ad Valorem Pass Through") pursuant to Proposition 1A. Proposition 1A was approved by the voters in November 2004, with the intent of protecting the property tax revenues of local governments. Under Proposition 1A, the State of California is allowed to borrow local government property taxes on the condition that they will be paid back within 3 years. The foregoing are collectively referred to in this ordinance as "Pass Through Increases."

Any SDCWA Fixed Pass Through will only impact the rates of the SDCWA Fixed Charges. Any SDCWA Pass Through, any Inflationary Pass Through, Energy Pass Through, and any Ad Valorem Pass Through will impact the rates of the Meter Charge, Commodity Charge, and the Fire Meter Service Charge. The District may annually implement the Pass Through Increases for a five-year period commencing January 1, 2016, through December 31, 2021, provided, however, that (1) any increase to the rates described above as a result of any SDCWA Pass Through, Energy Pass Through, Inflationary Pass Through, or Ad Valorem Pass Through shall not exceed 15% per year; and (2) in no event shall such rates be increased by more than the cost of providing water service.

END

POTABLE WATER COST OF SERVICE STUDY



Rainbow Municipal Water District

Potable Water Cost of Service Study

November 10, 2015





201 S Lake Ave.
Suite 301
Pasadena CA 91101

Phone 626.583.1894
Fax 626.583.1411

www.raftelis.com

November 10, 2015

Mr. Tom Kennedy
General Manager
Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

Subject: Water Rate Study Report

Dear Mr. Kennedy:

Raftelis Financial Consultants, Inc. (RFC) is pleased to present this water rate study (Study) to the Rainbow Municipal Water District (District). The Study involved a comprehensive review of the District's Financial Plan, user classifications and alternative rate structures. We are confident that the results, based on cost of service principles, result in fair and equitable water rates for the District's customers and meet the requirements of Proposition 218.

The report includes a brief Executive Summary followed by study assumptions and a detailed rate derivation in subsequent sections. Water Usage Reduction Rates are presented in the final Section 8.

It was a pleasure working with you and we wish to express our thanks for your and other staff member support during the study. If you have any questions, please call me at (626) 583-1894

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

A blue ink signature of Sudhir D. Pardiwala, appearing as a stylized 'Sudhir'.

Sudhir D. Pardiwala, PE
Executive Vice President

A blue ink signature of Andrea Boehling, appearing as 'Andrea Boehling' in a cursive script.

Andrea Boehling
Consultant

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1 EXECUTIVE SUMMARY

1.1 BACKGROUND

In early 2015, the Rainbow Municipal Water District (the District) contracted with Raftelis Financial Consultants (RFC) to conduct a Water Rate Study (Study) to include a five-year Financial Plan. This report presents the Financial Plan and the resulting rates for implementation on January 1, 2016.

This Executive Summary summarizes the water rates and contains a description of the rate study process, methodology, results, and recommendations for the District's water rates. The District's last rate adjustment was effective on January 1, 2014. The District wishes to establish fair and equitable rates that:

- » Meet the District's fiscal needs in terms of operational expenses, reserve goals, and capital expenditures to maintain the system;
- » Proportionately allocate the costs of providing service in accordance with California Constitution article XIII D, section 6 (commonly referred to as Proposition 218).

1.2 PROCESS

RFC first developed a Financial Plan for the District which projects revenues and expenses, incorporates capital expenditures, as well as proposed debt and reserve targets, and recommends total revenue adjustments during the five-year study period. RFC presented the Financial Plan forecasts to the Board of Directors (Board) and received their input and direction. Based on the Financial Plan forecast and direction from the Board, RFC proposes a 6% revenue increase in fiscal year ending (FYE) 2016 and FYE 2017 and 2% revenue increases in FYE 2018 through FYE 2020 in order to meet the operating and capital expenses and achieve minimum reserve targets by the end of FY 2020.

The proposed rate structure consists of four components: 1) A fixed monthly Operations and Maintenance (O&M) charge; 2) A fixed Pass-Through charge from San Diego County Water Authority (SDCWA); 3) Commodity or volumetric rates; and 4) A pumping charge comprised of a fixed and variable component. The proposed commodity rate structures consist of a 3-tier rate structure for single-family residential (SFR), Transitional Special Agriculture Water Rate (TSAWR) domestic, and agriculture customers with a domestic residence on the property and a uniform commodity rate structure for all other classes.

1.3 METHODOLOGY

The water rates were developed using cost of service principles set forth by the American Water Works Association M1 Manual titled *Principles of Water Rates, Fees and Charges* (AWWA M1 Manual). Cost of service principles endeavor to distribute costs to customer classes in accordance with the way each class uses the water system. This methodology is described in detail in Sections 4 and 5. For this Study, the Base-Extra Capacity Method of the AWWA M1 Manual was used for distributing costs. Costs were separated into three components: "(1) base costs, (2) extra capacity costs, and (3) customer costs. Base costs are costs that are associated with meeting average daily demand needs

and include operations and maintenance costs and capital costs designed to meet average load conditions. Extra capacity costs are costs associated with meeting peak demand. Customer costs are costs associated with serving customers, such as meter reading, billing, customer service, etc.

The rates are designed to meet the requirements of Proposition 218; all rates are charged to customers based on the cost of providing service. Tiered rates include supply under average conditions and peaking costs associated with each tier.

1.4 RESULTS AND RECOMMENDATIONS

Table 1-1 shows the recommended Financial Plan. Although Table 1-1 shows anticipated revenue adjustments for each year of the study period, the District will review and confirm the needed revenue adjustments on a yearly basis. Revenue adjustments represent the average increase in rates for the District as a whole; rate changes for individual classes and tiers will depend on the cost of service. These increases do not include increases in water costs after calendar year (CY) 2016.

Table 1-1: Financial Plan

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Revenue Adjustments	6.00%	6.00%	2.00%	2.00%	2.00%
Pass-through of SDCWA costs	No ¹	Yes	Yes	Yes	Yes
Water Demand Factor (Change from Prior Year)	94.00%	100.00%	100.00%	100.00%	100.00%
Proposed Debt (Proceeds)	\$0	\$0	\$0	\$0	\$0
Capital Investment Plan	\$2,478,680	\$4,000,000	\$4,120,000	\$2,546,160	\$2,622,545

Table 1-2 shows the recommended reserves and the target for each reserve.

Table 1-2: Recommended Reserves

Reserve	Target	FYE 2016 Target Balance	FYE 2017 Target Balance	FYE 2018 Target Balance	FYE 2019 Target Balance	FYE 2020 Target Balance
Operating Reserve	60 days of O&M	\$2,819,814	\$2,938,745	\$3,002,141	\$3,067,629	\$3,135,281
Water Capital Projects Reserve	1 yr avg CIP	\$3,322,176	\$3,322,176	\$3,322,176	\$3,322,176	\$3,322,176
Liability Self Insurance Reserve	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
New Water Sources Reserve	No min target					
Rate Stabilization Reserve	10% of Water Sales	\$3,389,214	\$3,640,694	\$3,911,860	\$4,126,775	\$4,355,735

Factors Affecting Revenue Adjustments

The following items affect the District's revenue requirement (i.e. costs) and thus its water rates. The District's expenses include Operation and Maintenance (O&M) expenses, capital expenses, and Pass-Through costs from the SDCWA.

¹ Rates for FYE 2016 already include the cost of purchased water from SDCWA. Future incremental increase in rates will be passed-through to the District's customers at the time of the increases.

- » **O&M expenses:** Overall, the District's O&M expenses are expected to increase by approximately 3-5% from FY 2015 to FY 2016. Additionally, the District did not pass-through SDCWA rate increases in January 2015 and needs to adjust rates in order to recover the cost of purchased water. RFC recommends that future purchased water cost increases are passed through.
- » **Water System Capital Investment:** The District is projecting approximately \$6.5 million in capital expenditures for FYE 2016 and FYE 2017. These investments will be funded partially by reserves and partially by anticipated capacity fee revenue. The average reserve (rate) funded capital expenditures of these two fiscal years is approximately \$2.5 million per year and the average capacity fee funded capital expenditures of these two fiscal years is approximately \$0.67M per year.
- » **Reserve Funding:** The District plans to use reserves during the study period to offset rate increases. By FY 2018, the Water Capital Projects Reserve will be completely depleted due to significant capital expenditures. However, with the proposed revenue adjustments and the anticipated capacity fee revenue, all reserves will reach minimum target levels by the end of FY 2020. Section 3 shows the reserve balances for the selected Financial Plan for each year of the Study Period.
- » **Reduced Water Sales:** The State is requiring a cutback of 36% in domestic water use. State and local public outreach efforts to conserve water are affecting water use and revenues of the District. The District has seen a 10% decrease in water use from FYE 2014 to FYE 2015 and has projected another 6% decrease for FYE 2016². Going forward, it is expected that sales will continue to be less than the norm before the drought. The reduced sales have resulted in lower revenues and depletion of reserves.

Proposed Water Rates

The District's water service fees are comprised of four components: (1) a RMWD O&M Fixed Charge, (2) a SDCWA Fixed Charge, (3) a Commodity Rate, and (4) a Pumping Charge. The O&M Charge is a fixed charge based on the size of meter serving a property, and is calculated to recover a portion of the District's fixed costs, such as the costs of billing and collections, customer service, meter reading, meter maintenance, and a portion of capacity related costs. The SDCWA Fixed Charge is based on the charges imposed by SDCWA and for which the District has no control. The commodity rates recover the costs associated with meeting base and extra capacity requirements. The pumping charges recover the costs associated with pumping water to higher elevations.

Table 1-3 shows the current and proposed monthly O&M charge by meter size. At the direction of the Board, RFC developed a separate fixed charge for agriculture customers.

² Based on District Staff, the District may see much larger reductions than originally anticipated. According to staff, the District has already seen a 25% reduction in usage.

Table 1-3: Current and Proposed Monthly O&M Charges (\$/Meter)

Meter Size	Current RMWD O&M Charge	FY 2016 Proposed O&M Charge ³	FY 2016 Proposed Ag O&M Charge ⁴
5/8"	\$28.35	\$23.82	\$43.26
3/4"	\$35.45	\$23.82	\$43.26
1"	\$46.10	\$37.20	\$69.59
1-1/2"	\$70.90	\$70.64	\$135.44
2"	\$124.05	\$110.78	\$214.45
3"	\$212.70	\$237.86	\$464.64
4"	\$354.50	\$425.15	\$833.36
6"	\$602.60	\$873.31	\$1,715.63

Table 1-4 shows the current and proposed SDCWA Pass-Through monthly fixed charge by meter size. The District did not pass through the SDCWA January 2015 rate increases and therefore has been utilizing reserves to cover the additional costs.

Table 1-4: Current and Proposed Monthly SDCWA Pass-Through Charges (\$/Meter)

Meter Size	Current SDCWA Domestic Fixed Charge	Current SDCWA TSAWR Domestic Fixed Charge	Current SDCWA Commercial Fixed Charge	Proposed SDCWA Pass-Through Charge ⁵	Proposed TSAWR SDCWA Pass-Through Charge ⁶
5/8"	\$30.48	\$30.48	\$16.17	\$35.02	\$17.05
3/4"	\$30.48	\$30.48	\$16.17	\$35.02	\$17.05
1"	\$48.77	\$48.77	\$25.87	\$58.37	\$28.42
1-1/2"	\$91.44	\$91.44	\$48.50	\$116.75	\$56.84
2"	\$158.49	\$91.44	\$84.07	\$186.79	\$90.94
3"	\$274.31	\$91.44	\$145.50	\$408.61	\$198.93
4"	\$487.66	\$91.44	\$258.66	\$735.50	\$358.08
6"	\$1,097.24	\$91.44	\$581.99	\$1,517.71	\$738.90

The proposed rates have been adjusted to recover the full costs from SDCWA. In addition, RFC recommends both TSAWR customer classes (domestic and commercial) be charged the same fixed Pass-Through charge based on their proportional share of the following SDCWA charges: Readiness-to-Serve Charge, Infrastructure Access Charge, Customer Service Charge, and the Capacity Reservation Charge. TSAWR customers receive water at a discounted rate because they have agreed to reduce usage during water shortages. Since they are required to reduce usage, they do not receive

³ Proposed RMWD O&M monthly fixed charge for all customer classes except Agriculture, TSAWR Domestic, and TSAWR Commercial (i.e. SFR, MFR, Commercial, and Institutional)

⁴ Proposed RMWD O&M monthly fixed charge for Agriculture, TSAWR Domestic, and TSAWR Commercial customer classes.

⁵ Proposed SDCWA monthly Pass-Through charge for all customer classes except TSAWR (i.e. SFR, MFR, Commercial, Agriculture, and Institutional).

⁶ Proposed SDCWA monthly Pass-Through charge for TSAWR Domestic and TSAWR Commercial customer classes.

the benefit of emergency storage or the guarantee of supply reliability and therefore do pay the Emergency Storage Charge or the Supply Reliability Charge.

Table 1-5 shows the current commodity rates by user class.

Table 1-5: Current Monthly Commodity Rates (\$/HCF)

Customer Class	Tier Width	Current Commodity Rate (\$/HCF ⁷)
Domestic (A, D, MF)		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 & above	\$3.15
Commercial		\$3.15
Construction		\$3.15
TSAWR/Domestic		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 - 26 HCF	\$3.15
Tier 3	27 & above	\$2.83
TSAWR/Commercial		\$2.83

RFC recommends splitting the current Domestic class into various classes as shown in Table 1-6. The tiers are designed to provide essential indoor use in the first tier, average single family outdoor use in the second tier and usage above that falls into the top tier. A separate rate for each class based on the peaking (i.e., extra capacity) needs of each class was developed. For these customers, the commodity rate is a distinct uniform rate per hundred cubic feet (HCF) of water usage. Cost of service principles justify higher rates for classes with higher peaking ratios as shown in Table 1-6. The rates are fully derived in Sections 5 and 6 of this Study.

Table 1-7 shows the current and proposed Pumping Charges. The Pumping Charges consist of a fixed component designed to recover the general maintenance and salaries costs related to the pumping facilities and a commodity component designed to recover the electricity costs associated with pumping water to the higher elevations.

Together, the four components of the District's proposed water service fees are structured to recover the proportionate costs of providing water service to each customer class and to deter waste, encourage water use efficiency, and manage the District's water resources.

⁷ HCF = Hundred Cubic Feet

Table 1-6: Proposed Monthly Commodity Rates (\$/HCF)

Customer Class	Tier Width	Proposed FY 2016 Commodity Rate (\$/HCF)
Single Family Residential		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$3.81
Agriculture (with residence)		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$3.24
TSAWR Domestic		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$2.77
Agriculture (w/o residence)		\$3.24
TSAWR Commercial		\$2.77
MFR		\$3.40
Commercial		\$3.51
Institutional		\$3.58
Construction		\$4.30

Table 1-7: Current and Proposed Monthly Pumping Charges

		Current Pumping Charge	Proposed Pumping Charge
Fixed Pumping Charge (\$/Month)		\$8.77	\$9.51
Commodity Rates (\$/HCF)			
Zone 1	Rainbow Heights	\$0.43	\$0.77
Zone 2	Improvement District U-1	\$0.27	\$0.48
Zone 3	Vallecitos	\$0.15	\$0.27
Zone 4	Northside	\$0.05	\$0.09
Zone 5	Morro Tank	\$0.08	\$0.14
Zone 6	Huntley	\$0.31	\$0.55
Zone 7	Magee Tank	\$1.42	\$2.53

2 WATER SYSTEM

This section briefly describes the water system and the District provided customer account and water use data for FY 2015.

2.1 WATER SOURCES AND SYSTEM FACILITIES

The Rainbow Municipal Water District serves the unincorporated communities of Rainbow, Bonsall, and portions of Fallbrook and Vista - covering approximately 51,200 acres. While the service area is rather large, the District has a relatively small customer base consisting primarily of agricultural customers and domestic residential customers. Agricultural customers currently account for over 60% of the District's total water usage.

The District is a water retailer and currently relies entirely on water purchased from the SDCWA and Metropolitan Water District of Southern California (MWD). Currently, the rate structure consists of both fixed monthly charges based on meter size and variable commodity charges based on units of water. Additionally, the rates include a pumping charge to account for pumping, electricity, and maintenance costs that are associated with delivering potable water to 7 unique elevation zones. The District's rates include a pass-through component to account for increases in the price of water purchased from SDCWA.

On January 17, 2014, Governor Jerry Brown issued a drought state of emergency declaration in response to record-low water levels in California's rivers and reservoirs as well as an abnormally low snowpack. On April 1, 2015, Governor Brown issued an Executive Order calling for statewide mandatory water reductions of up to 25%. The drought has impacted the cost of imported water the District purchases from SDCWA. Additionally, on May 5, 2015, the State Water Resources Control Board approved regulations, based on Governor Brown's Executive Order, mandating the District to reduce its water consumption by 36% percent for June 2015 through February 2016 as compared to the same months in 2013. Agricultural customers were exempted from the State mandate. However, SDCWA has implemented its Drought Management Plan which includes a mandatory 15% cutback for TSAWR customers.

2.2 NUMBER OF ACCOUNTS

Table 2-1 shows the estimated number of potable water accounts by meter size for FYE 2016. RFC estimated the number of accounts by tabulating FYE 2015 (actual) account data provided by the District and escalating the number of accounts using the growth factors described in Section 2.3. The number of accounts are used to forecast the amount of fixed revenue the District will receive from the Fixed Charges.

Table 2-1: Estimated Water Accounts by Meter Size (Projected - FYE 2016)

Meter Size	Residential	MFR	Commercial	Agriculture	TSAWR Domestic	TSAWR Commercial	Institutional	Total
5/8"	208	-	1	8	1	1	-	219
3/4"	2,116	4	26	265	97	9	4	2,521
1"	1,896	39	79	821	573	72	4	3,484
1-1/2"	127	10	26	135	210	76	5	589
2"	51	34	26	97	144	94	5	451
3"	3	-	6	7	6	10	1	33
4"	-	3	3	4	1	3	-	14
6"	-	-	-	1	-	-	-	1
Total	4,401	90	167	1,338	1,032	265	19	7,312

2.3 ACCOUNT AND WATER USE GROWTH ASSUMPTIONS

The revenue calculated for each of the fiscal years in the Financial Plan is a function of the number of accounts, account growth, water use, and existing rates. The District has realized relatively low account growth over the past few years however significant residential account growth is anticipated over the next 5 – 10 years. Due to the timing and uncertainty of anticipated development projects, District staff and the Board directed RFC to utilize the growth assumptions shown in Table 2-2⁸. Like most water purveyors, the District realized reduced water use due to conservation. Conservation is expected to continue both during the drought and moving forward as customer’s water usage patterns and behaviors have been altered. Therefore RFC assumed a reduction in water use as shown in Table 2-2 to account for the new normal of reduced usage.

Table 2-2: Account Growth and Water Use Assumptions

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Growth Rates					
Domestic / SFR	0.00%	2.00%	5.00%	5.00%	5.00%
Non-SFR	0.00%	0.00%	0.00%	0.00%	0.00%
Reduction in Water Use (%)	6.00%	0.00%	0.00%	0.00%	0.00%
Water Use (AF⁹)	18,017 AF	18,260 AF	18,877 AF	19,526 AF	20,207 AF

The projected water usage increase shown in Table 2-2 is due to growth in accounts.

2.4 WATER USE

Figure 2-1 shows the FYE 2015 water use by current customer class. The first number shown in the pie chart is the water use in acre feet (AF) per year followed by the percentage of total water used by the class. The total water use for FYE 2015 is 19,163 AF. Figure 2-2 shows the projected FYE 2016 water use (approximately 18,000 AF) by customer class assuming an anticipated 6% water reduction. The user codes from the consumption files in conjunction with the adjusted

⁸ The Domestic / SFR growth assumptions utilized in the study were more conservative than the development projections of 2.10%, 13.30%, 14.60%, and 10.70% for FYE 2017 through FYE 2020.

⁹ AF = Acre feet

classifications¹⁰, provided by the District, were used to classify each account into the customer classes shown in the Figure 2-2.

Figure 2-1: Water Use by Customer Class - FYE 2015

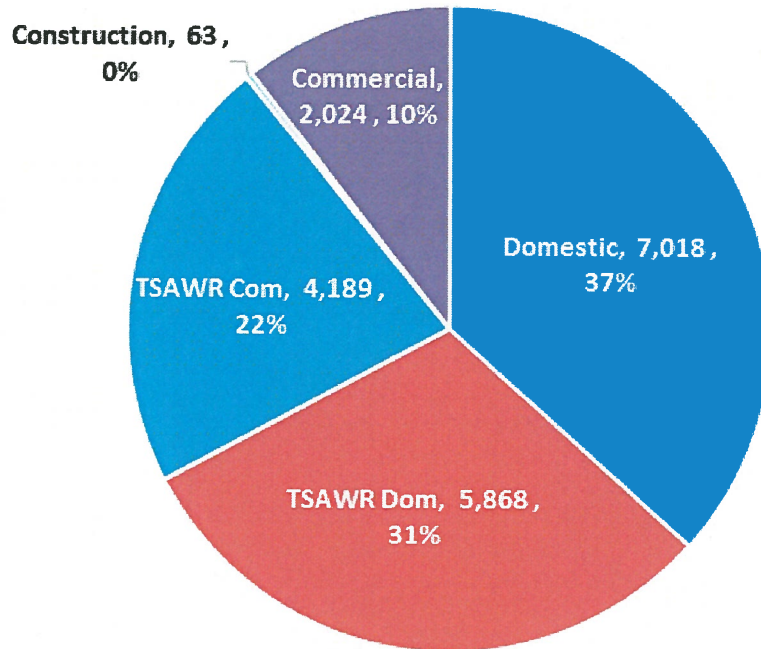
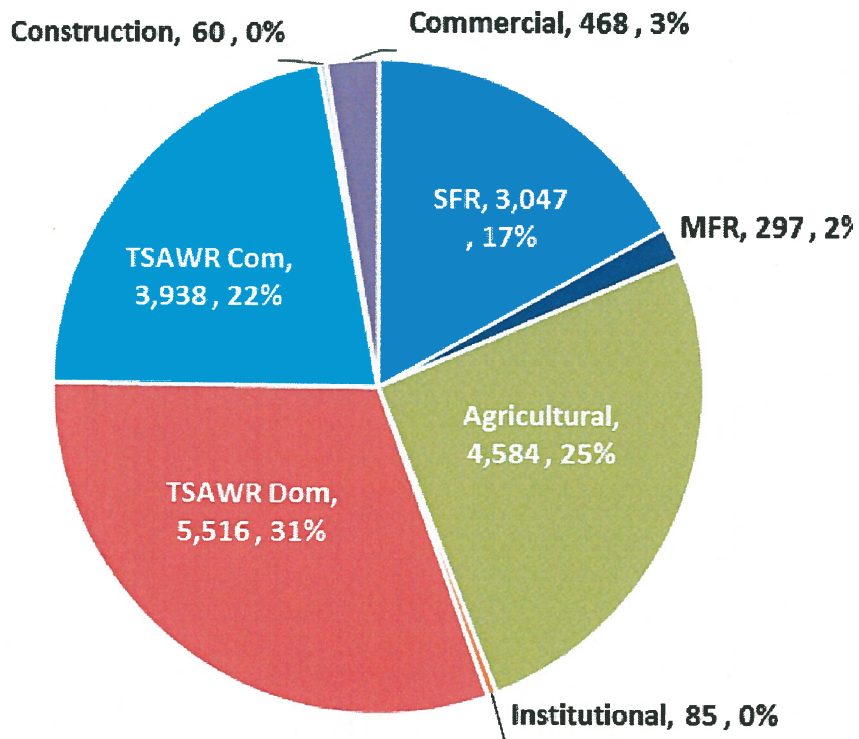


Figure 2-2: Projected Water Use by Customer Class - FYE 2016



¹⁰ The District reclassified various customers based on guidelines in regulations from the State Water Resources Control Board. Customers with over an acre of irrigation use were reclassified as agricultural.

3 FINANCIAL PLAN

This section describes the assumptions used in projecting operating and capital expenses as well as reserve coverage requirements that determine the overall revenue adjustments required to ensure the financial stability of the District. Revenue adjustments represent the average increase in rates for the District as a whole; rate changes for individual classes will depend on the cost of service.

3.1 INFLATIONARY AND OTHER ASSUMPTIONS

To ensure that future costs are reasonably projected, we make informed assumptions about inflationary factors and water costs and use. Table 3-1 shows the inflationary assumptions and water purchases incorporated in the Financial Plan. Interest rates earned on reserves are based on the low interest rates (for money market accounts) of the past several years.

Table 3-1: Inflationary Assumptions

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Inflationary Assumptions					
General	budget ¹¹	3.0%	3.0%	3.0%	3.0%
Salary and Benefits	budget	3.0%	3.0%	3.0%	3.0%
Capital	budget	2.0%	2.0%	2.0%	2.0%
Energy	budget	5.0%	5.0%	5.0%	5.0%
Interest on Reserves	1.0%	2.0%	2.0%	2.0%	2.0%
Water Purchase Assumptions					
Total Projected Water Purchases (AF)	18,825	19,078	19,723	20,401	21,113
SDCWA Purchases ¹²	9,538	9,667	9,994	10,337	10,698
Direct Purchases (MWD) ¹³	9,286	9,411	9,730	10,064	10,415
Number of Accounts	7,312	7,427	7,720	8,028	8,351

3.2 FINANCIAL PLAN

The assumptions shown in Table 3-1 were incorporated into the five-year Financial Plan. To develop the Financial Plan, RFC projected annual expenses and revenues, modeled reserve balances and transfers between funds, and capital expenditures to estimate the amount of additional rate revenue needed each year. This section of the report provides a discussion of O&M expenses, the Capital Improvement Plan (CIP), reserve funding, projected revenue under existing rates, and the revenue adjustments needed to ensure the fiscal sustainability and solvency of the District.

¹¹ Costs for FYE 2016 were provided in the budget, no escalation needed

¹² These purchases are charged the Melded Untreated M&I Supply Rate, the Melded M&I Treatment Rate, and the Transportation Rate.

¹³ The Direct Purchases are charged the Melded Untreated M&I Supply Rate and the Melded M&I Treatment Rate but do not get charged the Transportation Rate.

3.3 UTILITY EXPENSES

The District's expense include O&M expenses, capital expenses and debt service payments. Sections 3.4 through 3.6 discuss the details of each of these expenses.

3.4 O&M EXPENSES

The District's O&M budget is shown by fiscal year in Table 3-2. Fiscal year 2016 is the year with which rates were calculated (this is known as the test year) and fiscal year 2015 is shown for comparison. The Financial Plan study period is from FYE 2016 to FYE 2020. The O&M budget incorporates the inflationary factors discussed in Section 3.1. The slight increases in SDCWA water purchases anticipated for each year of the study period are due to the assumed growth rates discussed in Section 2.3 and not due to increases in the cost of purchased water. Increases in purchased water costs from SDCWA will be passed through to District customers at the time rates are increased. The Total Expenses shown on line 16 excludes the CIP expenditures discussed in Section 3.5.

Table 3-2: Projected Water O&M Expenses

Line No.	Operating Expenses (1)	Actual FYE 2015 (2)	Calculated FYE 2016 (3)	Projected FYE 2017 (4)	Projected FYE 2018 (5)	Projected FYE 2019 (6)	Projected FYE 2020 (7)
1	Water Purchases	\$20,490,103	\$19,759,584	\$20,222,558	\$20,906,757	\$21,625,166	\$22,379,495
2	Transportation	\$1,001,850	\$979,603	\$1,014,988	\$1,049,329	\$1,085,387	\$1,123,247
3	Ready to Serve Charge	\$516,828	\$527,580	\$527,580	\$527,580	\$527,580	\$527,580
4	Infrastructure Access Charge	\$426,000	\$435,546	\$436,656	\$436,656	\$436,656	\$436,656
5	Customer Service Charge	\$1,203,396	\$1,204,944	\$1,205,412	\$1,205,412	\$1,205,412	\$1,205,412
6	Capacity Reservation Charge	\$514,386	\$622,440	\$657,756	\$657,756	\$657,756	\$657,756
7	Emergency Storage Charge	\$1,895,022	\$1,778,478	\$1,714,356	\$1,714,356	\$1,714,356	\$1,714,356
8	Supply Reliability Charge	\$0	\$369,888	\$739,776	\$739,776	\$739,776	\$739,776
9	AG Credit-SAWR	(\$1,619,526)	(\$1,768,355)	(\$1,813,987)	(\$1,875,360)	(\$1,939,802)	(\$2,007,466)
10	Salaries and Benefits	\$6,194,504	\$6,287,561	\$6,476,188	\$6,670,474	\$6,870,588	\$7,076,706
11	Services and Supplies	\$3,361,173	\$3,727,282	\$3,840,066	\$3,956,283	\$4,076,037	\$4,199,436
12	Pumping	\$441,000	\$480,587	\$504,616	\$529,847	\$556,340	\$584,157
13	Capital Outlay	\$0	\$504,976	\$515,076	\$525,377	\$535,885	\$546,602
14	Total O&M Expenses	\$34,424,736	\$34,910,114	\$36,041,042	\$37,044,243	\$38,091,135	\$39,183,712
15	Existing Debt Service	\$214,334	\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
16	Total Expenses	\$34,639,070	\$35,287,481	\$37,145,837	\$38,149,037	\$39,195,929	\$40,288,507

3.5 CAPITAL IMPROVEMENT PLAN

Table 3-3 shows the District’s detailed five-year CIP along with the anticipated funding sources. Line 22 represents the anticipated connection fee revenue that will be generated from several residential developments coming online over the next 5 years. The anticipated capacity fee revenue from these developments will be available to fund CIP. Line 23 shows the anticipated rate and/or reserve (cash) funded CIP.

Table 3-3: Detailed Capital Improvement Plan

Line No.	CIP Description	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
1	2015 Urban Water Management Plan	\$150,000	\$0	\$0	\$0	\$0
2	Highway 76 Water Realignment - Water Lines	\$469,223	\$0	\$0	\$0	\$0
3	Gird to Monserate Hill Water Line	\$0	\$750,000	\$0	\$0	\$0
4	Wrightwood to Cottontail Water Line	\$200,000	\$0	\$0	\$0	\$0
5	Tarek Terrace Water Line	\$200,000	\$0	\$0	\$0	\$0
6	Regional Recycled Water Study	\$142,919	\$0	\$0	\$0	\$0
7	San Luis Rey Groundwater Study	\$150,000	\$0	\$0	\$0	\$0
8	Morro Tank Structural Repair	\$133,587	\$0	\$0	\$0	\$0
9	Ranchos Amigos Pressure Stations	\$10,016	\$0	\$0	\$0	\$0
10	Water Master Plan	\$22,865	\$0	\$0	\$0	\$0
11	Afton Farms Water Line	\$271,847	\$0	\$0	\$2,400,000	\$2,400,000
12	Lake Vista Estates Loop	\$286,394	\$0	\$0	\$0	\$0
13	Pressure Reducing Stations	\$143,829	\$130,000	\$140,000	\$0	\$0
14	Corrosion Control Implementation	\$130,000	\$120,000	\$106,364	\$0	\$0
15	SDCWA Shutdown Pump Stations	\$13,000	\$130,000	\$140,000	\$0	\$0
16	Other Infrastructure Replacements	\$130,000	\$2,870,000	\$3,613,636	\$0	\$0
17	Parking Lot Paving	\$25,000	\$0	\$0	\$0	\$0
18	Total CIP	\$2,478,680	\$4,000,000	\$4,000,000	\$2,400,000	\$2,400,000
19	Inflated Total CIP¹⁴	\$2,478,680	\$4,000,000	\$4,120,000	\$2,546,160	\$2,622,545
20						
21	Funding Sources:					
22	Capacity/Connection Fee Revenue	\$597,434	\$739,942	\$1,793,680	\$2,509,133	\$2,618,497
23	Rate / Reserve Funded Capital	\$1,881,246	\$3,260,058	\$2,326,320	\$37,027	\$4,048

¹⁴ Assumes 3% Escalation Factor for Projected CIP (FYE 2018 and beyond). A detailed CIP Masterplan review and update is currently underway at the District.

3.6 EXISTING AND PROPOSED DEBT SERVICE

Table 3-4 shows the District’s existing debt service payments, we are not recommending any new debt. Existing debt consists of two “State of California – State Water Resources Control Board, Drinking Water State Revolving Fund” loans. The first principal payments begin in FYE 2017. No future debt issuance is proposed at this time.

Table 3-4: Existing and Proposed Debt Service

Debt Service	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Existing Debt Service	\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794

3.7 PROPOSED FINANCIAL PLAN AND REVENUE ADJUSTMENTS

The proposed revenue adjustments help ensure adequate revenue to fund operating expenses, capital expenditures, and recommended reserve targets. Financial Plan modeling assumes the revenue adjustments occurs on January 1. The proposed revenue adjustments enable the District to execute the CIP shown in Table 3-3 and meet or exceed minimum reserve targets by FYE 2020.

Table 3-5 shows the Financial Plan selected by the Board. Although Table 3-4 shows anticipated revenue adjustments for each year of the Study period, the District will review and confirm the needed revenue adjustments on a yearly basis. The rates presented in Section 6 are based on this Financial Plan.

Table 3-5: Proposed Rate Adjustments and Debt Issues

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Revenue Adjustments	6.00%	6.00%	2.00%	2.00%	2.00%
Pass-through of SDCWA costs	No ¹⁵	Yes	Yes	Yes	Yes
Water Demand Factor (as % reduction from prior year)	94.00%	100.00%	100.00%	100.00%	100.00%
Proposed Debt (Proceeds)	\$0	\$0	\$0	\$0	\$0
Capital Investment Plan	\$2,478,680	\$4,000,000	\$4,120,000	\$2,546,160	\$2,622,545

Table 3-6 shows the cash flow detail over the next five years assuming the selected Financial Plan. Line number 7 shows the additional revenue from the revenue adjustments assuming they become effective January 1 of each year. The changes in expenses over the study period as shown on Lines 15 through 32 are due to the growth projections discussed in Section 2.3 and do not account for any future increases from SDCWA. Future increases from SDCWA will be passed-through to the District’s customers at the time of the increases.

¹⁵ Rates for FYE 2016 already include the cost of purchased water from SDCWA. Future incremental increase in rates will be passed-through to the District’s customers at the time of the increases.

Table 3-6: Five-Year Water Operating Cash Flow

Line No.	Rainbow Municipal Water District Cash Flow	Calculated FYE 2016	Projected FYE 2017	Projected FYE 2018	Projected FYE 2019	Projected FYE 2020
1	Rate Revenue Under Existing Rates	\$32,904,986	\$33,345,797	\$34,470,712	\$35,651,476	\$36,891,641
	Additional Revenue Required:					
		Revenue	Months			
	Fiscal Year	Adjustment	Effective			
2	2016	6.00%	January	\$987,150	\$2,000,748	\$2,068,243
3	2017	6.00%	January		\$1,060,396	\$2,192,337
4	2018	2.00%	January			\$387,313
5	2019	2.00%	January			\$801,160
6	2020	2.00%	January			\$408,592
7	Total Additional Revenue	\$987,150	\$3,061,144	\$4,647,893	\$5,616,274	\$6,665,706
8	Total Service Charge Revenue	\$33,892,136	\$36,406,941	\$39,118,604	\$41,267,749	\$43,557,347
	Other Revenue					
9	Other Operating Revenue	\$95,500	\$97,410	\$99,358	\$101,345	\$103,372
10	Interest Income	\$0	\$96,099	\$138,989	\$106,408	\$134,307
11	Property Taxes - Parcel Charge RTS	\$486,481	\$486,481	\$486,481	\$486,481	\$486,481
12	Non-Operating Revenue	\$346,383	\$346,383	\$346,383	\$346,383	\$346,383
13	Subtotal Other Revenue	\$928,364	\$1,026,373	\$1,071,211	\$1,040,617	\$1,070,543
14	TOTAL REVENUE	\$34,820,500	\$37,433,314	\$40,189,816	\$42,308,367	\$44,627,890
	EXPENSES					
	O&M Expenses					
15	Water Purchases	\$19,759,584	\$20,222,558	\$20,906,757	\$21,625,166	\$22,379,495
16	Transportation	\$979,603	\$1,014,988	\$1,049,329	\$1,085,387	\$1,123,247
17	Ready to Serve Charge	\$527,580	\$527,580	\$527,580	\$527,580	\$527,580
18	Infrastructure Access Charge	\$435,546	\$436,656	\$436,656	\$436,656	\$436,656
19	Customer Service Charge	\$1,204,944	\$1,205,412	\$1,205,412	\$1,205,412	\$1,205,412
20	Capacity Reservation Charge	\$622,440	\$657,756	\$657,756	\$657,756	\$657,756
21	Emergency Storage Charge	\$1,778,478	\$1,714,356	\$1,714,356	\$1,714,356	\$1,714,356
22	Supply Reliability Charge	\$369,888	\$739,776	\$739,776	\$739,776	\$739,776
23	AG Credit-SAWR	(\$1,768,355)	(\$1,813,987)	(\$1,875,360)	(\$1,939,802)	(\$2,007,466)
24	Salaries and Benefits	\$6,287,561	\$6,476,188	\$6,670,474	\$6,870,588	\$7,076,706
25	Services and Supplies	\$3,727,282	\$3,840,066	\$3,956,283	\$4,076,037	\$4,199,436
26	Pumping	\$480,587	\$504,616	\$529,847	\$556,340	\$584,157
27	Capital Outlay	\$504,976	\$515,076	\$525,377	\$535,885	\$546,602
28	Total O&M Expenses	\$34,910,114	\$36,041,042	\$37,044,243	\$38,091,135	\$39,183,712
	Debt Service					
29	Existing Debt Service	\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
30	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
31	Total Debt Service Expenses	\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
32	TOTAL EXPENSES	\$35,287,481	\$37,145,837	\$38,149,037	\$39,195,929	\$40,288,507
33	Transfers to (from) Reserves¹	(\$466,982)	\$287,477	\$2,040,779	\$3,112,437	\$4,339,383

¹before capital expenses

Figures 3-1 through 3-5 display the FYE 2016 through FYE 2020 Financial Plan in graphical format. Figure 3-1 shows the revenue adjustments (blue bars) for the next five years. The District is setting rates for FYE 2016 and revenue adjustments for FYE 2017 and beyond will be evaluated on a yearly basis.

Figure 3-1: Proposed Revenue Adjustments

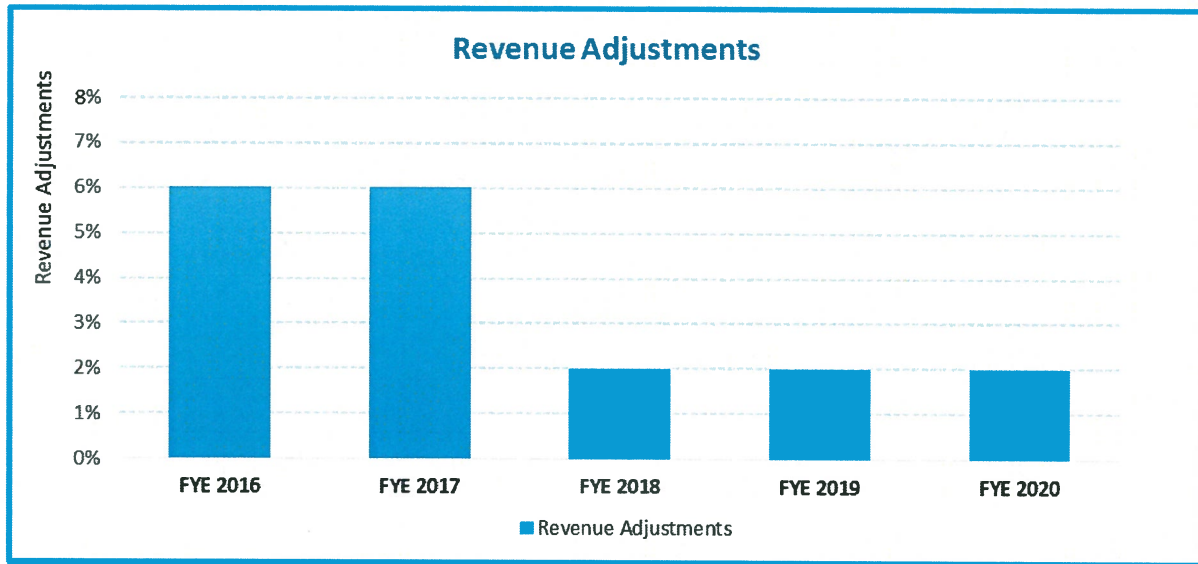


Figure 3-2 graphically illustrates the operating Financial Plan – it compares existing and proposed revenues with projected expenses. The expenses include O&M, purchased water, debt service, and reserve funding and are shown by the stacked bars; and total revenues at existing and proposed rates are shown by the horizontal black and purple lines, respectively. Current revenue from existing rates, does not meet future total expenses and shows the need for revenue adjustments.

Figure 3-2: Proposed Operating Financial Plan

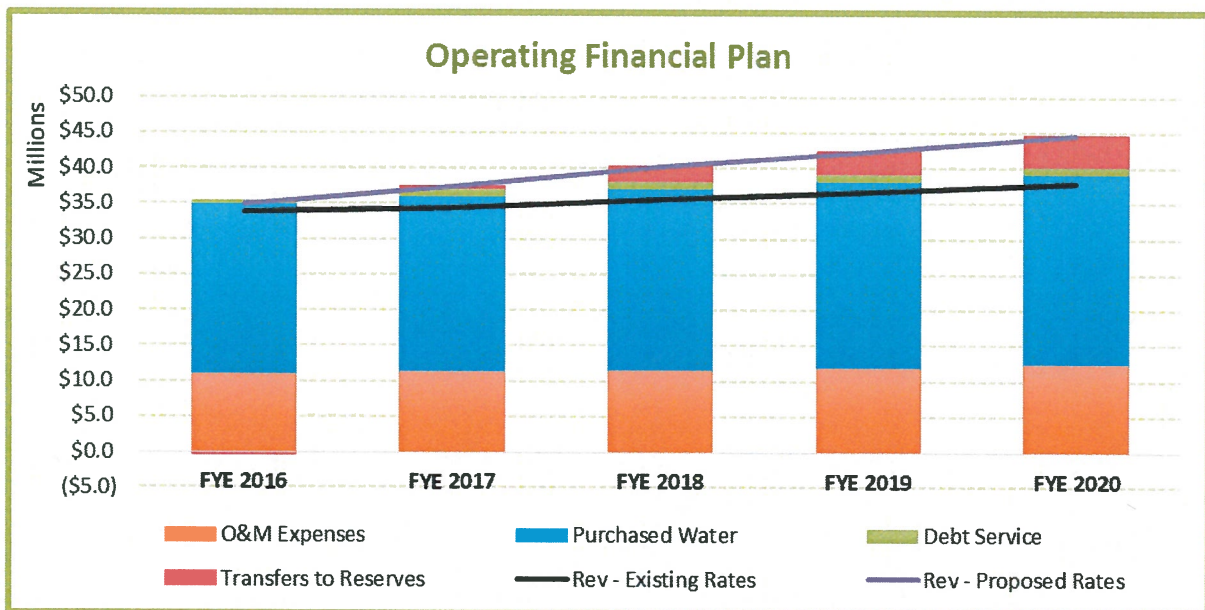


Figure 3-3 summarizes the projected CIP and the projected funding sources – debt, capacity fees, or rate funded. As shown, the District plans to have higher than average capital expenditures in FYE 2017 and FYE 2018. The anticipated capacity fee revenue from residential developments will help fund planned CIP. It does not appear that additional debt issuance is needed at this time, therefore none of the CIP is proposed to be funded through debt during the Study Period. A Master Plan Study has been initiated at the District but has not yet been completed. It is anticipated that once the Master Plan Study is finalized there may be additional capital expenditures in future years.

Figure 3-3: Projected CIP and Funding Sources

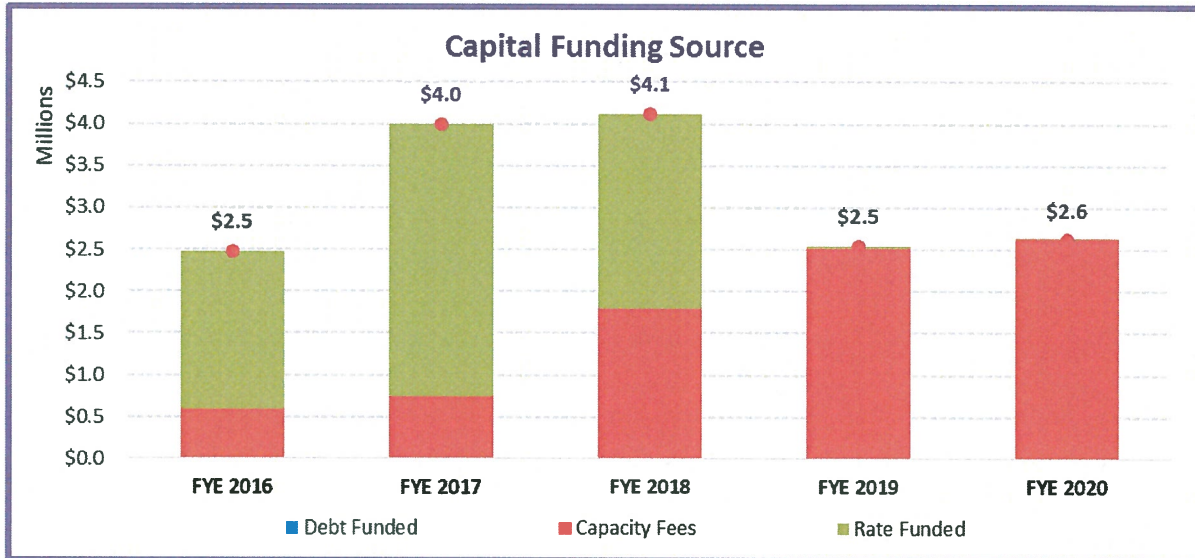


Figure 3-4 displays the operating fund yearly ending balance (green bars). The red horizontal line is the operating fund minimum target balance which is two months of O&M expenses¹⁶ based on current Board policy. As shown, the operating fund is anticipated to meet the minimum target for each year during the Study Period. Operating reserves are used to meet annual working capital requirements and any unexpected increase to operating expenses that may occur during the year.

The remaining reserves are the Water Capital Projects Reserve (Capital Reserve), Liability Self Insurance Reserve, New Water Sources Reserve, and the Rate Stabilization Reserve. The target for the Capital Reserve is the annual average expense for the following five years. It provides funds for meeting capital expenses and any unexpected increases in the budgeted costs. The Liability Self Insurance Reserve target of \$1 million covers the District's insurance deductibles. The New Water Sources will maintain its current balance of approximately \$1 million and will be utilized to help fund projects to develop new sources of water supply. The Rate Stabilization Reserve target is set a 15% of the rate revenue and allows the District to mitigate the need for rate adjustments if revenues drop off because of weather or water shortages,

¹⁶ Excludes the cost of purchased water and depreciation.

Figure 3-4: Projected Operating Fund Ending Balances

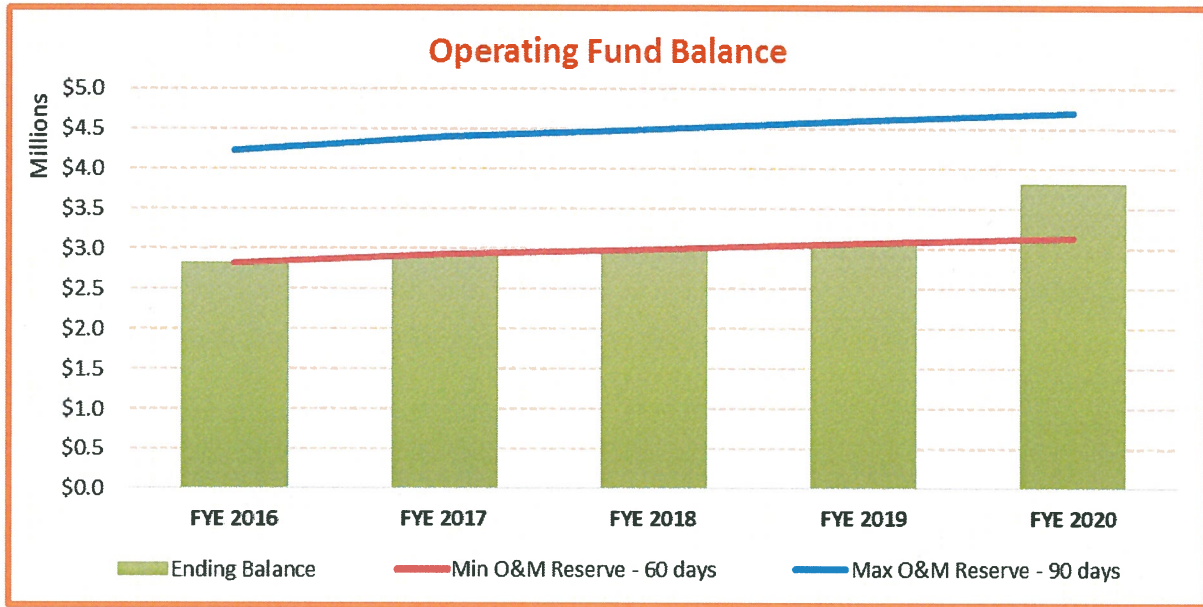
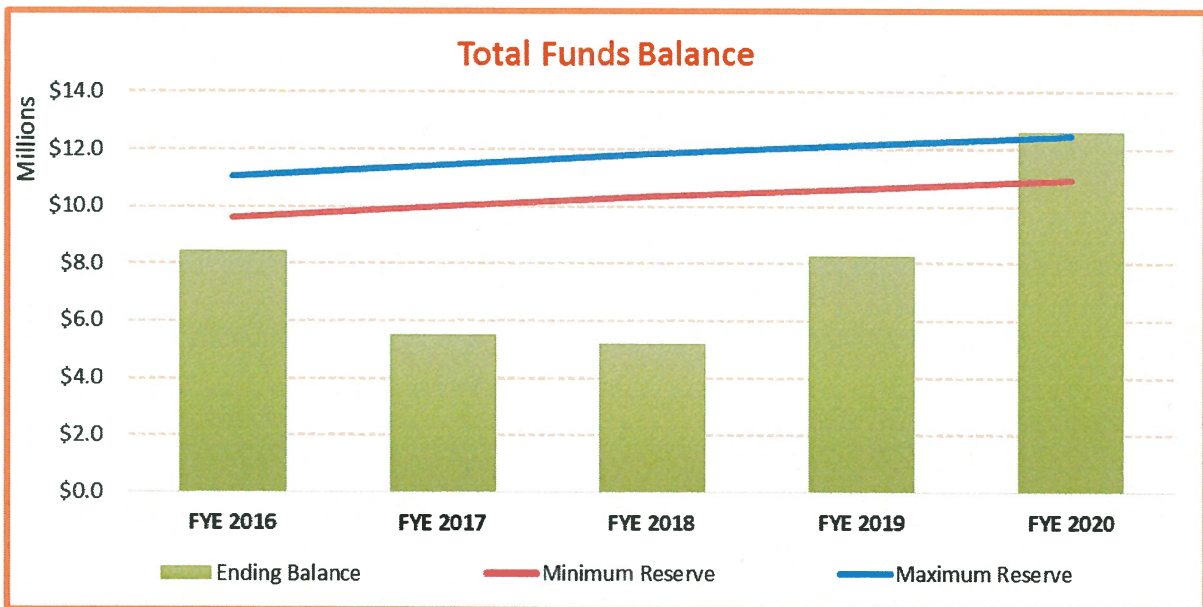


Figure 3-5 shows the ending yearly balance for the sum of all the District’s reserves and the total reserve target. As shown, the sum of all reserves is below the minimum target for FYE 2016 through FYE 2019, largely due to the establishment of the Rate Stabilization Reserve and the funding needs for capital expenditures. The Rate Stabilization Reserve will be funded over the course of several years. See Appendix A – Cash Flow Detail, which shows the flow of funds for all the District’s reserves¹⁷ as well as the ending balances for each reserve in graphical format.

Figure 3-5: Total Funds Balance



¹⁷ Reserve levels reaching above targeted levels in FYE 2020 or beyond will depend on several factors such as 1) development occurring as anticipated and the District receiving the additional meter fee revenue as well as the capacity fee revenue 2) no additional capital expenditures being scheduled in FYE 2019 or FYE 2020 based on the completion of the Master Plan.

4 LEGAL FRAMEWORK AND RATE SETTING METHODOLOGY

4.1 LEGAL FRAMEWORK

This section of the report describes the legal framework that was considered to ensure that the calculated cost of service rates provide a fair and equitable allocation of costs to customer classes.

California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements for fairness of the fees, as they relate to public water service are as follows:

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of the property.
5. No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners.
6. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA's *M1 Manual*, "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Prop 218 requires that water rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between costs and the rates charged. RFC followed industry standard rate setting methodologies set forth by the AWWA *M1 Manual* to ensure this study meets Proposition 218 requirements and creates rates that do not exceed the proportionate cost of providing water services.

California Constitution - Article X, Section 2

Article X, Section 2 of the California Constitution (established in 1976) states the following:

- "It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

As stated above, Article X, Section 2 of the State Constitution institutes the need to preserve the State's water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage conservation.

In addition, Section 106 of the Water Code declares that the highest priority use of water is for domestic purposes, with irrigation secondary. To meet the objectives of Article X, Section 2, Water Code Section 375 et seq., a water purveyor may utilize its water rate design to incentivize the efficient use of water. The District established single family tiered rates to incentivize customers to conserve water. The tiered rates (as well as rates for the remaining classes) need to be based on the proportionate costs incurred to provide water to each customer class in order to achieve compliance with Proposition 218.

Tiered Rates – “Inclining” block rate structures (which are synonymous with “increasing” block rate structures and tiered rates) when properly designed and differentiated by customer class, allow a water utility to send consistent conservation price incentives to customers. Due to heightened interest in water conservation, tiered rates have gained widespread use, especially in relatively water-scarce regions, such as Southern California. Tiered rates meet the requirements of Proposition 218 as long as the tiered rates reflect the proportionate cost of providing service.

4.2 COST-BASED RATE-SETTING METHODOLOGY

As stated in the AWWA M1 Manual, “the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” To develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, the following four major steps were followed.

1) *Calculate Revenue Requirement*

The rate-making process starts by determining the test year revenue requirement - which for this study is FYE 2016. The revenue requirement should sufficiently fund the utility's O&M, debt service, capital expenses, and reserve funding.

2) *Cost Of Service Analysis (COS)*

The annual cost of providing water service is distributed among customer classes commensurate with their service requirements. A COS analysis involves the following:

1. Functionalizing costs. Examples of functions are supply, treatment, transmission, distribution, storage, meter servicing and customer billing and collection.
2. Allocating functionalized costs to cost components. Cost components include base/supply, maximum day, maximum hour¹⁸, meter service, and customer servicing.
3. Distributing the cost components. Distribute cost components, using unit costs, to customer classes in proportion to their demands on the water system. This is described in the M1 Manual published by AWWA.

¹⁸ Collectively maximum day and maximum hour costs are known as peaking costs or capacity costs.

A COS analysis considers both the average quantity of water consumed (base costs) and the peak rate at which it is consumed (peaking or capacity costs as identified by maximum day and maximum hour demands)¹⁹. Peaking costs are costs that are incurred during peak times of consumption. There are additional costs associated with designing, constructing, and operating and maintaining facilities to meet peak demands. These peak demand costs need to be allocated to those imposing such costs on the utility. In other words, not all customer classes share the same responsibility for peaking related costs.

3) Rate Design and Calculations

Rates do more than simply recover costs. Within the legal framework and industry standards, properly designed rates should support and optimize a blend of various utility objectives, such as conservation, affordability for essential needs and revenue stability among other objectives. Rates may also act as a public information tool in communicating these objectives to customers.

4) Rate Adoption

Rate adoption is the last step of the rate-making process to comply with Proposition 218. RFC documented the rate study results in this Study Report to help educate the public about the proposed changes, the rationale and justifications behind the changes, and their anticipated financial impacts.

¹⁹ System capacity is the system's ability to supply water to all delivery points at the time when demanded. Peaking factors are calculated for each customer class at the time of greatest system demand. The time of greatest demand is known as peak demand. Both the operating costs and capital asset related costs incurred to accommodate the peak flows are generally allocated to each customer class based upon the class's contribution to the peak month, day, and hour event.

5 COST OF SERVICE ANALYSIS

The principles and methodology of a cost of service analysis were described in Section 4.2. A cost of service analysis distributes a utility's revenue requirements (costs) to each customer class. After determining a utility's revenue requirement, the next step in a cost of service analysis is to functionalize its O&M costs to the following **functions**:

1. Water supply
2. Transmission
3. Distribution
4. Storage/Reservoir
5. Meter service
6. Customer billing and collection
7. Booster Pumping

The functionalization of costs allows us to better allocate the functionalized costs to the **cost causation components**. The cost causation components include:

1. Base (average) costs (Supply and Average cost of service)
2. Peaking costs (maximum day and maximum hour)
3. Meter service
4. Billing and customer service
5. Fire protection

Base costs, as defined by the AWWA Manual M1, include the cost of supply and average costs of providing service. Peaking costs are further divided into maximum day and maximum hour demand. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day²⁰. Different facilities, such as distribution and storage facilities, and the O&M costs associated with those facilities, are designed to meet the peaking demands of customers. Therefore, extra capacity²¹ costs include the O&M and capital costs associated with meeting peak customer demand. This method is consistent with the AWWA M1 Manual, and is widely used in the water industry to perform cost of service analyses.

5.1 FUNCTIONALIZATION OF O&M EXPENSES

RFC reviewed the District's O&M expenditures as identified in the budget and shown in Table 3-2. The SDCWA fixed costs and pumping related costs were removed from this step of the analysis and will be discussed further in Section 6. The remaining expenditures were reviewed and functionalized, as summarized in Table 5-1.

²⁰ For the purposes of this study, a commonly used multiplier of 1.5 times the maximum day peaking factor was used for the maximum hour peaking factor.

²¹ The terms extra capacity, peaking and capacity costs are used interchangeably.

Table 5-1: Functionalization of O&M Expenses

Line No.	O&M Expenditure / Category (1)	Allocation Basis (2)	FYE 2016 Expenditure (3)
1	Water Purchases	Supply	\$19,759,584
2	Transportation Charges	Distribution	\$979,603
3	Salaries and Benefits	Assets	\$6,287,561
4	Services and Supplies	Assets	\$3,727,282
5	Capital Outlay	Assets	\$504,976
6	Total O&M Expenditures		\$31,259,006

Since the purpose of the utility is to operate and manage District assets to ensure the delivery of high quality water to the District’s customers, it is reasonable to use the functionalized assets as an allocation basis for certain O&M expenses, such as Salaries and Benefits, Services and Supplies, and the Capital Outlay (lines 3 through 5 of Table 5-1). Each line item in the District’s asset listing was categorized according to its function and summarized in Table 5-2.

Table 5-2: Functionalization of RMWD’s Assets

Line No.	Functional Category (1)	Asset Values (2)	% of total Assets (3)
1	Reservoir	\$45,605,622	38.0%
2	Transmission	\$25,380,590	21.2%
3	Distribution	\$44,907,346	37.5%
4	Meter Service	\$302,678	0.3%
5	Customer Service & Billing	\$3,702,765	3.1%
6	Total Assets	\$119,899,002	

Functionalizing O&M expenses and District assets allows RFC to follow the principles of rate setting theory in which the end goal is to allocate the District’s O&M expenses to cost causation components. This is further explained in Section 5.2. Note the functionalized expenses shown in Table 5-1 match the FYE 2016 O&M expenses shown in Table 3-2²².

5.2 ALLOCATION OF FUNCTIONALIZED EXPENSES TO COST COMPONENTS

After functionalizing expenses, the next step is to allocate the functionalized expenses to cost causation components. To do so we must identify system wide peaking factors which are shown in column 2, Table 5-3. The system-wide peaking factors are then used to derive the cost component allocation bases (i.e., percentages) shown in columns 3 through 5. Functionalized expenses are allocated to the cost components using these allocation bases.

To understand the interpretation of the percentages shown in columns 3 through 5 we must first establish the base use as the average daily demand during the year. The Max Day peaking factor

²² Expenditures shown on lines 1, 2, 10, 11, and 13 only of Table 3-2. Expenditures shown on lines 3 through 8 and line 12 will be discussed later. Additionally, the AG Credit – SAWR (line 9), will be treated as a revenue offset.

(column 2, line 2) was estimated based on the maximum month information from the FYE 2015 consumption data and was determined by dividing the maximum month usage for all customer classes (1,103,226 HCF) by the average monthly usage for all customer classes (695,643 HCF)²³. The Max Hour peaking factor (column 2, line 3) was determined by multiplying the Max Day peaking factor by 1.5²⁴. As an example, the functionalized expenses that are allocated to the cost components using the maximum day bases assume 63% (1.00/1.59) of costs are due to base demands and the remaining proportion (100%-63%) of costs are allocated to the maximum day cost component. Expenses allocated using the maximum hour bases attribute 42% (1.00/2.39) of the costs to the base cost component, 25% [(1.59-1.00)/2.3] to maximum day, and 33% (100%-42%-25%) to maximum hour. Collectively the maximum day and hour cost components are known as peaking costs. These allocation bases are used to assign the functionalized costs in Table 5-1 to the cost components.

Table 5-3: System-Wide Peaking Factors and Allocation to Cost Components

Line No.	Cost Component Allocation Basis (1)	System Wide Peaking Factor (2)	Base (3)	Max Day (4)	Max Hour (5)	Fire Protection (6)	Total (7)
1	Base	1.00	100%			0%	100%
2	Max Day	1.59	63%	37%	0%	0%	100%
3	Max Hour	2.39	42%	25%	33%	0%	100%
4	Max Day w/ Fire		58%	32%	0%	10%	100%
5	Max Hour w/ Fire		39%	21%	30%	10%	100%

Table 5-4 allocates the functionalized O&M expenses from Table 5-1 to each cost component using the bases shown in lines 1 through 7 which are based on the system wide peaking factors as shown in Table 5-3. The functions are allocated according to industry standards that are defined based on the nature of the water system functions. For example: transmission systems are designed larger to meet maximum day (Max Day) requirements as opposed to average day requirements. The costs associated with overdesign is therefore proportioned on the Max Day peaking factor. Storage (reservoirs) are designed to provide Max Day and fire flow service and distribution systems are designed to provide maximum hour (Max Hour) and fire flow service. A portion of the costs associated with these facilities is therefore allocated to fire service. Based on RFC experience 10 percent of the costs of storage and distribution are allocated to fire service.

As mentioned earlier, the District's revenue requirements identified as Salaries and Benefits, Services and Supplies, and the Capital Outlay (lines 3 through 5 of Table 5-1) are allocated using the asset allocation shown on line 7 of Table 5-4. The asset allocation was derived by functionalizing the District's assets and then allocating them to the cost causation components using the applicable percentages shown in lines 1 through 6 of Table 5-4²⁵.

Line 14 shows the total resulting cost component allocation for O&M expenses. This resulting allocation is used to allocate the District's operating revenue requirement (discussed in Section 5.3) to the cost components.

²³ Max Monthly Usage / Average Monthly Usage = Max Day Peaking Factor, (1,103,226 / 695,643 = 1.59), based on the consumption data provided by the District.

²⁴ 1.5 is a commonly used multiplier for determining Max Hour peaking factors in the absence of hourly consumption data for districts of similar size

²⁵ See Appendix B for Asset Functionalization

Table 5-4: Allocation of Functionalized O&M and Capital Expenses

Line No.	Functional Category	Fire							Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Allocation Basis	Supply	Base	Max Day	Max Hour	Protection	Meters	Customer	Total	
1	Water Supply	100%	0%	0%	0%	0%	0%	100%	
2	Reservoir	0%	32%	0%	10%	0%	0%	100%	
3	Transmission	0%	37%	0%	0%	0%	0%	100%	
4	Distribution	0%	21%	30%	10%	0%	0%	100%	
5	Meter Service	0%	0%	0%	0%	100%	0%	100%	
6	Customer Service & Billing	0%	0%	0%	0%	0%	100%	100%	
7	Assets	0%	28%	11%	8%	0%	3%	100%	

O&M Expenditure / Category	Fire							Total	
	Functional Category	Supply	Base	Max Day	Max Hour	Protection	Meters		Customer
8	Water Purchases	\$19,759,584	\$0	\$0	\$0	\$0	\$0	\$0	\$19,759,584
9	Transportation Charges	\$0	\$378,082	\$209,680	\$293,881	\$97,960	\$0	\$0	\$979,603
10	Salaries and Benefits	\$0	\$3,130,555	\$1,765,816	\$706,489	\$474,654	\$15,873	\$194,175	\$6,287,561
11	Services and Supplies	\$0	\$1,855,801	\$1,046,780	\$418,808	\$281,376	\$9,409	\$115,107	\$3,727,282
12	Capital Outlay	\$0	\$251,426	\$141,819	\$56,741	\$38,121	\$1,275	\$15,595	\$504,976
13	Total O&M Expenses	\$19,759,584	\$5,615,863	\$3,164,095	\$1,475,919	\$892,112	\$26,557	\$324,877	\$31,259,006
14	Resulting % Allocation - O&M	63.2%	18.0%	10.1%	4.7%	2.9%	0.1%	1.0%	100.0%

Note: Supply is broken out of base so that the variable costs can be tracked separately.

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Table 5-5: Revenue Requirement Determination

Line No.		(1) Operating	(2) Capital	(3) Total
	Revenue Requirements			
1	Water Purchases	\$19,759,584		\$19,759,584
2	Transportation	\$979,603		\$979,603
3	Salaries and Benefits	\$6,190,985		\$6,190,985
4	Services and Supplies	\$3,686,059		\$3,686,059
5	Capital Outlay	\$504,976		\$504,976
6	Debt Service		\$377,367	\$377,367
7	Total Revenue Requirements	\$31,121,207	\$377,367	\$31,498,574
	Revenue Offsets			
8	Plan Check & Inspection	\$33,000		\$33,000
9	New Development Services	\$10,900		\$10,900
10	Misc. Other Charges	\$48,600		\$48,600
11	Shut off fees	\$2,500		\$2,500
12	Water Letter Fees	\$500		\$500
13	Property Taxes - Assessed Valuation		\$316,383	\$316,383
14	Property Taxes - Parcel Charge RTS		\$486,481	\$486,481
15	Other Non-Operating Income	\$30,000		\$30,000
16	AG Credit - SAWR	\$1,768,355		\$1,768,355
17	Total Revenue Offsets	\$1,893,855	\$802,864	\$2,696,719
	less Adjustments			
18	Adjustment for Cash Balance		\$466,982	\$466,982
19	Adjustment for Mid-year Increase	(\$987,150)		(\$987,150)
20	Total less Adjustments	(\$987,150)	\$466,982	(\$520,168)
21	Cost of Service to be Recovered from Rates	\$30,214,502	(\$892,478)	\$29,322,023
	Fixed Pass-Through Revenue Requirements			
22	CWA Fixed Charges	\$2,790,510		\$2,790,510
23	ESC & SRC	\$2,148,366		\$2,148,366
24	Revenue Required for CWA Fixed Pass-Through			\$4,938,876
	Pumping Costs			
25	Utility - Pumping	\$480,587		\$480,587
26	Salaries and Benefits - Pumping	\$96,576		\$96,576
27	Services and Supplies - Pumping	\$41,223		\$41,223
28	Revenue Required for Pumping Costs			\$618,386
29	Revenue Required from RMWD Rates			\$34,879,285

5.4 UNIT COST COMPONENT DERIVATION

Our end goal is to proportionately distribute the cost components to each user class. To do so we must calculate the unit costs by assessing the total units demanded by each class for each cost component. This is shown across the bottom of Table 5-6 in line 18. The peaking factors²⁹ for each tier and class was used to establish the maximum day and hour requirements and are the reason for the peaking unit rate differentials discussed in Table 6-8 of Section 6.

Table 5-7 shows the cost component unit cost derivation. The operating revenue requirement (Table 5-5, column 1, line 21) plus the revenue offset (Table 5-5, column 1, line 17) is allocated to the cost components using the O&M allocation from Table 5-4 (line 14). Similarly, the capital revenue requirement from Table 5-5 (column 2, line 21) plus the revenue offsets (column 2, line 17) is allocated to the cost components using the asset allocation from Table 5-4 (line 7). Revenue offsets are allocated based upon the type of revenue. Where the allocation could not be clearly identified, the revenue offset was allocated in the same manner as the overall allocation of the asset (Table 5-4, line 7)³⁰. Property tax revenue was retained as revenue offsets to be allocated to customer classes. Public fire protection costs are reallocated to the meter service component (Table 5-7, line 5, column 6 & 7). Lastly, we allocate a portion (50%) of capacity related costs to the meter capacity component (Table 5-7, line 7) to ensure the costs are appropriately shared between fixed and variable components and to recognize the demands that meters place on the system. Shifting a portion of the capacity costs onto the fixed charge reinforces the District's goal of revenue stability. The total adjusted cost of service in line 8 is divided by the units of service, derived in Table 5-6, shown in line 9, to calculate the unit cost (line 10). For example, the unit cost for both the supply component and the base component is determined by dividing the total cost of each component by total water use in HCF. Max day costs are divided by the total max day use in HCF/day. Annual billing and customer service costs are divided by the estimated number of annual monthly bills. The unit costs are used to distribute the cost components to the customer classes in Section 5.5.

²⁹ Peaking factors were based on the FYE 2015 monthly consumption data provided by the District. Max Day peaking factors were determined by dividing the average max use per account by the average use for each customer class and tier. The Max Hour Peaking factors were determined by multiplying the Max Day peaking factors by 1.5.

³⁰ See Appendix C for revenue offset allocations.

Table 5-6: Derivation of Cost Component Units

Line No.	Customer Class Information	Annual Usage (hcf) (1)	TSAWR Usage (hcf) (2)	Daily Usage (hcf) (3)	Max Day Factor (4)	Max Day Demand (5)	Max Day Requirements (hcf) (6)	Max Hour Factor (7)	Max Hour Demand (8)	Max Hour Requirements (hcf) (9)	Equivalent Meters (Less TSAWR) (10)	Equivalent Meters (Total) (11)	No. of Bills (12)
1	SF Residence												
2	SFR Tier 1	425,002		1,164	1.11	1,298	134	1.67	1,947	649	6,214	6,214	52,812
3	SFR Tier 2	360,061		986	1.58	1,563	576	2.38	2,344	781			
4	SFR Tier 3	542,137		1,485	2.51	3,726	2,241	3.76	5,589	1,863			
5	MFR	129,521		355	1.36	484	129	2.05	726	242	347	347	1,080
6	Commercial	203,834		558	1.66	927	368	2.49	1,390	463	517	517	2,004
7	Agricultural	1,996,787		5,471	1.59	8,707	3,236	2.39	13,060	4,353	2,818	2,818	16,056
8	TSAWR Dom												
9	TSAWR Dom Tier 1	111,958		307	1.11	342	35	1.67	513	171		2,612	12,384
10	TSAWR Dom Tier 2	248,013		679	1.58	1,077	397	2.38	1,615	538			
11	TSAWR Dom Tier 3	2,042,956	2,042,956	5,597	1.73	9,695	4,098	2.60	14,543	4,848			
12	TSAWR Com	1,715,360	1,715,360	4,700	1.61	7,583	2,883	2.42	11,375	3,792		1,064	3,180
13	Institutional	36,984		101	1.88	190	89	2.81	285	95	66	66	228
14	Construction	25,959		71	3.57	254	183	5.36	381	127			
18	TOTAL	7,838,573 hcf	3,758,316 hcf	21,476 hcf			14,370 hcf			17,923 hcf	9,961	13,638	87,744

Annual Usage (column 1) was obtained from the analysis of the FYE 2015 monthly consumption data provided by the District.

Daily Usage (column 2) = Annual Usage (column 1) divided by 365.

Max Day Demand (column 5) = Daily Usage (column 3) x Max Day Factor (column 4)

Max Day Requirement (column 6) = Max Day Demand (column 5) - Daily Usage (column 3)

Max Hour Demand (column 8) = Daily Usage (column 3) x Max Hour Factor (column 7)

Max Hour Requirement (column 9) = Max Hour Demand (column 8) - Max Day Demand (column 5) - Daily Usage (column 3)

Equivalent Meters (column 11) = Number of Meters by meter size (obtained from the consumption data) x AWWA meter capacity ratio³¹

³¹ See Appendix D for additional information and the calculation of the equivalent meters.

Table 5-7: Unit Cost Calculation

Line No.	Cost of Service	Supply (1)	Base (2)	SAWR Supply (3)	Max Day (4)	Max Hour (5)	Fire Protection (6)	Meters (7)	Customer (8)	Revenue Offsets (10)	Total (11)
1	Operating Expenses	\$20,296,479	\$5,768,454	\$0	\$3,250,067	\$1,516,021	\$916,352	\$27,278	\$333,704	\$0	\$32,108,357
2	Capital Expenses	\$0	(\$44,619)	\$0	(\$25,168)	(\$10,069)	(\$6,765)	(\$226)	(\$2,768)	\$0	(\$89,614)
3	Revenue Offsets	\$0	(\$92,361)	(\$1,768,355)	(\$18,536)	(\$7,416)	(\$4,982)	(\$167)	(\$2,038)	(\$802,864)	(\$2,696,719)
4	Total Cost of Service	\$20,296,479	\$5,631,474	(\$1,768,355)	\$3,206,364	\$1,498,536	\$904,605	\$26,885	\$328,899	(\$802,864)	\$29,322,023
5	Allocation of Public Fire Protection						(\$904,605)	\$904,605			\$0
6	Allocated Cost of Service	\$20,296,479	\$5,631,474	(\$1,768,355)	\$3,206,364	\$1,498,536	\$0	\$931,490	\$328,899	(\$802,864)	\$29,322,023
7	Adjustment from Rates Sheet	\$0	\$0	\$0	(\$1,603,182)	(\$749,268)	\$0	\$2,352,450	\$0	\$0	(\$0)
8	Adjusted Cost of Service	\$20,296,479	\$5,631,474	(\$1,768,355)	\$1,603,182	\$749,268	\$0	\$3,283,940	\$328,899	(\$802,864)	\$29,322,023
9	Unit of Service	7,838,573 hcf	7,838,573 hcf	3,758,316 hcf	14,370 hcf/day	17,923 hcf/day		13,638 Equiv meter	87,744 No. of bills	7,812,614 hcf	
10	Unit Cost	\$2.59	\$0.72	(\$0.47)	\$111.57	\$41.81		\$20.07	\$3.75	(\$0.10)	

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5.5 DISTRIBUTION OF COST COMPONENTS TO CUSTOMER CLASSES

The final step in a cost of service analysis is to distribute the cost components to the user classes using the unit costs derived in Table 5-7. This is the ultimate goal of a cost of service analysis and yields the cost to serve each customer class. Table 5-8 shows the derivation of the cost to serve (i.e., cost of service for) each class. To derive the cost to serve each class, the unit costs from Table 5-7 (line 10) are multiplied by the units shown in Table 5-6 (columns 1, 2, 6, 9, 11, and 12) for each class. For example, the base costs for the commercial class is calculated by multiplying the base unit cost (Table 5-7, column 2, line 10) by the annual commercial use (Table 5-6, column 1, line 6). Similarly the commercial *customer* costs are derived by multiplying the *customer* unit cost (Table 5-7, column 8, line 10) by the number of commercial bills (Table 5-6, column 12, line 6). Similar calculations for each of the remaining user classes and cost components yield the total cost to serve each user class shown in Table 5-8 (column 9).

Agricultural customers account for approximately 78% of the District's water usage. Due to the nature of agricultural use, these customers' usage varies greatly in response to fluctuations in the weather. This volatility presents a risk to the District which can be mitigated by recovering a larger portion of the costs attributable to agriculture on the fixed charge. To ensure revenue stability to cover the fixed expenses we recommend that a greater percentage of the revenue requirements attributable to agricultural customers be recovered through the fixed charge.

Table 5-9 shows the adjustment of agriculture's capacity costs and the resulting unit cost. 90% of agriculture related capacity costs shown in Table 5-8 (column 4 & 5, lines 6, 9, and 10) were allocated to the meter capacity component. Note the total cost to serve each user class (as shown in Table 5-8, column 9) remains the same. For example, prior to the reallocation, the costs attributable to the agricultural user class was \$7,681,380 (Table 5-8, column 9, line 6) and after the reallocation the costs attributable to the agricultural user class remain the same, \$7,681,380 (Table 5-9, column 9, line 1). We have calculated the cost to serve each user class and can proceed to derive rates to collect the cost to serve each class.

Table 5-10 summarizes the cost to serve each user class after the adjustment of a portion of agriculture's capacity costs.

Table 5-8: Derivation of the Cost to Serve Each Class

Line No.	All Classes	TSAWR										Total Cost by	
		Supply (1)	Base (2)	Supply (3)	Max Day (4)	Max Hour (5)	Meters (6)	Customer (7)	Revenue Offsets (8)	Customer Class (9)			
1	SFR Tier 1	\$1,100,462	\$305,335	\$0	\$14,916	\$27,134	\$1,496,407	\$197,960	(\$43,675)	\$3,098,538			
2	SFR Tier 2	\$932,310	\$258,679	\$0	\$64,313	\$32,670	\$0	\$0	(\$37,002)	\$1,250,970			
3	SFR Tier 3	\$1,403,759	\$389,488	\$0	\$249,998	\$77,886	\$0	\$0	(\$55,713)	\$2,065,417			
4	MFR	\$335,369	\$93,052	\$0	\$14,397	\$10,115	\$83,477	\$4,048	(\$13,310)	\$527,148			
5	Commercial	\$527,790	\$146,441	\$0	\$41,066	\$19,367	\$124,493	\$7,512	(\$20,947)	\$845,722			
6	Agricultural	\$5,170,298	\$1,434,554	\$0	\$361,053	\$181,998	\$678,492	\$60,184	(\$205,200)	\$7,681,380			
7	TSAWR Dom Tier 1	\$289,893	\$80,434	\$0	\$3,929	\$7,148	\$0	\$0	(\$11,505)	\$369,899			
8	TSAWR Dom Tier 2	\$642,183	\$178,181	\$0	\$44,299	\$22,503	\$0	\$0	(\$25,487)	\$861,679			
9	TSAWR Dom Tier 3	\$5,289,841	\$1,467,723	(\$961,247)	\$457,190	\$202,654	\$628,968	\$46,420	(\$209,945)	\$6,921,604			
10	TSAWR Com	\$4,441,595	\$1,232,368	(\$807,108)	\$321,696	\$158,507	\$256,291	\$11,920	(\$176,279)	\$5,438,990			
11	Institutional	\$95,764	\$26,571	\$0	\$9,893	\$3,972	\$15,812	\$855	(\$3,801)	\$149,065			
12	Construction	\$67,216	\$18,650	\$0	\$20,431	\$5,315	\$0	\$0	\$0	\$111,611			
13	Total Costs of Service	\$20,296,479	\$5,631,474	(\$1,768,355)	\$1,603,182	\$749,268	\$3,283,940	\$328,899	(\$802,864)	\$29,322,023			

Table 5-9: Agriculture Allocation and Unit Cost Calculation

Line No.	Agricultural Classes	Supply (1)	Base (2)	TSAWR Supply (3)	Max Day (4)	Max Hour (5)	Meters (6)	Customer (&)	Revenue Offsets (8)	Total Cost by Customer Class (9)
1	Agricultural	\$5,170,298	\$1,434,554	\$0	\$361,053	\$181,998	\$678,492	\$60,184	(\$205,200)	\$7,681,380
2	TSAWR Dom Tier 3	\$5,289,841	\$1,467,723	(\$961,247)	\$457,190	\$202,654	\$628,968	\$46,420	(\$209,945)	\$6,921,604
3	TSAWR Com	\$4,441,595	\$1,232,368	(\$807,108)	\$321,696	\$158,507	\$256,291	\$11,920	(\$176,279)	\$5,438,990
4	TOTAL	\$14,901,734	\$4,134,645	(\$1,768,355)	\$1,139,939	\$543,160	\$1,563,750	\$118,524	(\$591,424)	\$20,041,974
5	Adjustment from Rates Sheet	\$0	\$0	\$0	(\$1,025,945)	(\$488,844)	\$1,514,789	\$0	\$0	\$0
6	Adjusted Cost of Service	\$14,901,734	\$4,134,645	(\$1,768,355)	\$113,994	\$54,316	\$3,078,539	\$118,524	(\$591,424)	\$20,041,974
7	Units of Service	5,755,103 hcf	5,755,103 hcf	3,758,316 hcf	10,217 hcf/day	12,992 hcf/day	6,494 Equiv meter	31,620 No. of bills	5,755,103 hcf	
8	Unit Cost	\$2.59	\$0.72	(\$0.47)	\$11.16	\$4.18	\$39.50	\$3.75	(\$0.10)	

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Table 5-10: Final Cost to Serve Each Class

Line No.	All Classes	TSAWR					Total Cost by			
		Supply (1)	Base (2)	Supply (3)	Max Day (4)	Max Hour (5)	Meters (6)	Customer (7)	Revenue Offsets (8)	Customer Class (9)
1	SFR Tier 1	\$1,100,462	\$305,335	\$0	\$14,916	\$27,134	\$1,496,407	\$197,960	(\$43,675)	\$3,098,538
2	SFR Tier 2	\$932,310	\$258,679	\$0	\$64,313	\$32,670	\$0	\$0	(\$37,002)	\$1,250,970
3	SFR Tier 3	\$1,403,759	\$389,488	\$0	\$249,998	\$77,886	\$0	\$0	(\$55,713)	\$2,065,417
4	MFR	\$335,369	\$93,052	\$0	\$14,397	\$10,115	\$83,477	\$4,048	(\$13,310)	\$527,148
5	Commercial	\$527,790	\$146,441	\$0	\$41,066	\$19,367	\$124,493	\$7,512	(\$20,947)	\$845,722
6	Agricultural	\$5,170,298	\$1,434,554	\$0	\$36,105	\$18,200	\$1,335,740	\$60,184	(\$205,200)	\$7,849,882
7	TSAWR Dom Tier 1	\$289,893	\$80,434	\$0	\$3,929	\$7,148	\$0	\$0	(\$11,505)	\$369,899
8	TSAWR Dom Tier 2	\$642,183	\$178,181	\$0	\$44,299	\$22,503	\$0	\$0	(\$25,487)	\$861,679
9	TSAWR Dom Tier 3	\$5,289,841	\$1,467,723	(\$961,247)	\$45,719	\$20,265	\$1,238,242	\$46,420	(\$209,945)	\$6,937,019
10	TSAWR Com	\$4,441,595	\$1,232,368	(\$807,108)	\$32,170	\$15,851	\$504,557	\$11,920	(\$176,279)	\$5,255,073
11	Institutional	\$95,764	\$26,571	\$0	\$9,893	\$3,972	\$15,812	\$855	(\$3,801)	\$149,065
12	Construction	\$67,216	\$18,650	\$0	\$20,431	\$5,315	\$0	\$0	\$0	\$111,611
13	Total Costs of Service	\$20,296,479	\$5,631,474	(\$1,768,355)	\$577,237	\$260,424	\$4,798,729	\$328,899	(\$802,864)	\$29,322,023

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6 RATE DESIGN

The revenue requirements and cost of service analysis described in the preceding sections of this report allocate the costs equitably amongst the different customer classes. Rate design is the process of developing rate schedules for each customer class such that the annual cost of service determined for each customer class is equitably recovered from the customers in that class. In this study, the focus of rate design is on the development of rate schedules for each of the District's customer classes. This section of the report discusses the current water rate structure and develops a schedule of water rates proportional to the cost of service for the District's customer classes that meet the District's objectives of equitable collection of costs and efficient use of resources.

6.1 EXISTING RATE STRUCTURE AND CURRENT RATES

Rate structures should be designed to ensure that customers pay their proportionate share of costs. In addition, rate structures should be easy to understand, simple to administer, and comply with regulatory requirements. A review of the current rate structure provides insights into the equity of the current methodology and changes, if any, that should be considered.

The District's monthly water service fees are comprised of four components: (1) a RMWD O&M Fixed Charge, (2) a SDCWA Fixed Charge, (3) a Commodity Rate, and (4) a Pumping Charge. The RMWD O&M Fixed Charge is designed to recover a portion of the District's fixed costs, such as the costs of billing and collections, customer service, meter reading, meter maintenance, and a portion of capacity related costs. The SDCWA Fixed Charge is based on the charges imposed by SDCWA and over which the District has no control. The commodity rates are intended to recover the costs of purchasing water from SDCWA, delivering water, maintaining infrastructure, and managing the District's water resources. The pumping charges are intended to recover the costs associated with pumping water to the different elevation zones. Figure 6-1 shows each of the four components of the monthly service charges.

Figure 6-1: Projected Operating Fund Ending Balances

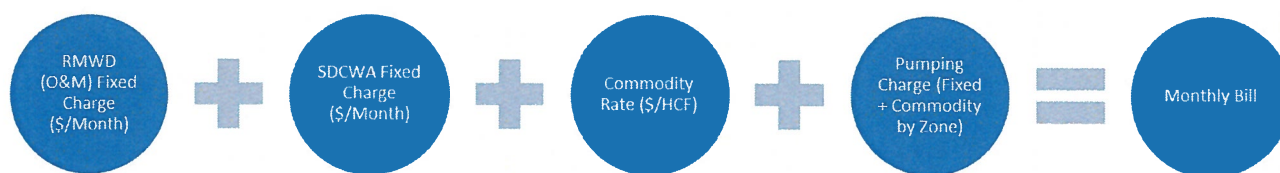


Table 6-1 shows the current monthly fixed charges (both RMWD O&M and the SDCWA Fixed Charges), Table 6-2 shows the current commodity rates by class, and Table 6-3 shows the current pumping charges.

Table 6-1: Current Monthly Fixed Charges

Meter Size	Monthly RMWD	Monthly SDCWA Fixed Charge		
	O&M Charge (\$/Meter)	Domestic Charge (\$/Meter)	TSAWR/Domestic (\$/Meter)	TSAWR/Commerical (\$/Meter)
5/8"	\$28.35	\$30.48	\$30.48	\$16.17
3/4"	\$35.45	\$30.48	\$30.48	\$16.17
1"	\$46.10	\$48.77	\$48.77	\$25.87
1-1/2"	\$70.90	\$91.44	\$91.44	\$48.50
2"	\$124.05	\$158.49	\$91.44	\$84.07
3"	\$212.70	\$274.31	\$91.44	\$145.50
4"	\$354.50	\$487.66	\$91.44	\$258.66
6"	\$602.60	\$1,097.24	\$91.44	\$581.99

Table 6-2: Current Monthly Commodity Rates (\$/HCF)

Customer Class	Tier Width	Current Commodity Rate (\$/HCF ³²)
Domestic (A, D, MF)		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 & above	\$3.15
Commercial		\$3.15
Construction		\$3.15
TSAWR/Domestic		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 - 26 HCF	\$3.15
Tier 3	27 & above	\$2.83
TSAWR/Commercial		\$2.83

Table 6-3: Current Monthly Pumping Charges

		Current Pumping Charge
Fixed Pumping Charge (\$/Month)		\$8.77
Commodity Rates (\$/HCF)		
Zone 1	Rainbow Heights	\$0.43
Zone 2	Improvement District U-1	\$0.27
Zone 3	Vallecitos	\$0.15
Zone 4	Northside	\$0.05
Zone 5	Morro Tank	\$0.08
Zone 6	Huntley	\$0.31
Zone 7	Magee Tank	\$1.42

³² HCF = Hundred Cubic Feet

6.2 PROPOSED RMWD O&M MONTHLY FIXED CHARGE

A service charge or monthly fixed charge is a cost recovery mechanism that is generally included in the rate structure to recover some of the fixed costs including meter and customer related costs, and a portion of the capacity related cost to provide a stable source of revenue independent of water consumption.

Customer related costs are fixed expenditures that relate to operational support activities including accounting, billing, customer service, and administrative and technical support. The customer related costs are essentially common-to-all customers and are reasonably uniform across the different customer classes. In addition, there are capacity related costs such as meter maintenance and peaking charges that are included based on the hydraulic capacity of the meters. Since facilities are designed to meet peaking requirements, RFC has assigned a portion of the costs related to peaking to the service charge. This assumes that larger meters have the potential to demand more capacity, or said differently, exert more peaking characteristics compared to smaller meters. The potential capacity demanded (peaking) is proportional to the potential flow through each meter size as established by the AWWA hydraulic capacity ratios which are shown in column 2 of Table 6-4 and 6-5. The ratios shown are the ratio of potential flow through each meter size compared to the flow through a 3/4-inch meter. For example, column 2 shows that the flow through a 4-inch meter is 21 times that of a 3/4-inch and therefore the capacity component of the RMWD fixed meter charge is 21 times that of the 3/4-inch meter.

Increasing the fixed charge reduces the variable rates and incentive for conservation, but provides a mechanism for recovering a portion of the fixed costs and ensures a stable source of customer revenues for the utility. A good rate design seeks an appropriate balance between these pricing objectives. The District collected approximately 26 percent of the total rate revenues from the fixed service charges in FYE 2015. RFC's rate design increased the fixed charge revenue recovery to approximately 29 percent.

Table 6-4 shows the derivation of the RMWD O&M Charge applicable to SFR, MFR, Commercial, and Institutional customers. The cost of service analysis derived in Table 5-7 feeds into the RMWD O&M derivation. The meter component (Table 6-4, column 3, line 1) is based on the meter unit cost (Table 5-7, column 7, line 10). The customer component (Table 6-4, column 4, line 1) is based on the customer unit cost (Table 5-7, column 8, line 10). The Monthly RMWD O&M Fixed Charge is determined by adding the meter component and the customer component as shown in column 5. For meters larger than the base meter size of 3/4" the charges are scaled up based on the meter capacity ratios shown in column 2.

As previously discussed, RFC recommends establishing a separate RMWD O&M Charge for the agriculture customer classes (Agriculture, TSAWR Domestic, and TSAWR Commercial). Table 6-5 shows the derivation of the RMWD Agriculture O&M Charge. The cost of service analysis derived in Table 5-9 feeds into the RMWD AG O&M derivation.

Table 6-4: Derivation of the Monthly RMWD O&M Charge

SFR, MFR, Commercial, and Institutional

Line No.	Meter Size (1)	AWWA Capacity Ratio (2)	Meter Component (3)	Customer Component (4)	Proposed RMWD	Current RMWD	
					O&M Fixed Charge (5)	O&M Charge (6)	# of Meters (7)
1	5/8"	1.00	\$20.07	\$3.75	\$23.82	\$28.35	209
2	3/4"	1.00	\$20.07	\$3.75	\$23.82	\$35.45	2,150
3	1"	1.67	\$33.44	\$3.75	\$37.20	\$46.10	2,018
4	1-1/2"	3.33	\$66.89	\$3.75	\$70.64	\$70.90	168
5	2"	5.33	\$107.02	\$3.75	\$110.78	\$124.05	116
6	3"	11.67	\$234.11	\$3.75	\$237.86	\$212.70	10
7	4"	21.00	\$421.40	\$3.75	\$425.15	\$354.50	6
8	6"	43.33	\$869.55	\$3.75	\$873.31	\$602.60	-

Table 6-5: Derivation of the Monthly RMWD AG O&M Charge

Agriculture, TSAWR Domestic, and TSAWR Commercial

Meter Size (1)	AWWA Capacity Ratio (2)	Meter Component (3)	Customer Component (4)	Proposed RMWD	Current RMWD		# of Meters (7)
				O&M Fixed Charge (5)	O&M Charge (6)		
5/8"	1.00	\$39.50	\$3.75	\$43.26	\$28.35	10	
3/4"	1.00	\$39.50	\$3.75	\$43.26	\$35.45	371	
1"	1.67	\$65.84	\$3.75	\$69.59	\$46.10	1,466	
1-1/2"	3.33	\$131.68	\$3.75	\$135.44	\$70.90	421	
2"	5.33	\$210.69	\$3.75	\$214.45	\$124.05	335	
3"	11.67	\$460.89	\$3.75	\$464.64	\$212.70	23	
4"	21.00	\$829.60	\$3.75	\$833.36	\$354.50	8	
6"	43.33	\$1,711.88	\$3.75	\$1,715.63	\$602.60	1	

6.3 PROPOSED SDCWA MONTHLY FIXED CHARGE

RFC recommends continuing to pass-through the monthly fixed charges from SDCWA and MWD as a separate fixed charge. The District relies entirely on purchased water from SDCWA and these charges represent part of the costs of purchasing water for which the District has no control. Continuing the separate fixed charge provides clear transparency between the costs that are controlled by the District versus uncontrolled costs from outside the agency.

Table 6-6 shows the annual fixed charges from SDCWA for FYE 2016. Lines 1 through 4 are charges applicable to every customer in the District. Lines 5 and 6 are applicable to every customer except the TSAWR Domestic and TSAWR Commercial customers. TSAWR customers receive water at a discounted rate because they have agreed to reduce usage during water shortages. Since they are required to reduce usage, they do not receive the benefit of emergency storage or the guarantee of supply reliability and therefore do not pay the Emergency Storage Charge or the Supply Reliability Charge.

Table 6-6: FYE 2016 SDCWA Fixed Charge

Line No.	SDCWA Fixed Charges	FYE 2016
1	Ready to Serve Charge	\$527,580
2	Infrastructure Access Charge	\$435,546
3	Customer Service Charge	\$1,204,944
4	Capacity Reservation Charge	\$622,440
5	Emergency Storage Charge	\$1,778,478
6	Supply Reliability Charge	\$369,888
7	Total SDCWA Fixed Charges	\$4,938,876

RFC recommends recovering the charges based on the equivalent meters subject to the charges. Table 6-7 shows the derivation of the unit cost.

Table 6-7: SDCWA Unit Cost Derivation

Line No.		Revenue Requirement (1)	Equivalent Meters (2)	Monthly Unit Cost (3)
1	Emergency Storage & Supply Reliability	\$2,148,366	9,961	\$17.97
2	All other SDCWA Fixed Charges	\$2,790,510	13,638	\$17.05
3	Total SDCWA Fixed Charges	\$4,938,876		

The Revenue Requirement (column 1) from Table 6-7 matches the requirement from Table 5-4 (column 1, line 22 through 24) and represents the yearly requirement. The Equivalent Meters³³ (column 2) were fed from Table 5-6 (column 10 and 11) and represent the total equivalent meters in a year. The monthly unit cost was determined by dividing the requirement (column 1) by the equivalent meters (column 2) and then dividing by 12.

Table 6-8 shows the proposed SDCWA Fixed Pass-Through Charge applicable to all customers except TSAWR. Table 6-9 shows the proposed SDCWA Fixed Pass-Through charges applicable to TSAWR customers.

³³ Also discussed further in Appendix D

Table 6-8: SDCWA Monthly Fixed Pass-Through Charge (Except TSAWR)

SFR, MFR, Commercial, Agriculture, Institutional

Meter Size (1)	AWWA		Other SDCWA Charges Component (4)	Proposed	Current SDCWA	# of Meters (7)
	Capacity Ratio (2)	ESC & SRC Component (3)		SDCWA Pass-Through Charge (5)	Fixed (Domestic) (6)	
5/8"	1.00	\$17.97	\$17.05	\$35.02	\$30.48	217
3/4"	1.00	\$17.97	\$17.05	\$35.02	\$30.48	2,415
1"	1.67	\$29.95	\$28.42	\$58.37	\$48.77	2,839
1-1/2"	3.33	\$59.91	\$56.84	\$116.75	\$91.44	303
2"	5.33	\$95.85	\$90.94	\$186.79	\$158.49	213
3"	11.67	\$209.68	\$198.93	\$408.61	\$274.31	17
4"	21.00	\$377.42	\$358.08	\$735.50	\$487.66	10
6"	43.33	\$778.81	\$738.90	\$1,517.71	\$1,097.24	1

Table 6-9: SDCWA Monthly Fixed Pass-Through Charge (TSAWR Customers)

TSAWR Customers (TSAWR Domestic and TSAWR Commercial)

Meter Size (1)	AWWA Capacity Ratio (2)	Proposed SDCWA Pass-Through Charge (3)	Current SDCWA Fixed (TSAWR Dom) (4)	Current SDCWA Fixed (TSAWR Com) (5)	# of Meters (6)
5/8"	1.00	\$17.05	30.48	16.17	2
3/4"	1.00	\$17.05	30.48	16.17	106
1"	1.67	\$28.42	48.77	25.87	645
1-1/2"	3.33	\$56.84	91.44	48.5	286
2"	5.33	\$90.94	91.44	84.07	238
3"	11.67	\$198.93	91.44	145.5	16
4"	21.00	\$358.08	91.44	258.66	4
6"	43.33	\$738.90	91.44	581.99	-

A review of the current SDCWA TSAWR Fixed Charges (Table 6-9, columns 4 and 5) indicates that TSAWR Domestic customers were charged the same charge as the domestic customers for 1-1/2" or smaller sized meters. Meters larger than 1-1/2" were held constant and charged the same charge as the 1-1/2" meter. In addition, it was noted that the TSAWR Commercial customers were charged 53% of the current SDCWA Domestic Fixed Charge. RFC recommends adjusting the charges as shown in Tables 6-8 and 6-9 to fully recover the SDCWA Fixed Pass-Through charges based on those customers receiving benefit from the charges. Under the proposed structure, both TSAWR customer classes will pay the same SDCWA Fixed Charge (Table 6-9, column 3).

6.4 PROPOSED COMMODITY RATES

The District reclassified various customers based on guidelines in regulations from the State Water Resources Control Board. Customers with over an acre of irrigation use were reclassified as agricultural. The customer classes can be sorted into groups with similar peaking characteristics and a uniform water commodity rate is calculated for each class of customers. RFC recommends that SFR, MFR, Commercial, Agricultural, TSAWR Domestic, TSAWR Commercial, Institutional, and Construction be separated into distinct customer classes. Having separate customer classes increases the equity in the District's rate structure.

Single Family Tier Definitions

RFC recommends maintaining a tiered rate structure for domestic or residential customers, but that the tiers be adjusted. RFC proposes a three-tiered rate structure for all residential customers. The first tier would be set at 10 HCF (or units) and is designed to provide essential indoor usage. The second tier is set at 26 HCF (units 11 through 26) and is designed to accommodate average single family outdoor use. Usage above 26 HCF will fall into tier 3 and is considered discretionary water use.

Non-Single Family Commodity Rates

RFC recommends creating a uniform rate for the following classes: Agricultural (without residence), Multifamily, Commercial, Institutional, and Construction. The rates reflect each user classes' peaking characteristics – i.e., the peaking/capacity demands these classes place on the water system. User classes with more responsibility for peaking costs realize a higher rate as set forth by cost of service principles described earlier in this report.

Unit Cost Definitions

The commodity rates for each class and tier are derived by summing of the unit rates (\$ / HCF) for:

1. Water Supply
2. Delivery/Base
3. TSAWR Supply Offset (where applicable)
4. Peaking
5. Revenue Offsets

Water Supply costs are the costs associated with purchasing water from SDCWA. The District relies entirely on purchased water from SDCWA and therefore the purchased water costs are spread over all units of water irrespective of customer class or tier.

Base costs are the operating and capital costs associated with delivering water to all customers at a constant average rate of use – also known as serving customers under average daily demand conditions. Therefore delivery costs are spread over all units of water irrespective of customer class or tiers.

TSAWR Supply Offset, represents the AG Credit (Table 3-6, line 23) received from SDCWA. TSAWR customers are provided a discount by SDCWA in the form of an AG Credit. The credit is spread evenly over all units of water for both the TSAWR Domestic and TSAWR Commercial customers.

Peaking costs, or extra-capacity costs, represent costs incurred to meet customer peak demands in excess of a base use (or average daily demand). Total extra capacity costs are comprised of maximum day and maximum hour demands. The peaking costs are distributed to each tier and class using peaking factors derived from customer use data. We previously showed the distribution of peaking needs (demand) and costs in Tables 5-6 and 5-10 respectively.

Revenue Offsets are property tax revenue that was used as an offset to reduce the commodity rates. The offset was applied evenly across all units of water.

Unit Cost Derivation

Supply Unit Cost

The first step in the commodity rate calculation is the derivation of the supply rate for each tier and class. Since the District only has one source of water, the supply costs are spread evenly over all units of water. Table 6-10 shows the supply unit rate as well as the supply costs spread evenly over every unit of water and broken out by customer class and tier. The supply costs shown in column 3 were derived in the cost of service section in Table 5-10.

Table 6-10: Supply Rate Derivation

Line No.	Customer Class	Annual Usage (1)	Supply Unit Rate (2)	Allocated Supply Costs (3)
1	SFR Tier 1	425,002	\$2.59	\$1,100,462
2	SFR Tier 2	360,061	\$2.59	\$932,310
3	SFR Tier 3	542,137	\$2.59	\$1,403,759
4	MFR	129,521	\$2.59	\$335,369
5	Commercial	203,834	\$2.59	\$527,790
6	Agriculture	1,996,787	\$2.59	\$5,170,298
7	TSAWR Domestic Tier 1	111,958	\$2.59	\$289,893
8	TSAWR Domestic Tier 2	248,013	\$2.59	\$642,183
9	TSAWR Domestic Tier 3	2,042,956	\$2.59	\$5,289,841
10	TSAWR Commercial	1,715,360	\$2.59	\$4,441,595
11	Institutional	36,984	\$2.59	\$95,764
12	Construction	25,959	\$2.59	\$67,216
13	Total	7,838,573		\$20,296,479

Base/Delivery Unit Cost

The base unit cost is the cost to deliver water under average daily demand conditions. This delivery cost is the same for all classes and for all tiers. Table 6-11 shows the delivery unit rate (as shown in Tables 5-7 and 5-9) as well as the costs spread evenly over every unit of water and broken out by customer class and tier (derived in the cost of service section and summarized in Table 5-10).

Table 6-11: Delivery Rate Derivation

Line No.	Customer Class	Annual Usage (1)	Base Unit Rate (2)	Allocated Base Costs (3)
1	SFR Tier 1	425,002	\$0.72	\$305,335
2	SFR Tier 2	360,061	\$0.72	\$258,679
3	SFR Tier 3	542,137	\$0.72	\$389,488
4	MFR	129,521	\$0.72	\$93,052
5	Commercial	203,834	\$0.72	\$146,441
6	Agriculture	1,996,787	\$0.72	\$1,434,554
7	TSAWR Domestic Tier 1	111,958	\$0.72	\$80,434
8	TSAWR Domestic Tier 2	248,013	\$0.72	\$178,181
9	TSAWR Domestic Tier 3	2,042,956	\$0.72	\$1,467,723
10	TSAWR Commercial	1,715,360	\$0.72	\$1,232,368
11	Institutional	36,984	\$0.72	\$26,571
12	Construction	25,959	\$0.72	\$18,650
13	Total	7,838,573		\$5,631,474

TSAWR Supply Offset Unit Cost

The agricultural credit from SDCWA was spread evenly over all units of agricultural use. TSAWR Domestic Tier 1 and Tier 2 usage is representative of the residential use for those customers and therefore the offset was only applied to Tier 3 usage (which reflects the agricultural use). The total agricultural credit was therefore spread equally over TSAWR Domestic Tier 3 and TSAWR Commercial usage. Table 6-12 summarizes the TSAWR Supply Offset Rate (as shown in Table 5-9) as well as the costs spread evenly over every unit of agriculture water use.

Table 6-12: TSAWR Supply Offset Derivation

Line No.	SAWR Domestic	Agriculture Usage by Tier (1)	Allocated TSAWR Credit (2)	TSAWR Offset (3)
1	TSAWR Dom Tier 1	-	-	\$0.00
2	TSAWR Dom Tier 2	-	-	\$0.00
3	TSAWR Dom Tier 3	2,042,956	(\$961,247)	(\$0.47)
4	TSAWR Com	1,715,360	(\$807,108)	(\$0.47)
5	Total	3,758,316	(\$1,768,355)	

Peaking Unit Cost

Table 6-13 shows the derivation of the unit peaking costs for each user class and tier. The peaking costs shown in column 3 were derived in the cost of service section and are the sum of columns 4 and 5, the max day and max hour peaking costs, in Table 5-10. The peaking rate is calculated by dividing the peaking costs (column 3) by the use (column 4) for each class. Note that the peaking rate is correlated with the peaking factor – a higher peaking factor correlates to a higher peaking rate. Also note that the total peaking costs in column 3 of Table 6-13 matches the total peaking costs (max day and max hour) shown in columns 4 and 5 in Table 5-10.

Table 6-13: Derivation of Peaking Unit Cost

Line No.	Tier / Class (1)	Peaking Factor (2)	Peaking Costs (3)	Use (HCF) (4)	Peaking Rate (\$ / HCF) (5)
1	SFR Tier 1	1.11	\$42,050	425,002	\$0.10
2	SFR Tier 2	1.58	\$96,982	360,061	\$0.27
3	SFR Tier 3	2.51	\$327,884	542,137	\$0.60
4	MFR	1.36	\$24,512	129,521	\$0.19
5	Commercial	1.66	\$60,434	203,834	\$0.30
6	Agricultural	1.59	\$54,305	1,996,787	\$0.03
7	TSAWR Dom Tier 1	1.11	\$11,077	111,958	\$0.10
8	TSAWR Dom Tier 2	1.58	\$66,802	248,013	\$0.27
9	TSAWR Dom Tier 3	1.73	\$65,984	2,042,956	\$0.03
10	TSAWR Com	1.61	\$48,020	1,715,360	\$0.03
11	Institutional	1.88	\$13,864	36,984	\$0.37
12	Construction	3.57	\$25,746	25,959	\$0.99
13	Total Costs of Service		\$837,661	\$42,050	

Revenue Offset

Table 6-14 shows the derivation of the Revenue offset. The property tax revenue shown in the cost of service section (Table 5-10, column 8, line 13) was spread over all usage except construction.

Table 6-14: Derivation of Revenue Offset

Line No.	Customer Class	Annual Usage (1)	Unit Rate (2)	Revenue Offset (3)
1	SFR Tier 1	425,002	(\$0.10)	(\$43,675)
2	SFR Tier 2	360,061	(\$0.10)	(\$37,002)
3	SFR Tier 3	542,137	(\$0.10)	(\$55,713)
4	MFR	129,521	(\$0.10)	(\$13,310)
5	Commercial	203,834	(\$0.10)	(\$20,947)
6	Agriculture	1,996,787	(\$0.10)	(\$205,200)
7	SAWR Domestic Tier 1	111,958	(\$0.10)	(\$11,505)
8	SAWR Domestic Tier 2	248,013	(\$0.10)	(\$25,487)
9	SAWR Domestic Tier 3	2,042,956	(\$0.10)	(\$209,945)
10	SAWR Commercial	1,715,360	(\$0.10)	(\$176,279)
11	Institutional	36,984	(\$0.10)	(\$3,801)
12	Construction	0	\$0.00	\$0
13	Total	7,812,614		(\$802,864)

Final Rate Derivation

We have calculated the unit rates for supply, delivery, TSAWR Offset, peaking, and revenue offset for each class and tier in Tables 6-10 through 6-14. Table 6-15 shows the final Commodity rate (column 7) which was determined by summing each unit cost for each tier and class. Note that the total revenue shown in line 19, column 9, nearly matches the revenue requirement derived in Table 5-5 and shown in line 29 with a slight difference due to rounding.

Table 6-15: Derivation of Rates by Tier and Class

Line No.	Customer Class	Tier (1)	Supply (2)	Base (3)	SAWR Supply (4)	Peaking (5)	Revenue Offsets (6)	Proposed Rates (\$/HCF) (7)	Usage (HCF) (8)	Commodity Revenue (\$) (9)
1	Single Family Residential									
2	Tier 1	10	\$2.59	\$0.72	\$0.00	\$0.10	(\$0.10)	\$3.31	425,002	\$1,406,757
3	Tier 2	26	\$2.59	\$0.72	\$0.00	\$0.27	(\$0.10)	\$3.48	360,061	\$1,253,014
4	Tier 3	27+	\$2.59	\$0.72	\$0.00	\$0.60	(\$0.10)	\$3.81	542,137	\$2,065,540
5	MFR		\$2.59	\$0.72	\$0.00	\$0.19	(\$0.10)	\$3.40	129,521	\$440,370
6	Commercial		\$2.59	\$0.72	\$0.00	\$0.30	(\$0.10)	\$3.51	203,834	\$715,458
7	Agriculture		\$2.59	\$0.72	\$0.00	\$0.03	(\$0.10)	\$3.24	1,996,787	\$6,469,591
8	TSAWR Domestic									
9	Tier 1	10	\$2.59	\$0.72	\$0.00	\$0.10	(\$0.10)	\$3.31	111,958	\$370,580
10	Tier 2	26	\$2.59	\$0.72	\$0.00	\$0.27	(\$0.10)	\$3.48	248,013	\$863,086
11	Tier 3	27+	\$2.59	\$0.72	(\$0.47)	\$0.03	(\$0.10)	\$2.77	2,042,956	\$5,658,987
12	TSAWR Commercial		\$2.59	\$0.72	(\$0.47)	\$0.03	(\$0.10)	\$2.77	1,715,360	\$4,751,547
13	Institutional		\$2.59	\$0.72	\$0.00	\$0.37	(\$0.10)	\$3.58	36,984	\$132,404
14	Construction		\$2.59	\$0.72	\$0.00	\$0.99	\$0.00	\$4.30	25,959	\$111,624
15	Subtotal								7,838,573	24,238,960
16	RMWD O&M Fixed Charges									\$5,128,076
17	SDCWA Fixed Charges									\$4,938,876
18	Pumping Revenue									\$618,386
19	Total Revenue									\$34,924,298
20	Revenue Requirement									\$34,879,285
21	Difference (Due to Rounding)									\$45,013

Based on discussions with District staff, agriculture customers with a residence on the property will be subject to the Single Family Residential Tier 1 and Tier 2 Rates similar to TSAWR Domestic customers. Table 6-16 shows the proposed agriculture commodity rates for customers with a residence on the parcel.

Table 6-16: Agriculture with Residence Commodity Rates

Customer Class	Tier Width	Proposed FYE 2016 Commodity Rate (\$/HCF)
Agriculture (with Residence)		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$3.24

6.5 PROPOSED PUMPING CHARGES

The Pumping Charges consist of a fixed component designed to recover the general maintenance and salaries costs related to the pumping facilities and a commodity component designed to recover the electricity costs associated with pumping water to the higher elevations.

Table 6-17 shows the derivation of the monthly pumping fixed charge. The District provided the breakdown of annual fixed pumping costs related to pumping water to higher elevations. The annual fixed pumping costs (line 10) were then divided by the total number of meters (line 11) located in the

pumping zones to determine the annual fixed charge per meter. The annual charge was then divided by 12 to determine the monthly charge (line 12).

Table 6-17: Derivation of Monthly Pumping Fixed Charge

Line No.	Cost Description	Pumping Fixed Costs
1	Salaries and Benefits	
2	Wages and Salaries	\$63,334
3	Benefits	\$33,242
4	Total S&B	\$96,576
5	Other Expenses	
6	Equipment Maintenance	\$30,673
7	Buildings Maintenance	\$63
8	Supplies and Services	\$10,487
9	Total Other Expenses	\$41,223
10	Total Pumping Fixed Costs	\$137,799
11	# of Pumping Zone Meters (year)	14,484
12	Fixed Pumping Charge (\$/Meter)	\$9.51

Next, the variable pumping costs (electricity costs) identified in the budget (Table 3-2, line 12) were allocated to each of the pumping zones in proportion to the existing rates³⁴. Table 6-18 shows the proposed pumping rates by zone as well as the costs allocated to each zone.

Table 6-18: Derivation of Pumping Commodity Rates

Line No.	Pump Zone (1)	Total Annual Consumption (hcf) (2)	Current Charge (3)	Calc Revene (Current Charge * Annual Consumption) (4)	Revenue Requirement (5)	Proposed Rate (\$/hcf) (6)
1	01 Rainbow Heights	222,402	\$0.43	\$95,633 35.4%	\$170,290	\$0.77
2	02 Improvement District U-1	57,353	\$0.27	\$15,485 5.7%	\$27,574	\$0.48
3	03 Vallecitos	110,437	\$0.15	\$16,566 6.1%	\$29,498	\$0.27
4	04 Northside	471,649	\$0.05	\$23,582 8.7%	\$41,992	\$0.09
5	05 Morro Tank	178,983	\$0.08	\$14,319 5.3%	\$25,497	\$0.14
6	06 Huntley	269,828	\$0.31	\$83,647 31.0%	\$148,947	\$0.55
7	07 Magee Tank	14,549	\$1.42	\$20,660 7.7%	\$36,789	\$2.53
8	Total			\$269,892	\$480,587	

The total annual consumption (column 2) times the current charge (column 3) equals the calculated revenue (column 4). Column 4 also shows what percentage of the total calculated revenue is attributable to each zone. The total revenue requirement (or electricity costs shown in column 5, line 8) are then allocated to each zone based on the percentage shown in column 4. The proposed pumping commodity rate (column 6) was determined by dividing the total requirement (column 5) by the annual consumption (column 2).

³⁴ Electricity costs by pumping zone was not available at the time of this study. The District intends to segregate this data moving forward. District staff verified the resulting pumping charges seemed reasonable based on their knowledge of the zones.

7 BILL IMPACTS

Section 7 demonstrates the customer bill impacts for several of the District’s customer classes assuming the revenue adjustments under the selected Financial Plan. The graphs shown include SDCWA pass through charges for FYE 2016. Future increases from SDCWA will be passed-through at the time of the increase and will be in addition to the increases under the selected Financial Plan.

The meter size for each graph is shown in the title and the bills corresponding to various points of use (for example 5, 15, 25 and 35 HCF) are shown on the horizontal axis. Note 1 HCF = 748 gallons = or 1 unit of water.

7.1 CUSTOMER BILL IMPACTS

Single Family Bill Impacts

Figure 7-1 shows the single family bill impacts for various use points inclusive of SDCWA charges. The graph shows two lines. The red line represents the bill assuming the existing rate structure and rates are unchanged. The green line represents the bill under the proposed rates. This color scheme remains unchanged for all graphs in this section.

As shown in Figure 7-1, SFR customers with a ¾” meter will see a reduction in their bill at lower levels of usage (approximately 3% reduction at 15 units) and an increase in their bill at higher levels of usage (approximately 4% increase at 35 units).

Figure 7-1: Single Family Residential Customer Bill Impact



Agriculture Bill Impacts

Figure 7-2 shows the bill impacts for agriculture properties with a residence on the parcel. Figure 7-3 shows the agriculture bill impacts for agriculture properties without a residence on the parcel.

Figure 7-2: Agriculture with Residence Customer Bill Impact

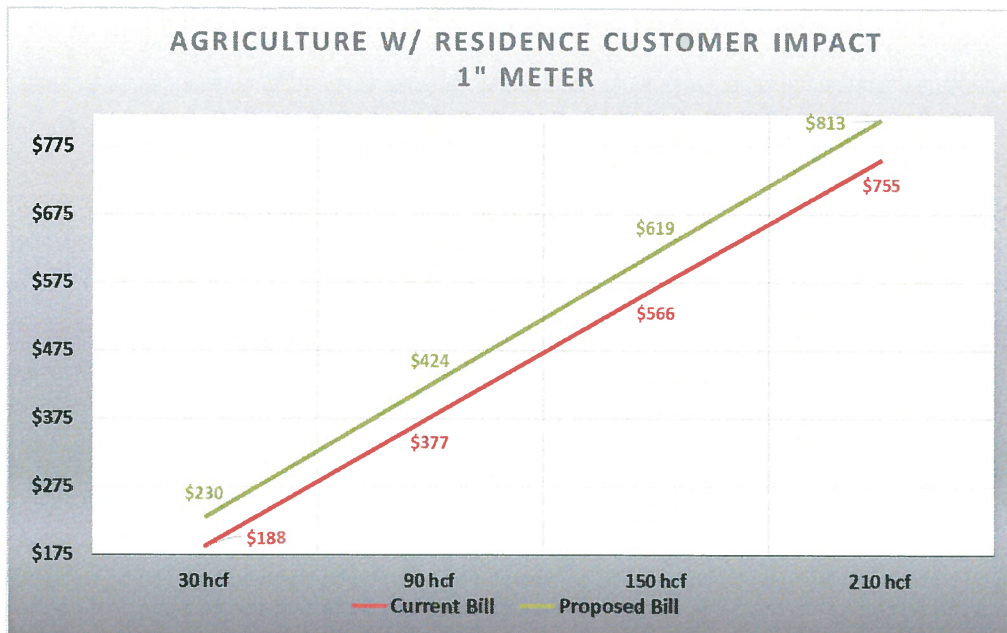
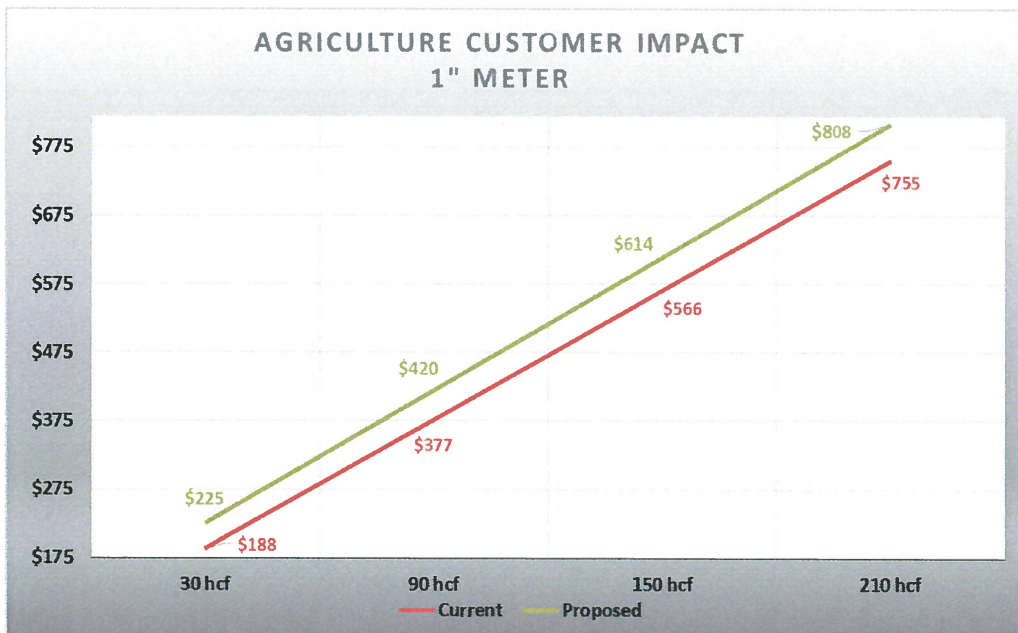


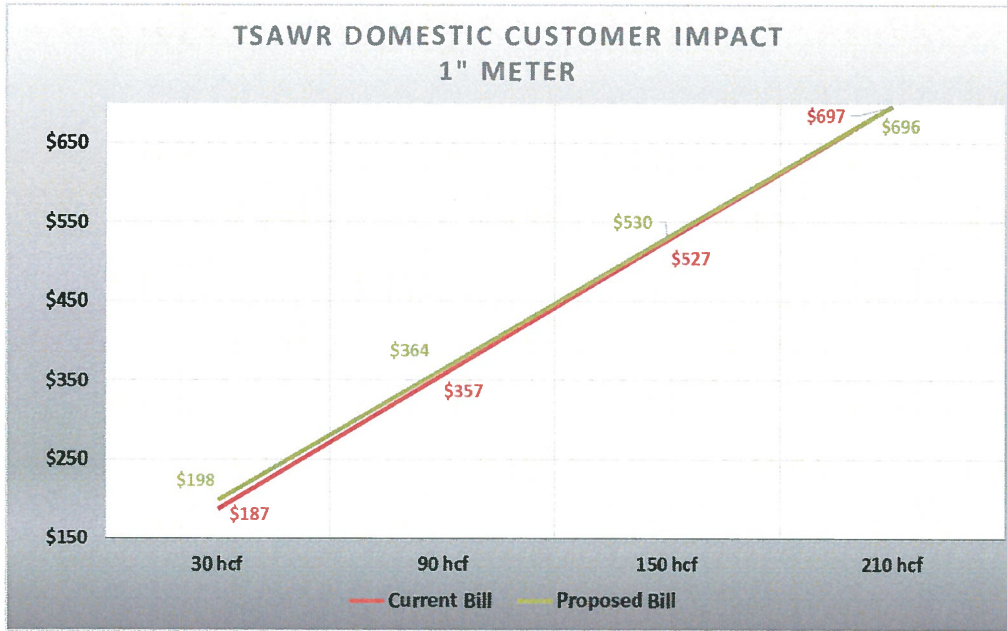
Figure 7-3: Agriculture without Residence Customer Bill Impact



TSAWR Domestic Bill Impacts

Figure 7-4 shows the TSAWR Domestic bill impacts for customers with a 1" meter. As shown, TSAWR Domestic customers at usage levels below 210 units will see a slight increase whereas customer with greater than or equal to 210 units will see a slight decrease in their bill.

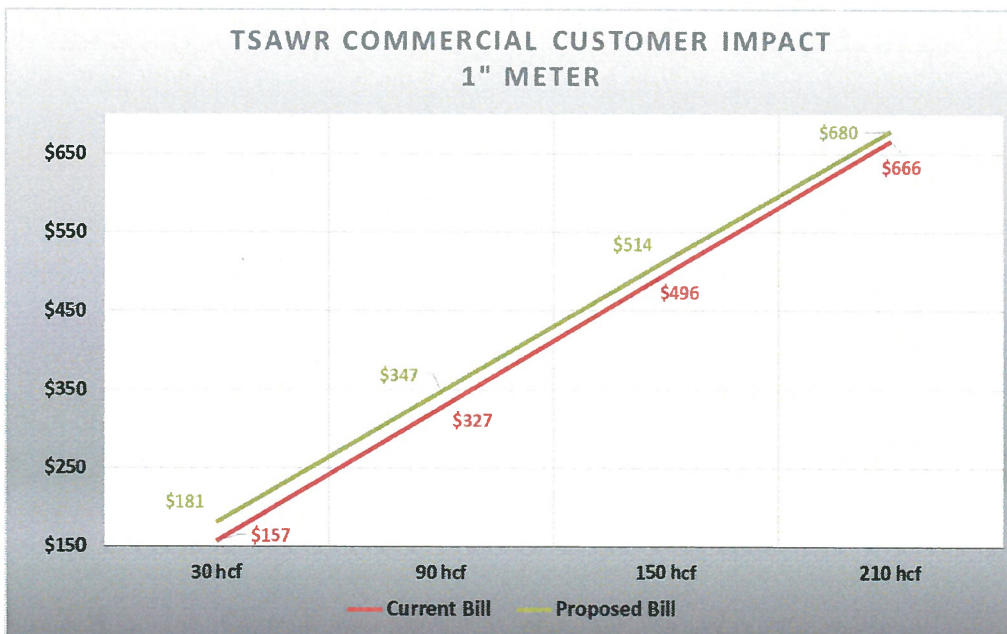
Figure 7-4: TSAWR Domestic Customer Bill Impact



TSAWR Commercial Bill Impacts

Figure 7-5 shows the TSAWR Commercial bill impacts for customers with a 1" meter. As shown, TSAWR Domestic customers will see a larger increase in bills at lower levels of usage. As the usage increases, the difference between the current and proposed bills will shrink resulting in a lower proposed bill at higher levels of usage.

Figure 7-5: TSAWR Commercial Customer Bill Impact



8 DEMAND REDUCTION RATES

8.1 DEMAND REDUCTION BACKGROUND

Given prevailing conditions in the state and long term conservation through efficiency gains and decreased water consumption, the District faces significant water demand reduction. Permanent conservation leads to less water sales and in turn less revenue. Depending upon agency specific characteristics (e.g., water supply) and the degree of fixed cost recovered from variable revenues, a reduction in water sales can impact the financial stability, staffing, capital planning, and overall health of the agency.

Demand Reduction Revenue Collection

With demand reduction, the District’s revenue requirement (costs to be covered through rates) decreases along with total revenue. That is, as water sales decline, costs - predominantly from purchased water - decline. However the District’s revenues decrease at a rate faster than its costs because a significant portion of fixed costs are recovered from variable rates. These fixed costs include debt service, salaries, and services, among other costs.

To maintain financial stability, provide water at the same level of service, and to achieve minimum reserve levels, it is necessary for the District to implement rates that recover lost revenue from demand reduction and recover the District’s fixed costs.

Demand Reduction Levels

Table 8-1 shows demand reduction at four levels. These level were selected after several discussions with District staff. The percentages shown represent the reduction in SFR use relative to FYE 2015 usage. Section 8.2 further explains the demand reduction assumptions for each customer class and tier.

Table 8-1: Reduction Assumptions

Up to 15%	Up to 25%	Up to 30%	Up to 35%
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8.2 DEMAND REDUCTION CALCULATION

The first step in calculating demand reduction rates is to estimate the cutback in use from each user class. Agricultural use is not subject to demand reductions, however, TSAWR use is subject to a 15% reduction mandated by MWD and SDCWA. RFC modelled the cutback in use by using District customer use data for FYE 2015 and establishing a minimum use level to provide for basic health and sanitation needs. This minimum use level represents essential indoor water use (10 HCF). This minimum allocation applies to the single family residential, agricultural, and TSAWR Domestic classes. 10 HCF is approximately equal to an indoor use of 60 gallons per day per person for a four-person household.

All remaining use is considered discretionary and is the target of the cutback assumptions in Table 8-1.

After applying the minimum allocation and the percentage reductions in Table 8-1, RFC determined the estimated cutbacks by class and by tier in Table 8-2. Note that TSAWR Domestic Tier 2 reductions are estimated at the same level as SFR Tier 2, while Tier 3 is estimated to be the same as TSAWR Commercial Tier 3. TSAWR Domestic exhibits characteristics in those tiers similar to the respective classes. The uniform rate classes (all other than SFR and TSAWR Domestic) are estimated as percentages of each level of reduction. For instance MFR is estimated to achieve 85% of the 15% reduction, or 13% in total. Similarly Commercial users are estimated to achieve 66% of the 15% reduction or 10% total. These differences acknowledge varying degrees of discretionary use for non-residential customers, as well as the fact that non-residential and MFR users are more likely to have dedicated irrigation meters. TSAWR Domestic Tier 3 and TSAWR Commercial will meet the SDCWA mandatory cutback at the Up to 30% reduction scenario. At the 30% and 35% reduction scenarios, agriculture customers will reduce usage by 10%.

Table 8-2: Reduction Assumptions, by Class

Customer Class	Up to 15%	Up to 25%	Up to 30%	Up to 35%
Single Family Residential				
Tier 1	0%	0%	0%	0%
Tier 2	23%	49%	45%	66%
Tier 3	68%	92%	91%	98%
MFR	13%	21%	26%	30%
Commercial	10%	17%	20%	23%
Agriculture	0%	0%	10%	10%
TSAWR Dom				
Tier 1	0%	0%	0%	0%
Tier 2	23%	49%	45%	66%
Tier 3	8%	13%	15%	18%
TSAWR Com	8%	13%	15%	18%
Institutional	10%	17%	20%	23%
Construction	0%	0%	0%	0%

After identifying class reductions, the percentages were applied to actual FYE 2015 water demand to determine the volumetric reductions in water sales. Using the estimated volumetric reduction in water use we calculated the estimated lost revenue. After calculating the reduction in water sales revenues we must account for savings due to lower water purchases and related expenses. Table 8-3 shows the estimated savings for each demand reduction level. The savings for water purchases is calculated by multiplying the estimated volumetric reduction (in acre feet) by the unit cost of purchased water. Pumping costs are assumed to have a linear relationship to water sold. As demand is reduced, pumping costs are reduced proportionally³⁵.

³⁵ Demand reductions are in relation to FYE 2015, however, the cost of service study already assumed a 6% reduction. Therefore, the proportional reduction in pumping costs was based on the reduction from the FYE 2016 estimated usage and represents the additional reduction beyond what was already assumed.

Table 8-3: Reduced Expenditures (Demand Reduction Savings)

Line No.		Demand Reduction Savings			
		Reduced Demand 15% (1)	Reduced Demand 25% (2)	Reduced Demand 30% (3)	Reduced Demand 35% (4)
1	Water Reduction, AF	882.62	2,111.81	2,786.16	3,446.52
2	Pumping % Cutback	11%	18%	22%	26%
3	Water Reduction Savings	\$889,239	\$2,127,647	\$2,807,057	\$3,472,364
4	Pumping - Electricity Cost Savings	\$54,400	\$87,228	\$105,238	\$122,874
5	Total Reduced Usage Savings	\$943,639	\$2,214,875	\$2,912,294	\$3,595,238
6	Net Revenue Lost after Savings (For One Year)	\$2,060,321	\$2,557,391	\$2,756,554	\$3,017,576
7	Estimated Net Revenue Lost for 6 Months (% of water sold July-Dec)	\$1,183,619	\$1,469,177	\$1,583,593	\$1,733,545
8	Optional Use of Rate Stabilization Funds	\$0	\$0	\$0	\$0
9	Net Revenue Lost After Savings and After Rate Stabilization Fund Use	\$2,060,321	\$2,557,391	\$2,756,554	\$3,017,576
10	Reduced Usage Volumetric Revenue Requirement - All Classes	\$23,295,320	\$22,024,085	\$21,326,665	\$20,643,722

Once savings are determined we can calculate the net revenue loss from demand reduction at each level. The net revenue loss is determined as the total revenue loss from reduced demand, less total savings. Table 8-4 shows the net revenue loss calculated for the four levels in the analysis.

Table 8-4: Net Revenue Loss

Line No.		Net Revenue Loss			
		Reduced Demand 15% (1)	Reduced Demand 25% (2)	Reduced Demand 30% (3)	Reduced Demand 35% (4)
1	Revenue Loss	\$1,447,460	\$3,215,765	\$4,112,348	\$5,056,313
2	Savings	(\$943,639)	(\$2,214,875)	(\$2,912,294)	(\$3,595,238)
3	Net Revenue Lost after Savings (For One Year)	\$503,821	\$1,000,890	\$1,200,053	\$1,461,075
4	Expected Volumetric Reduced Usage Revenue	\$22,791,500	\$21,023,195	\$20,126,612	\$19,182,647
5	Reduced Usage Volumetric Revenue Requirement	\$23,295,320	\$22,024,085	\$21,326,665	\$20,643,722
6	% Increase	2.2%	4.8%	6.0%	7.6%

We have now determined the net revenue loss to the District. Table 8-4 also adds the net revenue loss (line 3) to the expected revenue (line 4) at each level (proposed rate times expected usage) to determine the total revenue requirement (line 5) at each demand reduction level. We must compare the expected revenue requirement to the reduced revenue requirement to determine the difference in percentage terms (line 6). This percentage is the amount that proposed rates must be increased to recover the non-reduction revenue requirement.

Table 8-5 applies the percentage increases calculated in Table 8-4 to the proposed FYE 2016 volumetric rates to determine the demand reduction rates for all four levels.

Table 8-5: Water Demand Reduction Rates

Customer Class	Proposed Rates (FYE 2016)	Reduced Demand 15%	Reduced Demand 25%	Reduced Demand 30%	Reduced Demand 35%
% Increase Rates	N/A	2.2%	4.8%	6.0%	7.6%
Single Family Residential					
Tier 1	\$3.31	\$3.39	\$3.47	\$3.51	\$3.57
Tier 2	\$3.48	\$3.56	\$3.65	\$3.69	\$3.75
Tier 3	\$3.81	\$3.90	\$4.00	\$4.04	\$4.11
MFR	\$3.40	\$3.48	\$3.57	\$3.61	\$3.66
Commercial	\$3.51	\$3.59	\$3.68	\$3.72	\$3.78
Agriculture	\$3.24	\$3.32	\$3.40	\$3.44	\$3.49
TSAWR Dom					
Tier 1	\$3.31	\$3.39	\$3.47	\$3.51	\$3.57
Tier 2	\$3.48	\$3.56	\$3.65	\$3.69	\$3.75
Tier 3	\$2.77	\$2.84	\$2.91	\$2.94	\$2.99
TSAWR Com	\$2.77	\$2.84	\$2.91	\$2.94	\$2.99
Institutional	\$3.58	\$3.66	\$3.76	\$3.80	\$3.86
Construction	\$4.30	\$4.40	\$4.51	\$4.56	\$4.63

Where Table 8-5 shows the new demand reduction rates in total, Table 8-6 shows the increases to proposed rates in dollar terms for FYE 2016.

Table 8-6: Water Demand Reduction Rate Increases

Customer Class	Proposed Rates (FYE 2016)	Reduced Demand 15%	Reduced Demand 25%	Reduced Demand 30%	Reduced Demand 35%
% Increase Rates	N/A	2.2%	4.8%	6.0%	7.6%
Single Family Residential					
Tier 1	\$3.31	\$0.08	\$0.16	\$0.20	\$0.26
Tier 2	\$3.48	\$0.08	\$0.17	\$0.21	\$0.27
Tier 3	\$3.81	\$0.09	\$0.19	\$0.23	\$0.30
MFR	\$3.40	\$0.08	\$0.17	\$0.21	\$0.26
Commercial	\$3.51	\$0.08	\$0.17	\$0.22	\$0.27
Agriculture	\$3.24	\$0.08	\$0.16	\$0.20	\$0.25
TSAWR Dom					
Tier 1	\$3.31	\$0.08	\$0.16	\$0.20	\$0.26
Tier 2	\$3.48	\$0.08	\$0.17	\$0.21	\$0.27
Tier 3	\$2.77	\$0.07	\$0.14	\$0.17	\$0.22
TSAWR Com	\$2.77	\$0.07	\$0.14	\$0.17	\$0.22
Institutional	\$3.58	\$0.08	\$0.18	\$0.22	\$0.28
Construction	\$4.30	\$0.10	\$0.21	\$0.26	\$0.33

APPENDIX A: CASH FLOW DETAIL

Cash Flow

Rainbow Municipal Water District				Calculated	Projected	Projected	Projected	Projected
Line No.	Cash Flow			FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
1	Rate Revenue Under Existing Rates			\$32,904,986	\$33,345,797	\$34,470,712	\$35,651,476	\$36,891,641
	Additional Revenue Required:							
	Fiscal Year	Revenue Adjustment	Months Effective					
2	2016	6.00%	January	\$987,150	\$2,000,748	\$2,068,243	\$2,139,089	\$2,213,498
3	2017	6.00%	January		\$1,060,396	\$2,192,337	\$2,267,434	\$2,346,308
4	2018	2.00%	January			\$387,313	\$801,160	\$829,029
5	2019	2.00%	January				\$408,592	\$845,610
6	2020	2.00%	January					\$431,261
7	Total Additional Revenue			\$987,150	\$3,061,144	\$4,647,893	\$5,616,274	\$6,665,706
8	Total Service Charge Revenue			\$33,892,136	\$36,406,941	\$39,118,604	\$41,267,749	\$43,557,347
	Other Revenue							
9	Other Operating Revenue			\$95,500	\$97,410	\$99,358	\$101,345	\$103,372
10	Interest Income			\$0	\$96,099	\$138,989	\$106,408	\$134,307
11	Property Taxes - Parcel Charge RTS			\$486,481	\$486,481	\$486,481	\$486,481	\$486,481
12	Non-Operating Revenue			\$346,383	\$346,383	\$346,383	\$346,383	\$346,383
13	Subtotal Other Revenue			\$928,364	\$1,026,373	\$1,071,211	\$1,040,617	\$1,070,543
14	TOTAL REVENUE			\$34,820,500	\$37,433,314	\$40,189,816	\$42,308,367	\$44,627,890
	EXPENSES							
	O&M Expenses							
15	Water Purchases			\$19,759,584	\$20,222,558	\$20,906,757	\$21,625,166	\$22,379,495
16	Transportation			\$979,603	\$1,014,988	\$1,049,329	\$1,085,387	\$1,123,247
17	Ready to Serve Charge			\$527,580	\$527,580	\$527,580	\$527,580	\$527,580
18	Infrastructure Access Charge			\$435,546	\$436,656	\$436,656	\$436,656	\$436,656
19	Customer Service Charge			\$1,204,944	\$1,205,412	\$1,205,412	\$1,205,412	\$1,205,412
20	Capacity Reservation Charge			\$622,440	\$657,756	\$657,756	\$657,756	\$657,756
21	Emergency Storage Charge			\$1,778,478	\$1,714,356	\$1,714,356	\$1,714,356	\$1,714,356
22	Supply Reliability Charge			\$369,888	\$739,776	\$739,776	\$739,776	\$739,776
23	AG Credit-SAWR			(\$1,768,355)	(\$1,813,987)	(\$1,875,360)	(\$1,939,802)	(\$2,007,466)
24	Salaries and Benefits			\$6,287,561	\$6,476,188	\$6,670,474	\$6,870,588	\$7,076,706
25	Services and Supplies			\$3,727,282	\$3,840,066	\$3,956,283	\$4,076,037	\$4,199,436
26	Pumping			\$480,587	\$504,616	\$529,847	\$556,340	\$584,157
27	Capital Outlay			\$504,976	\$515,076	\$525,377	\$535,885	\$546,602
28	Total O&M Expenses			\$34,910,114	\$36,041,042	\$37,044,243	\$38,091,135	\$39,183,712
	Debt Service							
29	Existing Debt Service			\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
30	Proposed Debt Service			\$0	\$0	\$0	\$0	\$0
31	Total Debt Service Expenses			\$377,367	\$1,104,794	\$1,104,794	\$1,104,794	\$1,104,794
32	TOTAL EXPENSES			\$35,287,481	\$37,145,837	\$38,149,037	\$39,195,929	\$40,288,507
33	Transfers to (from) Reserves ¹			(\$466,982)	\$287,477	\$2,040,779	\$3,112,437	\$4,339,383

¹ before capital expenses

Reserve Balances

Rainbow Municipal Water District	Budgeted	Projected	Projected	Projected	Projected	
Reserve Balances	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	
Reserve Interest Rate	1.0%	2.0%	2.0%	2.0%	2.0%	
Operating Reserve						
Beginning Balance	\$9,720,447	\$2,819,814	\$2,938,745	\$3,002,141	\$3,067,629	
Transfers to (from) Reserves1	(\$466,982)	\$287,477	\$2,040,779	\$3,112,437	\$4,339,383	
Intermediate Balance	\$9,253,465	\$3,107,291	\$4,979,524	\$6,114,578	\$7,407,011	
Transfers In/ (Out) - Liability Self Insurance Reserve	(\$59,895)					
Transfers In/ (Out) - Water Capital Projects Reserve	(\$5,203,422)	(\$168,546)	(\$1,977,383)	(\$3,046,950)	(\$316,301)	
Transfers In/(Out) - Rate Stabilization Reserve	(\$1,170,334)	\$0	\$0	\$0	(\$3,303,673)	
Transfers In/ (Out) - New Water Resources Reserve	\$0	\$0	\$0	\$0	\$0	
Ending Balance	\$2,819,814	\$2,938,745	\$3,002,141	\$3,067,629	\$3,787,037	
Interest Income	\$62,701	\$57,586	\$59,409	\$60,698	\$68,547	
Min Balance - % of O&M	60 days	\$2,819,814	\$2,938,745	\$3,002,141	\$3,067,629	\$3,135,281
Max Balance - % of O&M	90 days	\$4,229,721	\$4,408,118	\$4,503,211	\$4,601,443	\$4,702,921
Water Capital Projects Reserve						
Beginning Balance	\$0	\$3,322,176	\$230,664	\$0	\$3,009,923	
<u>Plus:</u>						
Transfers from Operation Reserve	\$5,203,422	\$168,546	\$1,977,383	\$3,046,950	\$316,301	
Connection Fee / Capacity Revenue	\$597,434	\$739,942	\$1,793,680	\$2,509,133	\$2,618,497	
New Debt Issue	\$0	\$0	\$0	\$0	\$0	
Transfer from Rate Stabilization Reserve	\$0	\$0	\$118,272	\$0	\$0	
<u>Less:</u>						
Capital Projects	\$2,478,680	\$4,000,000	\$4,120,000	\$2,546,160	\$2,622,545	
Ending Balance	\$3,322,176	\$230,664	\$0	\$3,009,923	\$3,322,176	
Interest Income	\$16,611	\$35,528	\$2,307	\$30,099	\$63,321	
	\$3,322,176	\$230,664	(\$118,272)	\$3,009,923	\$3,322,176	
Target Balance - Average CIP	1 year(s)	\$3,322,176	\$3,322,176	\$3,322,176	\$3,322,176	
Liability Self Insurance Reserve						
Beginning Balance	\$40,105	\$100,000	\$100,000	\$100,000	\$100,000	
<u>Plus:</u>						
Transfers from Operation Reserve	\$59,895	\$0	\$0	\$0	\$0	
<u>Less:</u>						
Transfers Out - Expenditure						
Ending Balance	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	
Interest Income	\$701	\$2,000	\$2,000	\$2,000	\$2,000	
Target Balance	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	
New Water Sources Reserve						
Beginning Balance	\$1,023,429	\$1,023,429	\$1,023,429	\$1,023,429	\$1,023,429	
<u>Plus:</u>						
Transfers from Operation Reserve	\$0	\$0	\$0	\$0	\$0	
<u>Less:</u>						
Transfers Out - Expenditure						
Ending Balance	\$1,023,429	\$1,023,429	\$1,023,429	\$1,023,429	\$1,023,429	
Interest Income	\$10,234	\$20,469	\$20,469	\$20,469	\$20,469	
Rate Stabilization Reserve						
Beginning Balance	\$0	\$1,170,334	\$1,170,334	\$1,052,061	\$1,052,061	
<u>Plus:</u>						
Transfers from Operation Reserve	\$1,170,334	\$0	\$0	\$0	\$3,303,673	
<u>Less:</u>						
Transfers Out - Expenditure	\$0	\$0	(\$118,272)	\$0	\$0	
Ending Balance	\$1,170,334	\$1,170,334	\$1,052,061	\$1,052,061	\$4,355,735	
Interest Income	\$5,852	\$23,407	\$22,224	\$21,041	\$54,078	
Target Balance - 10% of Sales	10%	\$3,389,214	\$3,640,694	\$3,911,860	\$4,126,775	\$4,355,735

Figure A-1 shows the Water Capital Projects Reserve ending balances for each fiscal year in the Study Period. As shown in the figure, the reserves will be fully depleted in FYE 2018 and will not be sufficient to cover the capital projects scheduled during the year. It is anticipated that \$118,272 will be transferred from the Rate Stabilization Reserve to cover the deficiency (this can be seen in the Reserve Balance table shown on the previous page). However, the reserve will begin to recover in FYE 2019 and will reach the target by FYE 2020.

Figure A-1: Water Capital Reserve

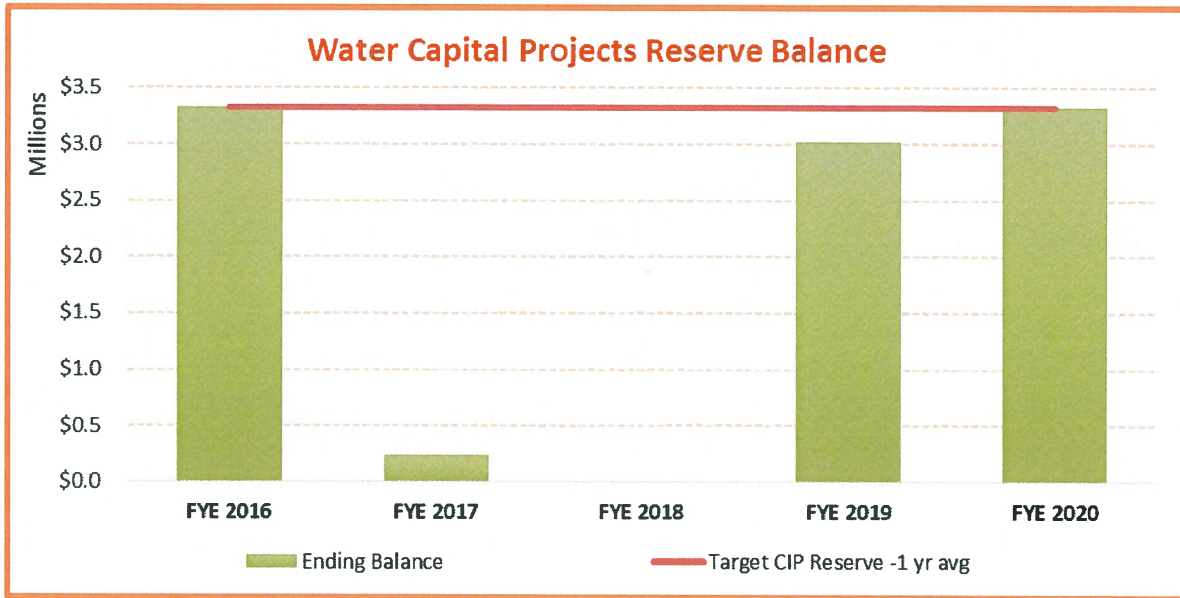


Figure A-2 shows the Liability Self Insurance Reserve. Based on the Financial Plan selected by the Board, this reserve will be funded at the targeted level of \$100,000 for each year during the Study Period.

Figure A-2: Liability Self Insurance Reserve

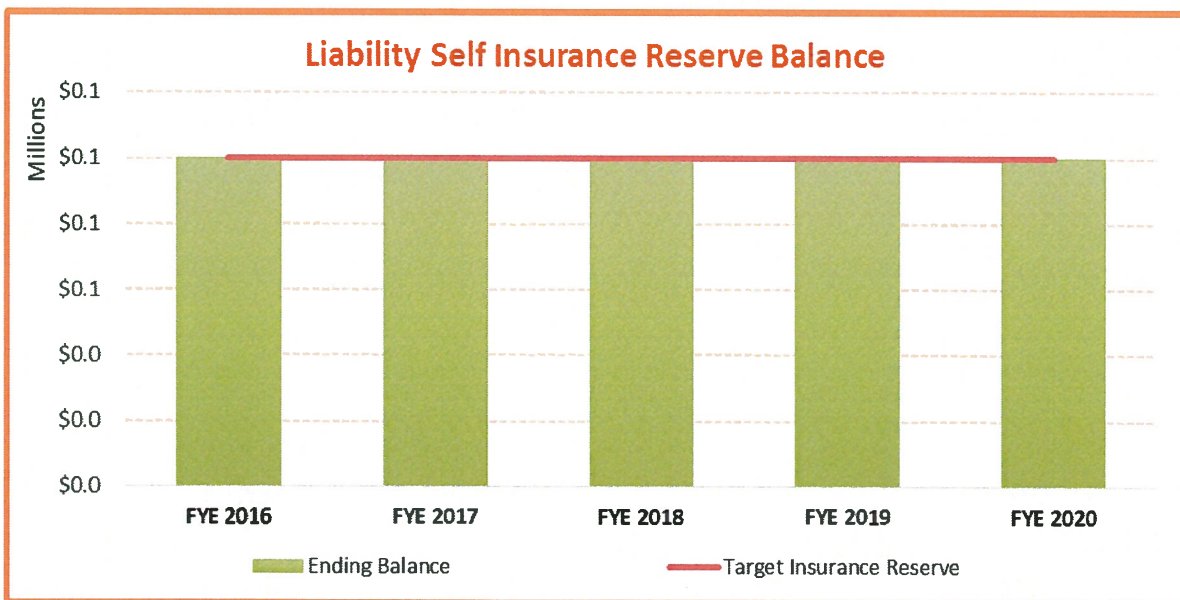


Figure A-3 shows the New Water Resource Reserve. This reserve is intended to fund new projects for developing new sources of water supply. During the Study Period, no additional funds were transferred in or out of the reserve.

Figure A-3: New Water Resource Reserve

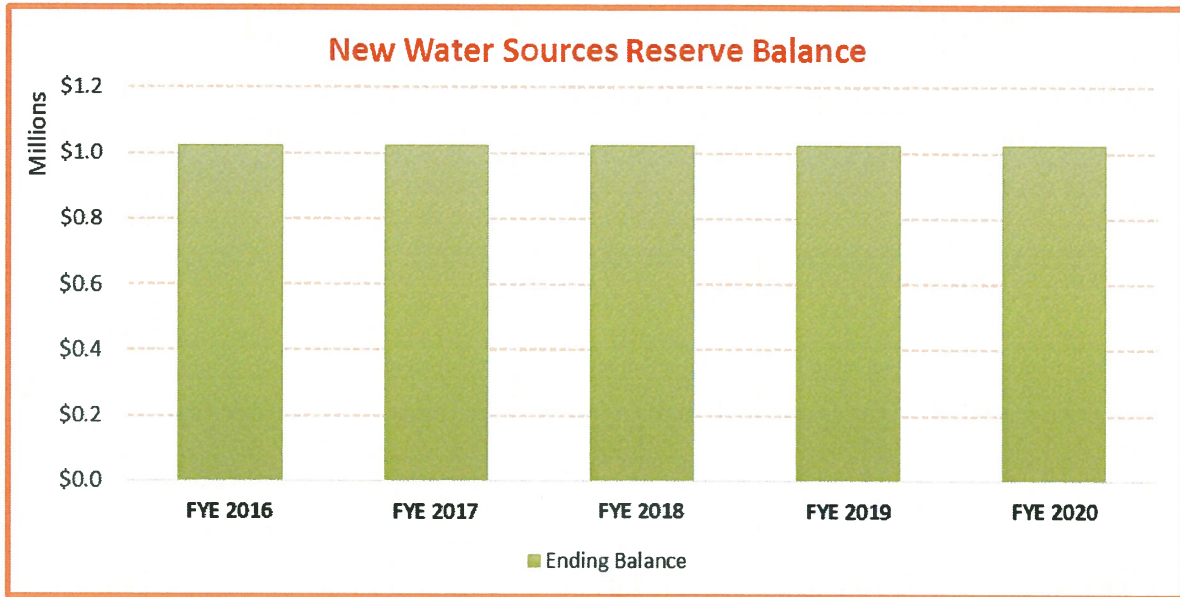
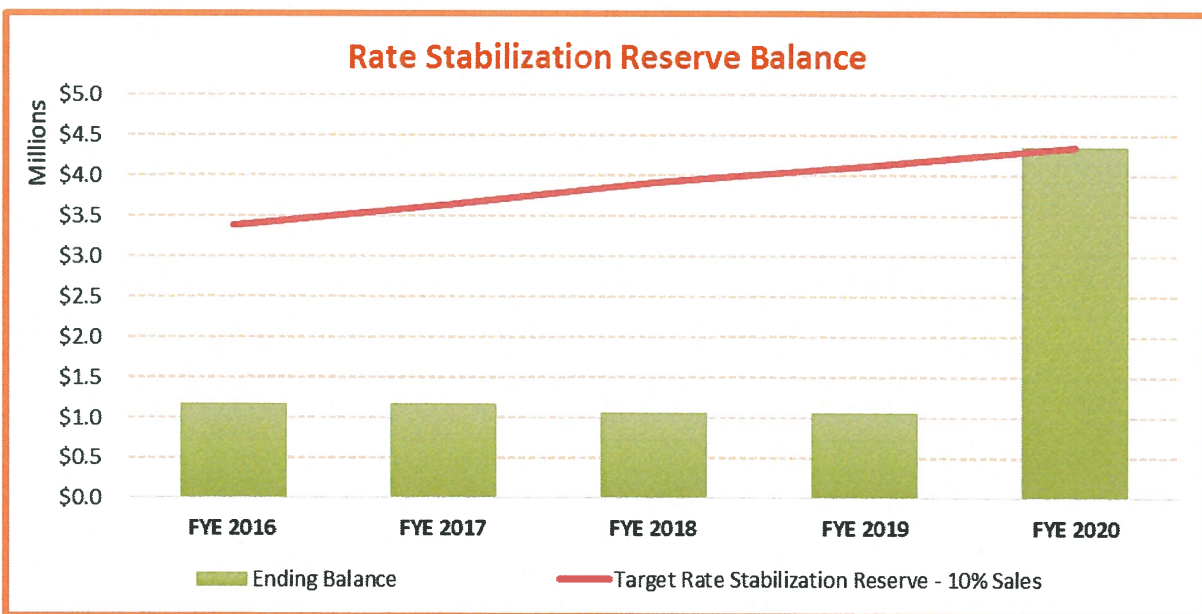


Figure A-4 shows the Rate Stabilization Reserve. RFC recommends establishing a rate stabilization reserve with a target reserve level of 10% of water sales. A Rate Stabilization Reserve is used in the event of any unforeseen circumstances or critical asset failures to help mitigate the impact to the District and ultimately the District's customers. RFC recommends building the reserves over the course of the Study Period. In addition, as mentioned earlier, approximately \$100,000 will be used in FYE 2018 to offset rate increases and help fund capital expenditures.

Figure A-4: Rate Stabilization Reserve



APPENDIX B: RMWD ASSET FUNCTIONALIZATION

RMWD Asset Functionalization

Line No.	Allocation Basis (1)	Supply (2)	Base (3)	Max Day (4)	Max Hour (5)	Fire Protection (6)	Meters (7)	Customer (8)	Total (9)
1	Assets								
2	Reservoir	0%	58%	32%	0%	10%	0%	0%	100%
3	Transmission	0%	63%	37%	0%	0%	0%	0%	100%
4	Distribution	0%	39%	21%	30%	10%	0%	0%	100%
5	Pumping	0%	39%	21%	30%	10%	0%	0%	100%
6	Meters	0%	0%	0%	0%	0%	100%	0%	100%
7	Customer	0%	0%	0%	0%	0%	0%	100%	100%
5-84									
Line No.	Allocation Basis (1)	Supply (2)	Base (3)	Max Day (4)	Max Hour (5)	Fire Protection (6)	Meters (7)	Customer (8)	Total (9)
8	Assets								
9	Reservoir	\$0	\$26,402,500	\$14,642,560	\$0	\$4,560,562	\$0	\$0	\$45,605,622
10	Transmission	\$0	\$15,962,635	\$9,417,955	\$0	\$0	\$0	\$0	\$25,380,590
11	Distribution	\$0	\$14,693,606	\$8,148,925	\$11,421,266	\$3,807,089	\$0	\$0	\$38,070,886
12	Pumping	\$0	\$2,638,559	\$1,463,318	\$2,050,938	\$683,646	\$0	\$0	\$6,836,461
13	Meters	\$0	\$0	\$0	\$0	\$0	\$302,678	\$0	\$302,678
14	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$3,702,765	\$3,702,765
16	TOTAL ASSETS	\$0	\$59,697,300	\$33,672,758	\$13,472,204	\$9,051,297	\$302,678	\$3,702,765	\$119,899,002
17	% Allocation	0.0%	49.8%	28.1%	11.2%	7.5%	0.3%	3.1%	

APPENDIX C: REVENUE OFFSET ALLOCATIONS

Revenue Offset Allocation

Line No.	Revenue Offset Allocation	Supply (1)	Base (2)	SAWR Supply (3)	Max Day (4)	Max Hour (5)	Fire Protection (6)	Meters (7)	Customer (8)	Revenue Offset (9)	Total (10)
1	Plan Check & Inspection	0%	50%	0%	28%	11%	8%	0%	3%		100%
2	New Development Services	0%	100%								100%
3	Misc. Other Charges	0%	100%								100%
4	Shut off fees	0%	50%	0%	28%	11%	8%	0%	3%		100%
5	Water Letter Fees	0%	50%	0%	28%	11%	8%	0%	3%		100%
6	Rent & Lease Revenue	0%	50%	0%	28%	11%	8%	0%	3%		100%
7	Property Taxes - Assessed Valuation	0%								100%	100%
8	Property Taxes - Parcel Charge RTS	0%								100%	100%
9	Interest Income - Unrestricted	0%	50%	0%	28%	11%	8%	0%	3%		100%
10	Other Non-Operating Income	0%	50%	0%	28%	11%	8%	0%	3%		100%
11	SAWR Credits	0%		100%							100%
12	Debt Funding	0%	50%	0%	28%	11%	8%	0%	3%		100%
13	Total Revenue Offset Allocation	\$0	\$92,361	\$1,768,355	\$18,536	\$7,416	\$4,982	\$167	\$2,038	\$802,864	\$2,696,719

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APPENDIX D: EQUIVALENT METERS

Equivalent Meters

To allocate meter-related costs appropriately, the concept of “equivalent meters” is utilized. Most rate studies calculate equivalent meters based on meter hydraulic capacity. The ratio of hydraulic capacity is calculated by dividing large meter capacities by the base meter capacity. The actual number of meters by size is multiplied by the corresponding capacity ratio to calculate equivalent meters. By using equivalent meters instead of a straight meter count, the analysis reflects the fact that larger meters impose larger demands, are more expensive to install, maintain, and replace than smaller meters and commit a greater capacity in the system.

Table D-1 shows the District’s customers by class and by meter size. Equivalent meters are used in calculating meter service costs. The equivalent meter ratios used for this study are shown in Table D-2 and were based on AWWA Safe Maximum Operating Capacity (gallons per minute) by meter type. The ¾” meter is the base capacity against which all other meter ratios are scaled. For the purposes of both the RMWD O&M monthly charge and the SDCWA monthly charge, the 5/8” and ¾” meters are assumed to be equivalent.

Table D-1: Meter Counts by Class

Meter Size	SFR	MFR	Commercial	Agriculture	TSAWR Dom	TSAWR Com	Institutional	Total
5/8"	208	-	1	8	1	1	-	219
¾"	2,116	4	26	265	97	9	4	2,521
1"	1,896	39	79	821	573	72	4	3,484
1 ½"	127	10	26	135	210	76	5	589
2"	51	34	26	97	144	94	5	451
3"	3	-	6	7	6	10	1	33
4"	-	3	3	4	1	3	-	14
6"	-	-	-	1	-	-	-	1
	4,401	90	167	1,338	1,032	265	19	7,312

Table D-2: AWWA Meter Capacity Ratios

Meter Size	AWWA Capacity (gpm)	AWWA Capacity Ratio
5/8"	20	1.00
¾"	30	1.00
1"	50	1.67
1 ½"	100	3.33
2"	160	5.33
3"	350	11.67
4"	630	21.00
6"	1300	43.33

Table D-3 shows the equivalent meters by customer class. The equivalent meters were determined by multiplying the number of meters from Table D-1 by the corresponding capacity ratio from Table D-2.

Table D-3: Equivalent Meters

Meter Size	Meter Ratios	SFR	MFR	Commercial	Agriculture	TSAWR DOM	TSAWR COM	Institutional	Total
½"	1.00	208	-	1	8	1	1	-	219
¾"	1.00	2,116	4	26	265	97	9	4	2,521
1"	1.67	3,160	65	132	1,368	955	120	7	5,807
1 ½"	3.33	423	33	87	450	700	253	17	1,963
2"	5.33	272	181	139	517	768	501	27	2,405
3"	11.67	35	-	70	82	70	117	12	385
4"	21.00	-	63	63	84	21	63	-	294
6"	43.33	-	-	-	43	-	-	-	43
		6,214	347	517	2,818	2,612	1,064	66	13,638

NOTICE OF PUBLIC HEARING



**NOTICE OF PUBLIC HEARING
CONCERNING PROPOSED
WATER RATE INCREASES
DECEMBER 15, 2015 AT 1:00 pm**

NOTICE IS HEREBY GIVEN THAT the Board of Directors of Rainbow Municipal Water District (the "District") will conduct a public hearing on December 15, 2015, at 1:00 p.m. in the Boardroom of the District Headquarters at 3707 Old Highway 395, Fallbrook, CA 92028, to consider adopting increases in the rates for its water service fees effective January 1, 2016 and an ordinance that would authorize the District to pass through increased costs in Purchased Wholesale Water, increases in the cost of energy necessary to move water, increases to the District's Cost of Operations and Maintenance and Capital Facilities, and any reduction in the allocation of ad valorem property tax revenues by the State of California ("Ad Valorem Pass Through") pursuant to Proposition 1A. Over the past five years (2011-2015) since the District last adjusted its water rates and charges, these rates and charges have been subject to, and reflect, an adjustment to pass through charges by the District's wholesaler supplier, the San Diego County Water Authority, as well as inflationary adjustments based on RMWD's internal operating costs.

REASONS FOR THE PROPOSED RATE INCREASES

The District's Mission Statement is to provide our customers reliable, high quality water and water reclamation services in a fiscally sustainable manner. While the District continually strives for cost reductions and efficient utilization of the assets it holds, it also needs to keep pace with inflation and other increases in costs, including, among others, the cost to purchase water and to comply with regulations. The District purchases its water from the San Diego County Water Authority ("SDCWA"). SDCWA in turn purchases a substantial portion of its water supplies from the Metropolitan Water District of Southern California ("MWD"). MWD imports water from two sources: the Colorado River via the Colorado River Aqueduct and Northern California via the California Aqueduct. On January 17, 2014, Governor Jerry Brown issued a drought state of emergency declaration in response to record-low water levels in California's rivers and reservoirs as well as an abnormally low snowpack. The drought has impacted the cost of imported water the District purchases from SDCWA and the availability of local water supplies. On January 1, 2016, SDCWA will be increasing the cost of wholesale water that it delivers to the District including a new Supply Reliability Charge. In addition to increases in the costs of wholesale water, the District anticipates there will be future increases in the costs of operating and maintaining the water system. Revenues collected from rates and charges are used to cover the cost of purchased water from SDCWA and costs to operate and maintain the water system and to provide ongoing repairs, replacements, and upgrades to the water system. As described below, the District is also proposing to adjust rates annually for a five-year period for any increases in such costs.

Components of RMWD Water Bills



HOW THE WATER RATES ARE CALCULATED

The District's rate structure for monthly water service fees is comprised of four components: (1) a SDCWA Fixed Charge ("SDCWA Fixed"), which is a fixed monthly charge established by SDCWA on the basis of the meter size of the parcel of property receiving water service; (2) a Rainbow Municipal Water District Operations and Maintenance Charge ("RMWD O&M Charge"), which also is a fixed monthly charge established on the basis of the meter size of the parcel of property receiving water service; (3) a pumping charge that consists of both a fixed monthly charge and variable charges based on the pump zone of the property; and (4) a Commodity Charge, which is determined on the basis of the amount of water served to a parcel of property in units of water (one unit of water is equivalent to approximately 748 gallons of water).

The SDCWA Fixed Charge is imposed by SDCWA on the District for the purpose of recovering certain SDCWA infrastructure costs. The SDCWA Fixed Charge is based on the size of the customer's meter and is imposed on the District by SDCWA and passed through to our customers. This fee also contains the new Supply Reliability Charge.

The RMWD O&MC is calculated on the basis of recovering certain fixed costs of the District to operate, maintain, and deliver water to its customers. These costs include, among others, meter reading, billings and collections, customer service, water facilities repairs and maintenance, meter reading, and certain other costs imposed on the District by SDCWA.

The Commodity Charge is a variable charge and generally consists of tiers which impose different rates per unit of water as the level of consumption increases. The rates for the variable Commodity Charge are based on the number of units of water delivered to a property and the water customer classification. These rates are calculated on the basis of the cost of providing water and infrastructure, purchasing water from SDCWA, and managing the District's water resources. The proposed rate increases include pre-defined Demand Reduction Rates to offset loss of revenue should water sales fall below current forecasts.

The rates for all four components of the District's water service fees are structured in such a way as to proportionately allocate the costs of providing water to each customer class and to manage the District's water resources.

The current and proposed rate increases are described in the tables below. If approved, the proposed rate increases will be effective on and after January 1, 2016. In addition to the water service charges described to the right, the District also imposes a fixed monthly fire meter service fee on certain properties as a condition of extending or initiating water service by (1) the installation of a private fire suppression system, and (2) upon the request of the consumer or property owner for the delivery of water to the property for the purpose of fire service protection.

To avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, the District is also proposing to pass through to its customers: (1) any increases in the rates of the SDCWA Fixed Charges imposed on the District by SDCWA (an "SDCWA Fixed Pass Through"); (2) any future charges and any rate increases to any other existing charges, including imported water charges, that are imposed on the District by SDCWA (a "SDCWA Pass Through"); (3) any increases in energy costs imposed on the District by San Diego Gas and Electric ("an Energy Pass Through"); (4) future increases in the costs of operating and maintaining the water system, including capital facilities, based on an annual inflationary adjustment in the San Diego Consumer Price Index, All Items, 1982-1984=100 for All Urban Consumers ("CPI-U") determined by the United States Department of Labor Statistics annually for the previous calendar year (an "Inflationary Pass Through"); and (5) any reduction in the allocation of ad valorem property tax revenues by the State of California ("Ad Valorem Pass Through") pursuant to Proposition 1A. Proposition 1A was approved by the voters in November 2004, with the intent of protecting the property tax revenues of local governments. Under Proposition 1A, the State of California is allowed to borrow local government property taxes on the condition that they will be paid back within 3 years. The foregoing are collectively referred to in this notice as "Pass Through Increases."

Any SDCWA Fixed Pass Through will only impact the rates of the SDCWA Fixed Charges. Any SDCWA Pass Through, any Inflationary Pass Through, Energy Pass Through, and any Ad Valorem Pass Through will impact the rates of the Meter Charge, Commodity Charge, and the Fire Meter Service Charge. If approved by the Board of Directors, the District may annually implement the Pass Through Increases for a five-year period commencing January 1, 2016, through December 31, 2021, provided, however, that (1) any increase to the rates described above as a result of any SDCWA Pass Through, Energy Pass Through, Inflationary Pass Through, or Ad Valorem Pass Through shall not exceed 15% per year; and (2) in no event shall such rates be increased by more than the cost of providing water service.

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Proposed RMWD Fixed O&M Charges

SFR, MFR, Commercial, and Institutional

Meter Size	Proposed RMWD O&M Fixed Charge	Current RMWD O&M Charge	Difference (\$)	Difference (%)
5/8"	\$23.82	\$28.35	(\$4.53)	-16%
3/4"	\$23.82	\$35.45	(\$11.63)	-33%
1"	\$37.20	\$46.10	(\$8.90)	-19%
1-1/2"	\$70.64	\$70.90	(\$0.26)	0%
2"	\$110.78	\$124.05	(\$13.27)	-11%
3"	\$237.86	\$212.70	\$25.16	12%
4"	\$425.15	\$354.50	\$70.65	20%
6"	\$873.31	\$602.60	\$270.71	45%

Agriculture, TSAWR Domestic, and TSAWR Commercial

Meter Size	Proposed RMWD AG O&M Fixed Charge	Current RMWD O&M Charge	Difference (\$)	Difference (%)
5/8"	\$43.26	\$28.35	\$14.91	53%
3/4"	\$43.26	\$35.45	\$7.81	22%
1"	\$69.59	\$46.10	\$23.49	51%
1-1/2"	\$135.44	\$70.90	\$64.54	91%
2"	\$214.45	\$124.05	\$90.40	73%
3"	\$464.64	\$212.70	\$251.94	118%
4"	\$833.36	\$354.50	\$478.86	135%
6"	\$1,715.63	\$602.60	\$1,113.03	185%

Proposed SDCWA Fixed Pass Through Charges

SFR, MFR, Commercial, Agriculture, Institutional

Meter Size	Pass-Through Fixed Charge (applicable to all but TSAWR customers)	Current CWA Fixed (Non-TSAWR)	Difference (\$)	Difference (%)
5/8"	\$35.02	\$30.48	\$4.54	14.9%
3/4"	\$35.02	\$30.48	\$4.54	14.9%
1"	\$58.37	\$48.77	\$9.60	19.7%
1-1/2"	\$116.75	\$91.44	\$25.31	27.7%
2"	\$186.79	\$158.49	\$28.30	17.9%
3"	\$408.61	\$274.31	\$134.30	49.0%
4"	\$735.50	\$487.66	\$247.84	50.8%
6"	\$1,517.71	\$1,097.24	\$420.47	38.3%

Please note that certain Non-TSAWR residential and commercial customers are being reclassified as agricultural customers based on guidelines in regulations from the State Water Resources Control Board. This reclassification affects residential and commercial properties with over 1 acre of agricultural use under irrigation.

TSAWR Customers (TSAWR Domestic and TSAWR Commercial)

Meter Size	Pass-Through Fixed Charge (applicable to TSAWR)	Current SDCWA Fixed (TSAWR Dom)	Current SDCWA Fixed (TSAWR Com)	Difference TSAWR Dom (\$)	Difference TSAWR Dom (%)	Difference TSAWR Com (\$)	Difference TSAWR Com (%)
5/8"	\$17.05	30.48	16.17	-\$13.43	-44.1%	\$0.88	5.5%
3/4"	\$17.05	30.48	16.17	-\$13.43	-44.1%	\$0.88	5.5%
1"	\$28.42	48.77	25.87	-\$20.35	-41.7%	\$2.55	9.9%
1-1/2"	\$56.84	91.44	48.5	-\$34.60	-37.8%	\$8.34	17.2%
2"	\$90.94	91.44	84.07	-\$0.50	-0.5%	\$6.87	8.2%
3"	\$198.93	91.44	145.5	\$107.49	117.6%	\$53.43	36.7%
4"	\$358.08	91.44	258.66	\$266.64	291.6%	\$99.42	38.4%
6"	\$738.90	91.44	581.99	\$647.46	708.1%	\$156.91	27.0%

Your monthly bill is comprised of fixed fees from RMWD and SDCWA which are based on your meter size and account classification.

SFR: Single Family Residential
MFR: Multi-Family Residential
TSAWR: Transitional Special Agricultural Rate

RMWD Proposed Pumping Charges

Fixed Pumping Charge

Pump Zone	Current Charge	Proposed Charge	Difference (\$)	Difference (%)
All	\$ 8.77	\$ 9.51	\$ 0.74	8.4%

Pump Charges apply to those customers who live at higher elevations that require the water to be pumped in order to provide service. Cost increases in this area are primarily due to increases in energy costs.

Variable Pumping Charge (\$/Unit)

Pump Zone	Current Charge	Proposed Rate (\$/Unit)	Difference (\$)	Difference (%)
Rainbow Heights	\$0.43	\$0.77	\$0.34	79%
ID U-1	\$0.27	\$0.48	\$0.21	78%
Vallecitos	\$0.15	\$0.27	\$0.12	80%
Northside	\$0.05	\$0.09	\$0.04	80%
Morro Tank	\$0.08	\$0.14	\$0.06	75%
Huntley	\$0.31	\$0.55	\$0.24	77%
Magee Tank	\$1.42	\$2.53	\$1.11	78%

Important Notice: All rates and charges shown in these tables apply to the rate increases effective January 1, 2016. Additional rate changes will be made during the five year term of this rate setting notice. Rate changes will be made in accordance with the methodologies described in this notice.

Proposed Demand Reduction Rates

Customer Class	Proposed Rates (\$/hcf)	Current Rate	Difference (\$)	Difference (%)	Proposed Rates			
					(15% Reduction)	(25% Reduction)	(30% Reduction)	(35% Reduction)
Single Family Residential					2.2%	4.8%	6.0%	7.6%
Tier 1 10	\$3.91	\$3.00	\$0.31	10%	\$3.39	\$3.47	\$3.51	\$3.57
Tier 2 26	\$3.48	\$3.15	\$0.33	10%	\$3.56	\$3.65	\$3.69	\$3.75
Tier 3 27+	\$3.81	\$3.15	\$0.66	21%	\$3.90	\$4.00	\$4.04	\$4.11
MFR	\$3.40	\$3.15	\$0.25	8%	\$3.48	\$3.57	\$3.61	\$3.66
Commercial	\$3.51	\$3.15	\$0.36	11%	\$3.59	\$3.68	\$3.72	\$3.78
Agriculture with Residence								
Tier 1 10	\$3.91	\$3.00	\$0.31	10%	\$3.39	\$3.47	\$3.51	\$3.57
Tier 2 26	\$3.48	\$3.15	\$0.33	10%	\$3.56	\$3.65	\$3.69	\$3.75
Tier 3 27+	\$3.24	\$3.15	\$0.09	3%	\$3.32	\$3.40	\$3.44	\$3.49
Agriculture	\$3.24	\$3.15	\$0.09	3%	\$3.32	\$3.40	\$3.44	\$3.49
TSAWR Domestic								
Tier 1 10	\$3.91	\$3.00	\$0.31	10%	\$3.39	\$3.47	\$3.51	\$3.57
Tier 2 26	\$3.48	\$3.15	\$0.33	10%	\$3.56	\$3.65	\$3.69	\$3.75
Tier 3 27+	\$2.77	\$2.83	-\$0.06	-2%	\$2.84	\$2.91	\$2.94	\$2.99
TSAWR Commercial	\$2.77	\$2.83	-\$0.06	-2%	\$2.84	\$2.91	\$2.94	\$2.99
Institutional	\$3.58	\$3.15	\$0.43	14%	\$3.66	\$3.76	\$3.80	\$3.86
Construction	\$4.90	\$3.15	\$1.15	37%	\$4.40	\$4.51	\$4.56	\$4.63

The proposed commodity rates include pre-defined Demand Reduction Rates which may be imposed by the RMWD Board should Demand fall below projections by the given amounts. Demand Reductions could be caused by State mandated cutbacks, conservation, wet weather, or a combination of these factors.

Please note that the Demand Reduction Rates may apply to future rate increases in proportion to the percentages listed at the top of each column. For example, if in a future year the demand reduction is 25% below the baseline demand, a 4.8% increase will be applied to all variable rates

Protest Provisions

Any property owner or any tenant directly responsible for the payment of water service fees may submit a written protest to the proposed water rate increases and Pass Through Increases, provided, however, only one protest will be counted per identified parcel. To be used in determining whether there is a majority protest as set forth below, each protest must: (1) be in writing; (2) state whether the protest is submitted in opposition to the water rate increases, and/or Pass Through Increases; (3) provide the location of the identified parcel (by assessor’s parcel number or service address); and (4) include the name and signature of the person submitting the written protest. Written protests may be submitted by mail to: Rainbow Municipal Water District at 3707 Old Highway 395, Fallbrook, CA 92028. Written protests may also be submitted in person at the District’s office, or at the public hearing (see date, time and location above). All written protests must be received prior to the conclusion of the public input portion of the Public Hearing. Any protest submitted via e-mail or other electronic means will not be accepted as a formal written protest. Please identify on the front of the envelope for any protest, whether mailed or submitted in person, that the enclosed letter is for the Public Hearing on the Proposed Rate Increases and Pass Through Increases.

The Board of Directors will consider all written protests timely submitted and hear and consider all public comments made at the public hearing. Oral comments at the public hearing will not qualify as the written protests to be used in determining whether there is a majority protest. At the conclusion of the public hearing, the Board of Directors will determine whether to adopt the proposed water rate increases and Pass Through Increases described in this notice. If, after the close of the public hearing, written protests against the proposed rate increases and Pass Through Increases as outlined above are not presented by a majority of the owners of record and tenants directly responsible for the payment of water service fees for the identified parcels upon which the increases are proposed to be imposed, the Board of Directors will be authorized to impose the rate increases and Pass Through Increases.

If you have any questions regarding the information provided in this notice, or the rates applicable to your property, please contact Rainbow Municipal Water District at 760-728-1178. A copy of the District’s 2015 Potable Water Cost of Service Study Report will be available for review at www.rainbowmwd.com starting November 1, 2015.

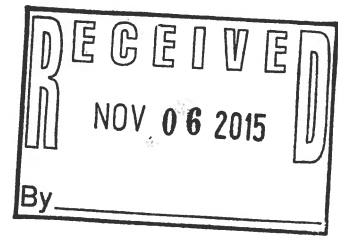
PROTEST LETTERS

Charles Sommer

APN: 125-242-05-00

3362 Avocado Vista Ln

Fallbrook, Ca 92028



Re: Protest Rate Increase

Rainbow Municipal Water District,

This is to inform you that we are in opposition to the water rate increase and the Pass Through Increases. Please do not increase the water rates at this time.

APN: 125-242-05-00

Thank you,

A handwritten signature in cursive script, appearing to read "Charles Sommer".

Charles Sommer

11/02/2015

11/3/15

RE: Proposed Water Rate Increases

This is being submitted in opposition
to both water rate increases and
pass through increases.

Ernest Wenk
1066 Bellingham Dr.
Oceanside, CA 92057

EW

11/3/15

Robert Curnow
4911 lake Park Ct
Fallbrook Ca
92028

This is a formal responds to my opposition to any proposed rate increase and Pass Through increase. I respectfully voice my opinion and I am against any rate increase to my property from Rainbow Municipal Water District.

Service address:
4926 Lake Park Ct
Fallbrook Ca
92028

Owner.
Robert Curnow

Robert Curnow
11/10/2015

Robert Curnow
4911 lake Park Ct
Fallbrook Ca
92028

This is a formal responds to my opposition to any proposed rate increase and Pass Through increase. I respectively voice my opinion and I am against any rate increase to my property from Rainbow Municipal Water District.

Service address:
4911 Lake Park Ct
Fallbrook Ca
92028

Owner.
Robert Curnow



11/10/2015

November 9, 2015

Mr. Christopher Amparo
1263 Bellingham Drive
Oceanside, CA 92057

Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

To Whom This May Concern:

Please be advised that I sent you this letter in opposition to the water rate and Pass Through Increases. My property's parcel number is 122-590-15-00.

Truly Yours,


C. AMPARO

Serrato Farms

36437 B Carney Road
Valley Center, CA 92082

November 18, 2015

RE: Rainbow Municipal Water District

Opposition-Water Rate Increase

APN#: 108-390-29

Dear Sirs,

As you are aware, we farm and own Serrato #10, it is a fifty two (52) acre ranch that has been farmed in the valley for many years. In the recent years, we have changed our crop variation to reduce water consumption. However in the past two years, due to the lack of rain, it has caused a large impact on the way we can farm and the outcome of our production. We are asking for an opposition to the water rate increase, which can cause us to lose our ranch if the rate increases more than it has. The livelihoods of our employees, as well as ours are a stake with additional fees.

Sincerely,



Jaime Serrato

Andrew & Annette Heilmann
31440 Lake Vista Circle
Bonsall, CA 92003
760 295-8166

November 19, 2015

Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

To whom it may concern,

This is a written letter protesting the water rate increases and the pass through increases proposed to our area. We protest both options. Water rates should not be increased! Additionally, a decrease in pricing would be appropriate in our opinion.

Attached is an article outlining the breakdown of water usage in the state of California. As you will clearly see, **80% of the water useage is Agriculture. 80%!** That is by far the majority. If the Agriculture industry would like to continue growing and using water wastefully, then pass on the costs to them. There are many other options and new methods for saving water within the Agriculture industry, however they fail to make necessary changes to reduce their water usage.

Economics is simple. Supply and Demand. The majority of the "supply" of water and the demand for water has been from the Agriculture industry and commercial entities. The increased costs should ONLY be considered for them.

Our identification parcel number is: **126-441-10-00**

The address of this parcel is : **31440 Lake Vista Circle, Bonsall, CA 92003**

Respectfully submitted,



Andrew G. Heilmann
Homeowner



Annette S. Heilmann
Homeowner

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GovBeat

Agriculture is 80 percent of water use in California. Why aren't farmers being forced to cut back?

By Jeff Guo April 3, 2015

On Wednesday, California Gov. Jerry Brown took the unprecedented step of forcing urban water agencies to reduce their water use by 25 percent. Cities and towns are now prohibited from using more than three-quarters the amount of water they used in 2013. This will save an estimated 1.5 million acre-feet, or nearly 500 billion gallons of water, between now and February.

But what about farmers? In 2010, irrigated agriculture consumed four times as much water as urban users. The state could easily save the same amount of water if it required farms to increase water efficiency by about 5 percent.

But it's not.

Of course, California is a huge farming state. If the Midwest is the nation's breadbasket, California is our sprinkler garden. It produces two-thirds of our fruits and nuts. California makes more money off agriculture than any other state in the nation. In 2013, farmers sold almost \$50 billion of food.

All of which sounds staggering until you realize that California is a \$2 trillion economy. As many have pointed out, all the calls for urban water conservation seem puzzling. Is it worth squeezing the cities when farms consume 80 percent of the water that people use in California, while they generate only 2 percent of its economic activity?

Take a look at these charts from the state water plan:

There are political dimensions to this. The agricultural lobby is powerful and would resist a regime of forced water reductions. They argue that it's illogical for a farmer to fallow his fields just so people in L.A. can have a green patch in front of their homes. Agriculture means jobs, and it supports a whole industry of processing and packing plants. (Though, to be fair, lawn care maintenance is also its own industry.)

Brown made the point on Wednesday that agriculture has borne the brunt of California's drought, which is in its fourth year. There's truth to this. Economists estimate that in 2014, the drought cost farmers about \$2.2 billion through lost crops and increased water costs. They believe that the impact of the drought on the agricultural sector eliminated 17,100 jobs from the state economy.

Some have suffered much more than others. "The fact is that not all farmers are created equal in terms of their water supplies," said Nancy Vogel, spokesperson for the California Department of Water Resources. "Some are largely unaffected by the droughts and others are suffering and scrambling because they have precarious access to water."

California has a complex system of water rights, which evolved from a system of first dibs instituted by its early settlers. In the Western states, where surface water can be scarce, early miners and farmers would dig channels to divert water from far-away streams. Often, the streams weren't even on their property.

[The strange history of water rights in the West]

The custom was this: If you dug a diversion — say, to irrigate a field — you were entitled to whatever water you carried off. You established a right to that water. It would be illegal for someone to go upstream of you and divert all the water onto her property. In the West, the people who got there first get their water first.

During droughts, the state water board starts to cut off people with more junior water rights. The board issues notices telling them to stop drawing water in order more senior rights holders to drink their fill. This happened last summer, and the board has already issued a warning for people to expect curtailments again this year.

Many of the senior water rights, established over a century ago, are held by farmers. This helps enable the industry to thrive. But many farmers don't have the luxury of a near certain water supply. They have to figure out where they will get their water from, and the only certainty there is that it will cost them dearly.

The government is the largest water supplier. California's State Water Project and the federal Central Valley Project store rain and runoff in reservoirs instead of letting it flow away. These systems sell to both farmers and towns, who buy water delivery contracts. But in dry years, these contracts, too, dry up.

So farmers drill wells if they can, or buy water from wholesalers or elsewhere on the private market. If that gets too expensive, they let their fields go fallow. Over 400,000 acres, about 6 percent of cropland, was left unused because of the drought last year. The same or more is expected to lie fallow this year.

From the perspective of many farmers, they have already been forced to use less water—and they look upon the big-pocketed cities with frustration. City water agencies tend to be better equipped to ensure that their water portfolios are lush. If their delivery contracts fall through, they can afford to drill deeper wells, or buy water off of people with

Thomas G. Johnson

Post Office Box 499 Bonsall, California 92003 (760) 728-4001

November 24, 2015

Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook CA 92028

RE: Opposition to water rate increases and/or Pass Through Increases at service
address: 4677 La Canada Road, Fallbrook CA 92028

Gentlemen,

I believe it is quite disingenuous to raise water rates in the face of the extensive cutbacks the ratepayers have been tasked with and I understand the cutbacks are a mandate by the State of California. Additionally, if District expenses remain at a high level, and seem unserviceable, may I suggest, instead of constant rate raises, cutbacks in administrative personnel salaries and benefits starting with the General Manager and right on down in the office to any employee making more than \$120,000 annually. Start there. I'm no expert, just an individual with common sense and a sharp pencil and I can nearly guarantee you that pencil would be busy, eliminating cushy, undeserved pay, and lots and lots of wasteful spending.

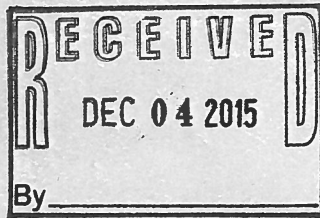
With regards to the tyrannical "water wholesalers" that keep jacking up the cost of water, passing the costs of their handsome remuneration on to Districts and by extension, ratepayers. What happened to the successful lawsuit brought against them? A judgement of many millions of dollars. Are we to see any relief from these rates and increases due to the outcome of this suit?
I thought not...

Respectfully,



Thomas G Johnson

Ratepayer



Dec 2 2015

To whom it may concern -

I Ralph F Silva III reside
at 8125 Via Urner Way, Bonsall,
Ca 92003 (Parcel # 127-060-71-00

APN# 10172

127-060-72-00
127-060-73-00

do hereby submit my protest
in opposition to both the
Water Rate increase and the
Pass Through increase

Ralph F. Silva III

12/2/15 Ralph F Silva III

8125 Via Urner Way, Bonsall
APN 10172 Parcel 127-060-71-00
127-060-72-00
127-060-73-00

Opposed to Water Rate Increase
Opposed to Pass Through Increase

Thank You



BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

CONSIDER REVISION TO ADMINISTRATIVE CODE SECTION 5.03.220 ESTABLISHING A RATE STABILIZATION RESERVE FUND

DESCRIPTION

As part of the 2015 Potable Water Cost of Service Study, an evaluation was made as to whether it would be beneficial to ratepayers to establish a Rate Stabilization Fund. This topic was discussed on multiple occasions by the Budget and Finance Committee and the outcome of these discussions was to recommend to the Board that the Rate Stabilization Fund that is included in the Potable Water Cost of Service Study be implemented.

The Rate Stabilization Fund will be equal to 10% of the annual water revenues and will be set aside to prevent rate hikes that are caused by unexpected changes in water revenues. These sorts of changes could be caused by demand reduction mandates from the State, extra wet weather, or any other factor that reduces water revenue below the budgeted level. This fund will be in place to transfer money into the Operating fund to make up short term shortfalls in revenue, thus preventing rate hikes which would otherwise be required.

The proposed policy would provide five fiscal years to bring the reserve fund from a zero balance to the target balance in order to reduce the rate impact of creating this reserve fund.

POLICY

Section 5.03.220 will be amended to add Section 5.03.220.08

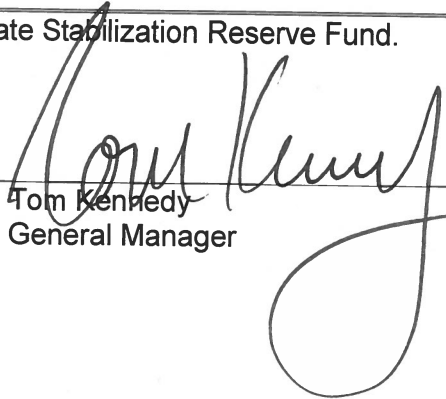
BOARD OPTIONS/FISCAL IMPACTS

The establishment of the Rate Stabilization Fund is included in the Potable Water Cost of Service Study and the fiscal impacts are outlined in detail in that study. The gradual increase in funding to the target level is included in the revenue adjustments described in the study and will not require significant rate increases in order to fund the reserve.

The Board could choose not to adopt a Rate Stabilization Fund which would potentially reduce rates slightly in the near term but could require future rate increases to manage revenue shortfalls as described above.

STAFF RECOMMENDATION

Staff recommends the establishment of a Rate Stabilization Reserve Fund.



Tom Kennedy
General Manager

December 15, 2015

Ordinance No. 15-09

Ordinance of the Board of Directors of the Rainbow Municipal Water District Amending and Updating the Administrative Code Section 5.03.220

WHEREAS, the Rainbow Municipal Water District has, from time to time, adopted various rules and regulations for the operation of the District; and

WHEREAS, certain of those rules and regulations require updating to reflect best practices, as well as changes in applicable laws; and

WHEREAS, the Board of Directors has determined that changes in the rules or regulations of the District shall occur solely by amendment to the Administrative Code;

NOW, THEREFORE,

BE IT ORDAINED by the Board of Directors of Rainbow Municipal Water District as follows:

1. Section 5.03.220 of the Administrative Code is revised as shown in the attached Exhibit A.

2. The General Manager is hereby directed to update the Administrative Code to reflect the approval of these rules and regulations, and to assign or reassign the numbering of the Administrative Code as necessary to codify these rules and regulations as amended.

3. This ordinance shall take effect immediately upon its adoption on this 15th day of December, 2015.

AYES:
NOES:
ABSTAIN:
ABSENT:

ATTEST:

Dennis Sanford, Board President

Dawn Washburn, Board Secretary

EXHIBIT A

Section 5.03.220.08
Water Rate Stabilization Reserve

Rainbow Municipal Water District shall maintain one Water Rate Stabilization Reserve equal to 10% of annual water revenues. This reserve shall be established on January 1, 2016 and will be brought to its target balance over a five year period. Funds for this reserve will come from water rates and charges and will be used to mitigate rate impacts from changes in water demand.

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**MINUTES OF THE REGULAR BOARD MEETING
OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
OCTOBER 27, 2015**

1. **CALL TO ORDER** - The Regular Meeting of the Board of Directors of the Rainbow Municipal Water District on October 27, 2015 was called to order by President Sanford at 12:03 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. President Sanford presiding.

2. **ROLL CALL**

Present: Director Walker
Director Sanford
Director Brazier
Director Griffiths
Director Lucy

Absent: None

Also Present: General Manager Kennedy
Executive Assistant/Board Secretary Washburn
Legal Counsel Moser
Finance Manager Thomas
Operations Manager Atilano
Engineering Manager Kirkpatrick
Superintendent Maccarrone
Superintendent Zuniga
Superintendent Walker

No members of the public were present for Closed Session. Seven members of the public were present for Open Session.

3. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

There were no changes to the agenda.

4. **ORAL/Written COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
CLOSED SESSION AGENDA ITEMS (Government Code § 54954.2).**

There were no comments.

The meeting adjourned to Closed Session at 12:03 p.m.

(*) - Asterisk indicates a report is attached.

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5. CLOSED SESSION

- A. Conference with Legal Counsel—Anticipated Litigation (Government Code §54956.9(d)(4))
- One potential case

6. REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

This item was addressed under Item #8.

The meeting reconvened at 1:01 p.m.

Time Certain: 1:00 p.m.

7. PLEDGE OF ALLEGIANCE

8. REPEAT REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

Legal Counsel stated there was nothing to report.

9. REPEAT ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)

Director Griffiths requested Item #15 be an informational item only. Mr. Kennedy explained it was a time sensitive matter for which staff needed Board direction.

10. ORAL/WITTEN COMMUNICATIONS FROM THE PUBLIC OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING ITEMS NOT ON THIS AGENDA (Government Code § 54954.2).

There were no comments.

***11. APPROVAL OF MINUTES**

- A. September 16, 2015 - Regular Board Meeting

Director Walker pointed out the word “not” should be removed before the word “innocent” on Page A-4 of the minutes.

Action:

Moved by Director Brazier to approve the minutes as revised. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Sanford, and Walker
NOES: None
ABSTAINED: Director Lucy
ABSENT: None

(*) - Asterisk indicates a report is attached.

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12. BOARD OF DIRECTORS' COMMENTS/REPORTS

Directors' comments are comments by Directors concerning District business, which may be of interest to the Board. This is placed on the agenda to enable individual Board members to convey information to the Board and to the public. There is to be no discussion or action taken by the Board of Directors unless the item is noticed as part of the meeting agenda.

A. President's Report (Director Sanford)

President Sanford said he was happy the Board was finally able to focus on water issues.

B. Representative Report (Appointed Representative)

1. SDCWA

Mr. Kennedy referred to the handout provided. He also mentioned SDCWA's General Counsel has left and that SDCWA was currently in the process of looking for a replacement.

Mr. Kennedy reported the final judgement came through on the lawsuit between SDCWA and MWD; however, it was now waiting on appeal. He noted RMWD's share would be millions of dollars once settled.

2. CSDA

Mr. Kennedy reported the next meeting will be on November 17th.

3. LAFCO

It was noted up until November 6, 2015 any interested party can file for a Notice of Reconsideration with LAFCO in regards to the FPUD application to dissolve RMWD. It was also confirmed it has been heard FPUD was done with this matter.

4. San Luis Rey Watershed Council

Director Walked reported the September 2015 meeting cancelled; however, at the October meeting an election was held for various Board of Director positions. He mentioned the He mentioned the agriculture representative seat was remains vacant. He talked about the two guest speakers who focused on the Highway 76 and San Luis Rey San Diego County Park.

Director Lucy offered to contact the two people he thought would be good candidates to serve on this Council.

5. Santa Margarita Watershed Council

President Sanford reported on the October 20, 2015 meeting at which there was discussion on groundwater. He also noted there may be an increase in dues. He confirmed the Council is involved in the conjunctive use project; however, the Council only meets quarterly.

C. Meeting, Workshop, Committee, Seminar, Etc. Reports by Directors (AB1234)

President Sanford reported he and Mr. Kennedy attended the CSDA conference in Monterey in September at which time they were presented the District Transparency Certificate of Excellence on behalf of RMWD.

(*) - Asterisk indicates a report is attached.

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D. Directors Comments

Director Lucy expressed how proud he was of RMWD's entire team and their extraordinary effort put forth in the LAFCO matter.

Director Brazier announced there were rain barrels available and how with the discounted rates and State rebates, they cost only \$10. She noted the website was <http://www.rainbarrelprogram.org/sandiego>. It was noted this was on the District website. She noted the new pick up place was Fallbrook Public Utility District.

***13. COMMITTEE REPORTS (Approved Minutes have been attached for reference only.)**

A. Budget and Finance Committee

1. August 11, 2015 Minutes

Mr. Stitle said there was nothing to report.

B. Communications Committee

1. August 10, 2015 Minutes

No report was given.

C. Engineering Committee

1. September 2, 2015 Minutes

Mrs. Kirkpatrick reported the last meeting was held on October 7, 2015 where discussion took place regarding the sewer policy. She also mentioned the committee took a facilities tour.

BOARD ACTION ITEMS

***14. CONSIDER RELEASE OF DRAFT STRATEGIC PLAN FOR PUBLIC REVIEW AND COMMENT**

President Sanford talked about how the District as a whole embarked on the Strategic Plan

Mr. Kennedy introduced Michele Tamayo of Tamayo Group as the consultant who worked with RMWD on drafting a strategic plan. He explained the process that took place and the work involved.

Ms. Tamayo stated that as someone who has done this process for many other California water agencies, she wanted to commend RMWD. She said every Board Member was extremely committed as well as aligned, which is not always the case. She noted all of the committee members were all very actively involved. She concluded by noting how outstanding RMWD's staff was and how engaged they were in the process. She explained what took place at the end of all these workshop sessions and how the presentation before the Board today was the sum of all that took place.

(*) - Asterisk indicates a report is attached.

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Director Griffiths expressed his concern with “reclamation services” being in the RMWD Mission Statement. Mr. Kennedy explained how RMWD was already involved in reclamation services by transferring wastewater to the City of Oceanside. Director Brazier pointed out water reclamation services could legitimately refer to RMWD’s transferring waste from here to Oceanside where it is reclaimed and how should RMWD go into its own water reclamation in the future, it will just have a deeper meaning.

Mr. Kennedy proceeded with presenting the draft plan. He mentioned how once a Strategic Plan is adopted by the Board of Directors, some of the standards will be incorporated into the day-to-day operations at the District as well as become a part of all the job descriptions.

President Sanford emphasized that going forward, pretty much any action taken at the Board level should and must tie back to the strategic plan. He stressed the seriousness of developing this plan. Mr. Kennedy noted once this plan is developed, all action items will be related to one of the goals and objectives presented in the strategic plan. He also suggested this plan be incorporated into the budget process.

Director Lucy suggested replacing “resource” with “asset” where it says “employees are our most important valuable resource”. He also noted cross training will save RMWD a great deal of money. Mr. Kennedy added succession planning was something that needed to be looked at very carefully so that there is a properly trained person to back up certain key roles at the District in the event there comes a need. He also noted it was important to find ways to recognize those employees that are doing great.

Mr. Kennedy pointed out one of the objectives for RMWD to be fiscally responsible, transparent, and sustainable approaches would be improving the budget process as well as getting the new financial software system up and running. He also emphasized the need to continually find ways to improve and streamline excellent customer service to the ratepayers.

Mr. Kennedy continued by noting another idea was to improve the relationship between the Board and the committee members.

Ms. Rhyne suggested it be communicated better to the ratepayers that they own this district and have a stake in RMWD. Mr. Kennedy stated messaging to the customers is one of the things that will be included in the goals and objectives for the new Administrative Analyst.

Mr. Kennedy noted this was now out for review internally, on the website, distributed to the committee members, and included in the newsletter for comment and input. He talked about how this plan will be incorporated into the goals and objectives for budgeting as well as in making staff decisions. Ms. Tamayo pointed out this would also be a good for orientation with new Board and staff members.

Mr. Kennedy noted this plan establishes direction for RMWD staff so work can begin on long term projects as well as continuity. It was noted this plan would be revisited periodically. He confirmed once the Board has approved this plan, another step would include being this back to the entire RMWD staff so that they have an opportunity to discuss ways it will be incorporated into their daily routine. He explained there was no Board action required today. He asked the Board to review the plan and send him any comments they have as well as any from the public, committee members, etc. and incorporate them into a final draft that will be brought back to the Board for approval in December.

(*) - Asterisk indicates a report is attached.

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Director Lucy expressed how pleased he was at how well this document was done. Director Walked added he thought it was well written and concise.

Director Griffiths suggested narrowing in on some of the specific goals. Mr. Kennedy explained this document was more global and how the specified goals and objectives will come into play through other means.

Mr. Carlstrom congratulated the District for doing a very fine job working on putting this together. He said he found the professionalism to be amazing. He talked about how the District had to really work through diversity with the LAFCO matter.

Director Brazier said she was pleased with the whole thing.

No action taken.

***15. CONSIDER THE ESTABLISHMENT OF A GROUNDWATER SUSTAINABILITY AGENCY FOR THE SAN LUIS REY GROUNDWATER BASIN**

Mr. Kennedy explained how it was signed into law that every groundwater basin had to be essentially adjudicated. He noted there were also priorities set for different groundwater basins. He pointed out the San Luis Rey groundwater basin was a medium priority basin which means RMWD has until June 2017 to have a Groundwater Sustainability Agency similar to the Water Master of Santa Margarita. He talked about how the basic idea was for local agencies who have groundwater management authority to establish these Groundwater Sustainability Agencies and develop groundwater sustainability plans. He pointed out those water districts who fail to set up these agencies will cause the State to come in and set them up. He said the question for the Board was do they want to staff work toward establishing this agency and bring back all the proper formation documents for the Board to consider or allow the State to do it on RMWD's behalf.

Director Walker explained the main thing was to set up the authority to do something due to the fact the worst thing to allow to happen is for the State (or County) to come in and take care of it for the District.

Mr. Kennedy noted the costs involved really depends on whether the Board wants to keep control at RMWD or allow someone in Sacramento have control.

Director Griffiths inquired as to the Groundwater Study. Mr. Kennedy stated the first draft was given to the Engineering Committee on October 7, 2015 for review as per RMWD's past protocol for projects such as this.

Discussion ensued.

Director Walker mentioned there was a Sustainable Groundwater Management Act website that provides interesting information including timelines.

(*) - Asterisk indicates a report is attached.

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Action:

Moved by Director Brazier the Board conceptually approve the development of a Groundwater Sustainability Agency for the Bonsall and Pala groundwater basins and direct the General Manager to continue discussions with other local agencies and the State of California to create the legal and regulatory structures required to establish the GSA. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker

NOES: None

ABSTAINED: None

ABSENT: None

- 16. CONSIDER SETTING A TIME AND PLACE FOR A PUBLIC HEARING TO CONSIDER ADOPTING INCREASES IN THE RATES FOR RAINBOW MUNICIPAL WATER DISTRICT SERVICE FEES EFFECTIVE JANUARY 1, 2016 AND AN ORDINANCE AUTHORIZING THE DISTRICT TO PASS THROUGH INCREASED COSTS IN PURCHASED WHOLESALE WATER, INCREASES TO THE DISTRICT'S COST OF OPERATIONS AND MAINTENANCE AND CAPITAL FACILITIES, AND ANY REDUCTION IN THE ALLOCATION OF AD VALOREM PROPERTY TAX REVENUES BY THE STATE OF CALIFORNIA (Public Hearing tentatively scheduled for December 15, 2015 – 1:00 p.m.)**

Mr. Kennedy explained this item was for the Board to consider setting a time and place for a public hearing at which to possibly adopt rate increases that will go into effect January 1, 2016. He mentioned per Proposition 218, it was necessary to give a 45-day notice to hold a rate increase hearing and how the State Water Resource Control Board was propelling this to be completed by November 1, 2015.

Mr. Sudhir Pardiwala repeated the presentation given at the October 23, 2015 Special Board meeting with some minor revisions.

Director Lucy suggested the number of houses be included in the presentation to the ratepayers.

Mr. Kennedy stressed the importance of the Board giving the growth rates and capacity fee revenue adjustments much consideration. Discussion ensued.

Director Lucy inquired about fire protection in the home.

Mr. Kennedy solicited for Board feedback in regards to RMWD having a Rate Stabilization Reserve. He confirmed it was best for largely agricultural water districts to have this type of reserve. President Sanford, Director Lucy, Director Brazier, Director Walker, and Director Griffiths confirmed RMWD having a Rate Stabilization Reserve would be best for the District.

Discussion ensued regarding pumping charges and how they were adjusted and reduced by 20%-30% in 2011. Mr. Kennedy noted under Proposition 218, RMWD has to capture all the costs associated with pumping. He said moving forward he would like to have RMWD to setup Asset Management to better track labor, costs, etc.

(*) - Asterisk indicates a report is attached.

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Mr. Pardiwala recommended the rates be presented in percentages in the Proposition 218 notices.

Mr. Kennedy explained the differences in the two proposed scenarios.

Mr. Carlstrom inquired as to what costs were in RMWD's control. Discussion ensued.

President Sanford suggested RMWD caution on the conservative side. Directors Brazier and Lucy agreed.

President Sanford solicited the Budget and Finance Committee members in the audience for their input regarding the conservative approach. Discussion ensued.

Director Lucy asked if the final presentation would be given at the December 15th Special Board meeting. He suggested there be bullet points in order to help those present understand the information.

Mr. Kennedy explained the 45-day protest period process. He noted RMWD has until December 1st to mail out written approximately 8,000 rate hearing notices to all registered ratepayers, tenant ratepayers, or property owners. He noted that should 50% of those notified protest the proposed rates, then the new rates cannot be implemented; otherwise, the Board can adopt the new rates at the December 15th meeting.

Action:

Moved by Director Brazier to set the rate hearing at a Special Board Meeting on December 15, 2015 at 1:00 p.m. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

Action:

Moved by Director Brazier to take a more conservative approach as presented as Scenario 2. Seconded by Director Lucy

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

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***17. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 15-13-A RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY RATES OF PAY FOR DISTRICT EMPLOYEES EFFECTIVE JULY 3, 2015 THROUGH JUNE 30, 2016**

Mr. Kennedy noted this Resolution reflects the new salary rates to include the 2% COLA adjustments approved by the Board during the MOU negotiation processes. He explained CalPERS requires RMWD to publish this information.

Director Brazier asked for clarification that what the Board was voting on today was nothing more than what the Board voted on when they approved the last MOU's plus the COLA.

Legal Counsel pointed out CalPERS has been auditing local agencies to make sure they have actually adopted resolutions to put in place employee compensation. He explained this was the product of meeting their regulations.

Director Griffiths said he would like to see if RMWD was looking at possibly putting a freeze on gross number of employees hired due to a possible reduction in water sales. It was noted this would be something to discuss during the budgetary process and could be addressed under an entirely different topic at a future meeting.

Director Brazier made comments regarding what was on her plate in the future regarding this issue. She explained how for decades she had asked every subsequent general manager a few simple questions regarding salary scales, how those scales are aligned, etc. She stated the response she received back was either it was none of her business due to the fact she was just a ratepayer, they would find out if this information could be shared with her, or they would get back to her which they never did. She stressed she believes in collective bargaining and does not believe in micro-managing. She talked about the steps she took to research this information further after which she came up with more questions than answers. She noted some of her questions included how does one propose and approve a 5-digit raise in a category within the salary scale, why (philosophically) can someone get more money for taking on more responsibility and when the responsibilities are lowered the money still stays, what and who determines job descriptions and how are they arranged for the benefit of both the employee and the District. She said the most difficult things to talk about are what credentials does RMWD require for qualifications, who determines what those qualifications are, who is entitled to know what the qualifications are, and how does RMWD gear its compensation to those qualifications. She said the big question was there ever a formal salary study performed at RMWD. She explained although this was not on the agenda, she believes this was something this should be considered in conjunction with other things currently being done at RMWD.

Director Brazier suggested RMWD be a little aggressive in light of the growth coming and having greater financial responsibilities. She suggested this was a critical thing to look into at this stage. Mr. Kennedy agreed as part of going forward and now that the LAFCO matter was over, this was something that could be looked into in terms of workforce development including recruitment and retain the best people for the services needed at the District. He suggested there may need to define and possibly make some policy adjustments. Director Brazier noted most of this was a discretionary managerial matter; however, some involved Board policies and may be interconnected with decisions made in this area. Mr. Kennedy stated the transparency rule outweighs everything and if there was something the Board does not understand, then it has not been done transparently enough so that the rationale for any decision is very clear. He said RMWD wants to show the record needs to be very clear, especially to the ratepayers.

(*) - Asterisk indicates a report is attached.

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President Sanford asked if the discussion Director Brazier was requesting prevents the Board from approving this resolution. Mr. Kennedy says it does not; however, what he was committing to do was start doing a better job of staffing analysis every year with five year projections and planning. He said if there has never been a really good salary study conducted at RMWD, it would be something to consider having done.

Discussion ensued.

Action:

Moved by Director Lucy to approve Resolution No. 15-13 and direct the Human Resources Manager to post a copy on the RMWD website. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

Director Lucy excused himself from the meeting at 4:01 p.m.

18. DISCUSSION AND POSSIBLE ACTION TO AWARD A PROFESSIONAL SERVICES CONTRACT TO PREPARE THE 2015 URBAN WATER MANAGEMENT PLAN (UWMP)

Director Walker recused himself from this discussion due to a contract he currently has with Atkins.

Director Walker excused himself from the meeting at 4:02 p.m.

Mrs. Kirkpatrick recalled RMWD approved an Urban Water Management Plan which the States requires RMWD to update every five years. She noted the District solicited for proposals to update this plan and received three responses. She said after staff evaluated each of the three proposals, they would like to recommend negotiating a contract with Atkins for Urban Water Management Plan.

Mrs. Kirkpatrick said although she worked on the plan the last time; however, now she was the only engineer at RMWD and her workload would prevent her from working on it this year. Mr. Kennedy pointed out this was a time-sensitive item.

Action:

Moved by Director Brazier to authorize staff to negotiate a contract with Atkins and execute a professional services contract not to exceed \$46,180. Seconded by Director Sanford.

(*) - Asterisk indicates a report is attached.

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After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, and Sanford.
NOES: None
ABSTAINED: None
ABSENT: Directors Lucy and Walker

Director Walker rejoined the meeting at 4:06 p.m.

19. DISCUSSION AND POSSIBLE ACTION TO AWARD CONSTRUCTION CONTRACT FOR THE AFTON FARMS WATERLINE EXTENSION

Mrs. Kirkpatrick recalled the Board approved purchasing an easement for the Afton Farms waterline extension a few months ago. She mentioned RMWD went out for formal bid with the bid opening held last week. She noted there were nine contractors who bid on this project and after reviewing the lowest three bidder contracts and their respective references, staff recommends the contract be awarded to Kirtley Construction.

Discussion ensued regarding the most efficient means of getting this waterline extension completed.

Director Walker asked if the material Kirtley Construction was proposing to use was of this same rating. Mrs. Kirkpatrick confirmed it would be at the same higher pressure rating.

Action:

Moved by Director Griffiths to authorize the General Manager to execute a contract for the construction of the Afton Farms Waterline Extension to the lowest qualified bidder. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: Director Lucy

***20. RECEIVE AND FILE INFORMATION ITEMS FOR SEPTEMBER 2015**

A. General Manager Comments

1. Meetings, Conferences and Seminar Calendar (November & December)

B. Communications

1. Ratepayer Letters
2. Gregory Canyon Project Opposition Letter

C. Construction & Maintenance Comments

1. Construction and Maintenance Report
2. Valve Maintenance Report
3. Garage/Shop Repair

(*) - Asterisk indicates a report is attached.

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- D. Water Operations Comments**
 - 1. Water Operations Report
 - 2. Electrical/Telemetry Report
- E. Wastewater Comments**
 - 1. Wastewater Report
- F. Operations Comments**
 - 1. Water Quality Report
 - 2. Cross Connection Control Program Report
- G. Engineering Comments**
 - 1. Engineering Report
 - 2. Morro Tank Update
- H. Customer Service Comments**
 - 1. Field Customer Service Report
 - 2. Meters Report
- I. Safety Comments**
 - 1. Safety Report
- J. Human Resources Comments**
 - 1. Changes in Personnel
 - 2. Organizational Chart

Mr. Kennedy pointed out the letter sent to the State Board regarding RMWD's monthly report was included in the agenda packet for Board informational purposes. He noted this letter was again to request the Conservation Order be rescinded as well as report on all RMWD's efforts.

Ms. Washburn encouraged the Board to review the meeting and conference reports for November and December due to the holiday schedules.

Director Lucy returned to the meeting at 4:12 p.m.

Mrs. Kirkpatrick gave an update on Morro Tank. Discussion ensued.

Action:

Moved by Director Brazier to receive and file information items. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

***21. RECEIVE AND FILE FINANCIAL STATEMENTS AND INFORMATION FOR SEPTEMBER 2015**

- A. Finance Manager Comments**
 - 1. Interim Financial Statement
 - 2. Monthly Investment Report
 - 3. Visa Breakdown

(*) - Asterisk indicates a report is attached.

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4. Directors' Expense
5. Check Register
6. Month Water Usage
7. Projected CIP Cash Flow Report
8. RMWD Sewer Equivalent Dwelling Units (EDU's) Status

Director Griffiths requested an item to discuss RFP's for legal services be on the next agenda.

Director Griffiths made several inquiries on Item #21.

Action:

Moved by Director Brazier to receive and file financial statements and information. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

22. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT REGULAR BOARD MEETING

Director Griffiths requested an item to solicit Requests for Proposals for legal services as well as one to discuss staffing levels.

23. ADJOURNMENT - To Tuesday, November 17, 2015 at 1:00 p.m.

The meeting was adjourned with a motion made by Director Brazier and seconded by Director Sanford to a regular meeting on November 17, 2015 at 1:00 p.m.

The meeting was adjourned at 4:23 p.m.

Dennis Sanford, Board President

Dawn M. Washburn, Board Secretary

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**MINUTES OF THE REGULAR BOARD MEETING
OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
NOVEMBER 17, 2015**

1. **CALL TO ORDER** - The Regular Meeting of the Board of Directors of the Rainbow Municipal Water District on Tuesday, November 17, 2015 was called to order by President Sanford at 12:03 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. President Sanford presiding.

2. **ROLL CALL**

Present: Director Walker
Director Sanford
Director Brazier
Director Griffiths
Director Lucy

Absent: None

Also Present: General Manager Kennedy
Executive Assistant/Board Secretary Washburn
Legal Counsel Ochoa
Finance Manager Thomas
Operations Manager Atilano
Acting District Engineer Kirkpatrick
Superintendent Zuniga
Superintendent Walker
Administrative Analyst Gray

No members of the public were present before Open Session. Four members of the public were present for Open Session.

3. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

Director Griffiths' proposed Item #16 be changed to information only and any action be postponed until January. Mrs. Kirkpatrick noted this was a time-sensitive item. It was decided whether to vote on this item when it comes up on the agenda.

4. **ORAL/WITTEN COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
CLOSED SESSION AGENDA ITEMS (Government Code § 54954.2).**

There were no comments.

The meeting adjourned to Closed Session at 12:07 p.m.

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5. CLOSED SESSION

- A. Conference with Legal Counsel--Potential litigation (Gov. Code section 54956.9(d)(2))
 - Pala Mesa Highlands
- B. Conference with Legal Counsel--Anticipated Litigation (Government Code §54956.9(d)(4))
 - One potential case

6. REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

The meeting reconvened at 1:03 p.m.

Time Certain: 1:00 p.m.

7. PLEDGE OF ALLEGIANCE

8. REPEAT REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

President Sanford said there was nothing to report out of Closed Session.

9. REPEAT ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)

There were no changes to the agenda.

10. ORAL/WRITTEN COMMUNICATIONS FROM THE PUBLIC OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING ITEMS NOT ON THIS AGENDA (Government Code § 54954.2).

There were no comments.

***11. APPROVAL OF MINUTES**

- A. October 23, 2015 – Special Board Meeting

Director Griffiths pointed out the word “too” should be “two” on Page #11A-2.

Action:

Moved by Director Brazier to approve the minutes as revised. Seconded by Director Griffiths.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Sanford, and Walker
NOES: None
ABSTAINED: Director Lucy
ABSENT: None

(*) - Asterisk indicates a report is attached.

12. BOARD OF DIRECTORS' COMMENTS/REPORTS

BOARD ACTION ITEMS

***14. CONSIDER STATUS OF TRANSITIONAL SPECIAL AGRICULTURAL WATER RATE (TSAWR) PROGRAM AS WELL AS POSSIBLE CHANGES TO ALLOCATION SYSTEM**

Mr. Kennedy recalled how the Board adopted policies earlier this year involving the TSAWR program. He noted how RMWD's customers on the TSAWR program have done very well with conserving water. He mentioned the Board agreed to review the program again in November to determine what changes could be made based on the information gathered over the past several months. He explained the information provided in the handouts in the agenda packet and what RMWD could do in the future without accruing any penalties. He pointed out there were three recommendations from which the Board may want to make a decision with the third option being the best overall.

Director Lucy said he thought Mr. Kennedy was looking at this very prudently and how Option 3 was fair and defensible.

Director Griffiths inquired about financial forecasting for the District. Discussion ensued.

Mr. Kennedy stated special letters would be sent out to the TSAWR customers within the next week. Discussion followed.

Action:

Moved by Director Brazier to accept Option 3 - Expand outreach to TSAWR customers so that the hardship provisions currently in place in our Drought Ordinance 15-05 could be used by selected TSAWR customers on a case-by-case basis to provide relief our existing policies. As part of this outreach effort we could also inform TSAWR customers as to the status of the program and the low likelihood of penalties. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

***15. DISCUSSION AND POSSIBLE ACTION ON RELEASE OF REQUEST FOR PROPOSAL FOR GENERAL COUNSEL SERVICES**

Legal Counsel Ochoa excused herself from the meeting at 1:35 p.m.

Director Griffiths expressed concern the RMWD has spent a great deal of money on legal services over the past several years. He recommended RMWD have one low cost Legal Counsel for procedural matters and another to represent RMWD in legal actions.

(*) - Asterisk indicates a report is attached.

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Mr. Kennedy pointed out the Board of Directors are solely responsible for hiring District Counsel; therefore, it was up to the Board to decide if they want to solicit for proposals.

President Sanford explained legal fees are generally quite high. Director Griffiths suggested expenses for legal counsel be kept as low as possible; therefore, he recommended there be one counsel for procedural purposes and a separate lawyer group for court proceedings.

Mr. Kennedy reiterated this item was for the Board to determine whether Requests for Proposals should be solicited.

Director Brazier said the periodic review of services was a prudent thing. She added if the aim of this matter was to solely save money was stupid due to the last two years being exceptional and she does not know if anyone would have done it for less money. She stated even if RMWD had a competent law firm, there would have still been a need to hire specialty counsel. She asked the Board what they expected to come out of this process.

Director Lucy expressed concern with the inconsistency in the representatives from the current law firm which was something he has expressed a few times over the past nine years. He said there have been a couple of times he has been disappointed in the advice provided to the Board; however, he likes what current counsel has done for the District particularly in the LAFCO matter. He agreed reviewing other agencies would be a good idea, but he was not unhappy with current counsel. He stressed it may be important to express to current counsel they need to have someone showing up at RMWD regularly as opposed to changing out representation. He stated if current counsel cannot be consistent, then he would suggest the District see what other representation is out there.

Mr. Stitle asked how much has been spent in legal fees independent of the LAFCO matter in a fiscal year. Mr. Kennedy noted it was a significant amount; however, there are a number of matters in which legal gets involved such as labor. Discussion followed.

Director Walker agreed with Director Brazier in that it was healthy to take a look every once in a while to see what is out there. He pointed out some of the biggest challenges ahead of RMWD are going to require a legal firm that is top notch in understanding the issues concerning the State. He suggested the Board not look at smaller firms, but rather one of the legal firms including Procopio that would be able to perform in this way.

President Sanford stated there were a few times when he could have been rendered better legal advice. He also said in current counsel's defense, there have also been several different general managers since he has been on the Board which has made getting direction from the general managers difficult. He stated the Board decisions are filtered through the general manager who in turn passes it on to counsel which may have had some impact in terms of what has transpired.

Mr. Kennedy pointed out the Board does not have to choose a different legal firm, but just see what is out there to best serve the District.

Director Brazier asked if the Board thought it would be beneficial to have a serious discussion with current counsel about some of the concerns.

Discussion ensued.

(*) - Asterisk indicates a report is attached.

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Mr. Kennedy suggested the Board evaluate the specific challenges coming to RMWD with water reclamation, groundwater, etc. that are specialized areas and then determine if it would be more beneficial to find a firm that has more deep bench in these areas than one that has a less deep bench that may not render as good a value.

Discussion ensued regarding setting up an ad hoc committee to hold discussions with the District's current Legal Counsel before deciding to proceed with putting out Requests for Proposals. It was decided President Sanford and Mr. Kennedy would meet with the appropriate legal representative from the current legal counsel firm in order to have an opportunity to discuss the Board's concerns and examine the depth of their bench.

No action taken.

Legal Counsel Ochoa rejoined the meeting at 1:56 p.m.

President Sanford reported the Board discussed the entire legal representation process and how they would like to have him and Mr. Kennedy sit down with the appropriate people at Procopio and review where RMWD has been, where the District is now, and where the District is heading. He said after that discussion he would return to the Board with a report of his and Mr. Kennedy's findings. Legal Counsel agreed to set up something that works with his and Mr. Kennedy's schedules.

***16. SEWER SYSTEM MANAGEMENT PLAN 2 YEAR AUDIT**

Mr. Kennedy mentioned this was a biennial review of the SSMP and how there was a sheet provided as a handout summarizing the changes made to the plan through the audit process.

Director Brazier asked some questions regarding the revisions made to the plan including "SSO" not being included in the list of acronyms.

Director Brazier requested a copy of Page 2 of 2 of the organizational chart that was not included in the agenda packet. Mr. Kennedy said he would ask Mrs. Bush to provide this page.

Action:

Moved by Director Brazier to approve the Sewer System Management Plan. Seconded by Director Griffiths.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

17. DISCUSSION AND POSSIBLE ACTION TO APPOINT NEW COMMUNICATIONS COMMITTEE MEMBER

Mr. Kennedy announced Mrs. Kirby expressed interest in serving on the Communications Committee. He also mentioned Mrs. Kirby's husband serves on the Engineering Committee.

(*) - Asterisk indicates a report is attached.

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Action:

Moved by Director to appoint Jenna Kirby to the Communications Committee. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

***18. RECEIVE AND FILE INFORMATION ITEMS FOR OCTOBER 2015**

- A. General Manager Comments**
- B. Communications**
 - 1. Ratepayer Letters
- C. Engineering Comments**
 - 1. Engineering Report
- D. Human Resources Comments**
 - 1. Human Resources Report
 - 2. Personnel Changes
 - 3. Organizational Chart

Mr. Kennedy reintroduced Cynthia Gray, RMWD's Administrative Analyst. He also pointed out this was the first month with the new software check register report. He noted the new report generation process was still being perfected; therefore, there may be some style changes going forward as the refining processes continue.

Ms. Thomas updated the Board on the progress being made with transitioning the financial software with Springbrook.

Director Brazier inquired as to the reason human resources manager was not present at these meetings to answer questions that may pertain to that department. Mr. Kennedy said he will compel Mrs. Bush to attend.

Discussion ensued regarding information provided in Item #18C1.

Action:

Moved by Director Brazier to receive and file information items. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

(*) - Asterisk indicates a report is attached.

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***19. RECEIVE AND FILE FINANCIAL STATEMENTS AND INFORMATION FOR OCTOBER 2015**

A. Finance Manager Comments

1. Credit Card Breakdown
2. Directors' Expense
3. Check Register
4. Office Petty Cash

It was recommend all the information items be combined into one item on future agendas.

Action:

Moved by Director Brazier to receive and file financial statements and information. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

20. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT REGULAR BOARD MEETING

It was noted the rate hearing will take place at the December 15, 2015 Special Board meeting.

21. ADJOURNMENT - To the Rainbow Public Facilities Corporation Annual meeting on November 17, 2015.

The meeting was adjourned with a motion made by Director Walker and seconded by Director Brazier to the Rainbow Public Facilities Corporation annual meeting on November 17, 2015.

The meeting was adjourned at 2:22 p.m.

Dennis Sanford, Board President

Dawn M. Washburn, Board Secretary

(*) - Asterisk indicates a report is attached.

73-7



BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

APPROVAL OF RESOLUTION NO. 15-16 ESTABLISHING CHECK SIGNING AUTHORITY

DESCRIPTION

The purpose of this Resolution is to establish check signing responsibilities and designate authorized signers of checks due to changes in staff members. Resolution No. 15-16 will replace Resolution No. 14-02.

POLICY

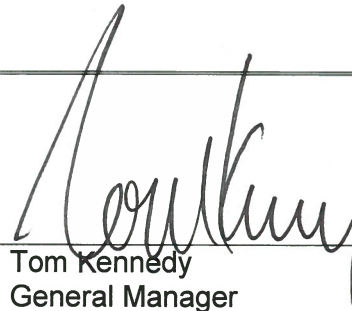
Administrative Code, Chapter 5.01 – Banking

BOARD OPTIONS/FISCAL IMPACTS

- Option 1: Approve attached Resolution 15-16.
Option 2: Approve attached Resolution 15-16 with Board recommended revisions.

STAFF RECOMMENDATION

Staff recommends Option 1.



Tom Kennedy
General Manager

12-15-15

RESOLUTION NO. 15-16

**RESOLUTION OF THE BOARD OF DIRECTORS
OF RAINBOW MUNICIPAL WATER DISTRICT
ESTABLISHING CHECK SIGNING RESPONSIBILITIES
AND DESIGNATING AUTHORIZED SIGNERS OF CHECKS**

WHEREAS, the Rainbow Municipal Water District maintains an accounts payable checking account for the purposes of paying vendors, and a payroll checking account for the purpose of paying employees, and

WHEREAS, the bank requires that responsible parties be designated as authorized signers of these accounts, and

WHEREAS, it is appropriate to establish check signing responsibilities and designate authorized signers;

NOW, THEREFORE, IT IS HEREBY RESOLVED, DETERMINED AND ORDERED by the Board of Directors of Rainbow Municipal Water District that:

1. The following persons be designated as authorized signers on the checking accounts of the District:

Accounts Payable Authorized Signers:

Dennis Sanford, Director
Jack Griffiths, Director
Tory Walker, Director
Bob Lucy, Director
Harriette "Helene" Brazier
Tom Kennedy, General Manager
Juan Atilano, Operations Manager
Vanessa Martinez, Finance Manager

Payroll Authorized Signers:

Tom Kennedy, General Manager
Vanessa Martinez, Finance Manager
Juan Atilano, Operations Manager

2. Accounts payable checks under \$50,000 shall be signed by members of the management staff, and checks over \$50,000 shall be signed by one member of the management staff and one Board member.
3. Payroll checks will be signed by one member of the management staff.
4. Resolution 15-16 rescinds Resolution 15-02.

PASSED AND ADOPTED at a Regular meeting of the Board of Directors of Rainbow Municipal Water District held on the 15th day of December, 2015 by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

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BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO ADOPT RESOLUTION NO. 15-17 DESIGNATING TOM KENNEDY AS CONTRACT SIGNER FOR ALL UNION BANK TRANSACTIONS

DESCRIPTION

This Resolution replaces Resolution No. 14-11, which appointed Margaret Thomas as contract signer.

POLICY

N/A

BOARD OPTIONS/FISCAL IMPACTS

N/A

STAFF RECOMMENDATION

Staff recommends Adoption of Resolution No. 15-17.

Tom Kennedy, General Manager

12/15/15

RESOLUTION NO. 15-17

**RESOLUTION OF THE BOARD OF DIRECTORS
OF RAINBOW MUNICIPAL WATER DISTRICT
DESIGNATING MARGARET THOMAS AS CONTRACT SIGNER FOR ALL
TRANSACTIONS
WITH UNION BANK**

WHEREAS, in the conduct of District business it is necessary for the District to utilize the Union Bank, and

WHEREAS, this institution requires an authorized person to sign contracts establishing contracts with the Union Bank;

NOW, THEREFORE, IT IS HEREBY RESOLVED, DETERMINED AND ORDERED by the Board of Directors of Rainbow Municipal Water District that

1. Tom Kennedy be designated as the contract signer; and
2. Resolution 15-17 replaces Resolution 14-11.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Rainbow Municipal Water District held on the 15th day of December, 2015 by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

DISCUSSION AND POSSIBLE APPOINTMENT OF TREASURER

DESCRIPTION

Currently Margaret Thomas serves as the District Treasurer. Due to Ms. Thomas' retirement in early January 2016, the Board may want to take this opportunity to consider appointing a treasurer in her place.

POLICY

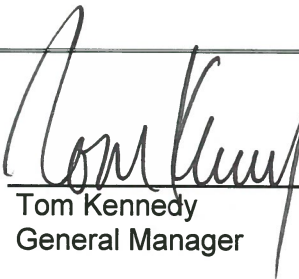
Administrative Code: Section 3.01.020.01—Bi-annual Organizational Meeting
Section 2.09—Committees

BOARD OPTIONS/FISCAL IMPACTS

The Board may appoint new officers and/or make Committee assignments.

STAFF RECOMMENDATION

Staff supports Board direction


Tom Kennedy
General Manager

12/15/15



BOARD ACTION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO AWARD A PROFESSIONAL SERVICES CONTRACT TO PREPARE THE WATER RECLAMATION PLANT AND RECYCLED WATER DISTRIBUTION SYSTEM PRE-DESIGN REPORT

BACKGROUND

On September 16, 2015 the RMWD Board approved moving forward from the master plan level feasibility of a local water reclamation plant and recycled water distribution system to develop a more detailed study. The pre-design report will consist of reviewing, confirming and refining the report done by Atkins and develop a more detailed engineering cost estimate. The pre-design report refines the technical and cost analyses done in the Master Plan so that an informed decision can be made about whether or not to proceed with the project. The pre-design report will include sufficient detail to determine the final viability of the project.

Work will be required with defining costs with City of Oceanside, plant siting and applicable land acquisition, detailed distribution alignments, treatment, the use of Beck Reservoir and costs to operate and maintain a District-owned water reclamation plant and distribution system. Along the way there will be feasibility check points to control the pre design costs and evaluate the feasibility of the project.

DESCRIPTION

The District conducted a search and issued a Request for Proposal with the help of a special consultant Don MacFarlane of DLM Engineering to highly qualified engineering firms with expertise in the preparation of pre-design and design work, and cost estimates for water reclamation facilities and recycled water distribution systems. Two firms responded with proposals; IEC and Dudek. Staff reviewed the proposals along with the Engineering Committee and conducted interviews of the two firms at the December 2nd Engineering Committee meeting. The firms presented a summary of their proposals and were asked a series of questions about the project. The Committee evaluated each firm on their presentation and answers to questions and recommends awarding the contract to Dudek. The proposal is enclosed for your reference.

BOARD OPTIONS/FISCAL IMPACTS

This project was appropriated \$200,000 in capital reserves at the September 16, 2015 Board Meeting. The Dudek proposal has a price of \$224,995 and staff costs to complete the project should be under \$25,000 so a total appropriation of \$250,000 is required to complete this phase of the project. The Master Plan project was budgeted \$600,000 and the contract amount was \$268,879. Remaining funds for the Master Plan project can be appropriated to this project to cover the difference.

1. Appropriate an additional \$50,000 from the Master Plan Project into the Pre-Design Water Reclamation Project and authorize staff to negotiate a contract to prepare the water reclamation plant and recycled water distributions system pre-design report not to exceed \$224,995 with Dudek.
2. Direct staff to recommend other options

STAFF RECOMMENDATION

Staff recommends Option 1.



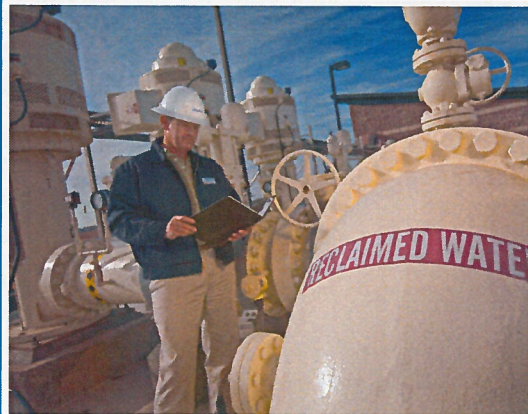
Sherry Kirkpatrick
Engineering Manager

December 15, 2015

DUDEK

WATER RECLAMATION PLANT & RECYCLED WATER DISTRIBUTION SYSTEM PRE-DESIGN REPORT

PREPARED FOR
Rainbow Municipal Water District
Engineering Department



IN ASSOCIATION WITH

ATKINS

PREPARED BY

Dudek
605 Third Street
Encinitas, CA 92024
800.450.1818
www.dudek.com

November 12, 2015

11-3





MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

November 12, 2015

Ms. Sherry Kirkpatrick
Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

Subject: Proposal for Water Reclamation Plant and Recycled Water Distribution System Pre-Design Report

Dear Ms. Kirkpatrick:

Success of the *Water Reclamation Plant and Recycled Water Distribution System Pre-Design Report* project requires the selection of a highly experienced, committed consultant team with expertise in design of recycled water infrastructure, delivery of realistic funding opportunities, permitting of Title 22 recycled water facilities, design and operation of MBR and Aero-Mod treatment facilities, and knowledge of the District's procedures. The Dudek/Atkins team is uniquely qualified to deliver this project, building on our previous work and master planning efforts. Our approach capitalizes on the depth, breadth and commitment of our team with extensive experience with the planning, designing, funding, permitting, and implementation of recycled water facilities and over two decades of actual recycled water plant operation in North San Diego County.

Our team is led by firm Principal, Michael Metts, PE, who will serve as Principal in Charge and Project Manager. To facilitate cohesive project implementation, we have structured our team with parallel design teams led by Mr. Metts, as the Task Manager for the WRF facilities and Mr. Jud Warren with Atkins, a seasoned industry expert to serve as the Task Manager for the recycled water distribution facilities. Our quality control manager, Mr. Steve Deering has extensive experience in planning and design of recycled water treatment/distribution infrastructure over his 40-year career. Our project management corps is supported by a team of dedicated and talented technical and production staff. By continuing the Dudek/Atkins team, the District assures itself of a cost-effective PDR, unparalleled understanding of critical project challenges, and fully developed working relationships with District management and staff.

Development of the PDR will foundationally support the District's development of its own recycled water program, reducing cost to its ratepayers and preserving a renewable local water resource. Our recycled water design experience assures the District that the PDR will be comprehensive and supportive, allowing the Board of Director to confidently make its determination of project feasibility. Understanding the sensitivity of this project, we will work with the District to clarify critical aspects of the recycled water program, targeting agriculture, landscape and nursery users for a strong, long-term demand base.

We appreciate the opportunity to continue our assistance on this important project, and we look forward to meeting with you to discuss our proposal further. I have has the authority to bind the firm and will serve as your primary contact. If you have any questions or need for additional information, please contact do not hesitate to contact me at 760.479.4111 or mmetts@dudek.com.

Respectfully Submitted,

D. Michael Metts, PE
Principal, Project Manager

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APPENDICES

Resumes

1 Executive Summary

Rainbow Municipal Water District (District) provides water and wastewater service to an approximate 80 square mile service area in northern San Diego County. The District serves approximately 7,800 metered accounts using imported water resources. The District also services approximately 1,900 wastewater customers, sending the collected wastewater to the City of Oceanside (City) for treatment and disposal. The City recycles the District's wastewater to the benefit of its existing ratepayers, with no benefit to District ratepayers. Currently, the District conveys approximately 700,000 gpd of wastewater to the City, at an approximate annual cost of over \$800,000. This cost, coupled with the loss of a valuable water resource, led the District toward investigation of developing its own Recycled Water Facility and Distribution System.

Team Benefits for the District

- Proven partnership and ability to perform
- San Diego County-focused team
- Strong water, wastewater, and recycled water planning and design experience
- Unique ability to finalize practical, cost-effective solutions to recycled water planning

The District contracted with Atkins to update its water and sewer master planning documents. Declining water demand and wastewater generation, increasing wholesale water rates and wastewater disposal costs, and emerging residential and commercial development along the I-15 corridor at SR-76 contribute the District's need to take full advantage of its available water resources. In particular, development of a District-owned Water Recycling Program could benefit the District ratepayers through a secondary revenue source and lowering operational costs below that charged by the City.

Dudek and Atkins have continued our partnership from the Master Plan project for the purpose of completing the recycled water pre-design project in an efficient and low cost manner. Our firms worked cooperatively with District staff to complete an initial feasibility study, defining the various alternatives for both recycled water production and distribution, as well as associated facilities. By continuing our team's involvement, the District realizes a high rate of return on its previous investment and avoids having to bring new consultants up to speed on the project at increased cost and schedule requirements. We intimately understand the previous work, and helped define the needs and scope of the current project. As such, we are prepared to begin work immediately to the benefit of the District.

Our proposal is organized to address all of the District requirements as defined in discussions with District staff and in the Request for Proposals. The following summarizes the contents of our proposal:

Section 2 introduces the prime consultant, Dudek, and our only subconsultant, Atkins. Having collaborated on the previous feasibility study, our two firms are uniquely qualified to further refine the prior analyses. Both firms are local, north San Diego County companies, with a long history of service to the District.

Section 3 of discusses our project approach including technical components of the plant configurations, seasonal storage, distribution system considerations, project management and a schedule/work plan to meet the District's required milestones. We identify several enhancements to the proposed scope of the work to clarify project definition and cost. This section defines the anticipated scope of the project, based on our team's unique knowledge of and insights into the project.

Section 4 highlights our proposed project team and key personnel of each firm available to service your needs for this project. Comprised of a proven team of recycled water treatment and distribution experts, the Dudek/Atkins team provides the District with an experienced, knowledgeable, dedicated team of local professionals. Our proximity to District offices assures that we are continuously available to communicate with

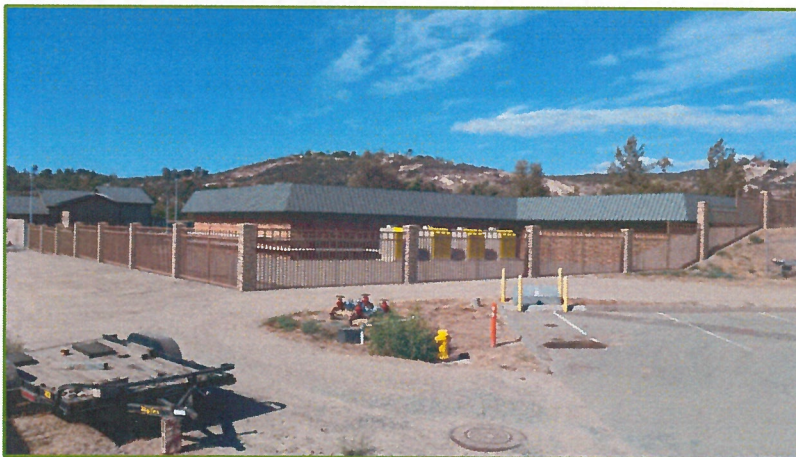
EXECUTIVE SUMMARY

District staff. We have proven our ability to work with the District on numerous projects, and, as known a known quantity, we reduce the risk for the District on this highly important project. Both firms have dedicated key staff to your project, and have the capacity to perform and the authority assure necessary resources are provided at all times.

Section 5 highlights the Dudek/Atkins team qualifications and technical expertise related to water recycling and distribution facilities, with demonstrated expertise in planning, funding, design, and construction. Dudek and Atkins, as recycled water industry leaders, bring proven and successful experience on numerous projects of similar scope requirements. This Section contains illustrations of our ability to complete projects of similar nature and complexity. We have provided representative North San Diego County projects where both Dudek and Atkins have successfully implemented recycled water treatment and distribution projects. In fact, Dudek has completed similar planning, design and implementation efforts for the San Elijo Joint Powers Authority, including a 2.4 mgd Title 22 reclamation facility and over 80 miles of regional recycled water distribution system. We also recently completed a fast-tracked project for the City of San Juan Capistrano to retrofit the Marbella Golf Course and over 40 other local recycled water users. Our team has the right experience to assist the District in successfully completing its recycled water program pre-design effort.

Section 6 directs the District to our proposed project fee for the current effort, which is, as requested, submitted under separate cover. Our proposal includes several assumptions necessary to minimize the project cost, while maintaining the District need for highly accurate analyses and recommendations. We are pleased to meet and discuss our fee proposal, and to tailor the scope and fee to parallel District expectations and preferences.

Section 7 identifies to the District that Dudek takes no exception to the District's standard contract, a contract that we have signed many times in the past. We are ready to commence work upon your selection and notice to proceed.



3D simulation of Valley Center Municipal Water District's Wood Valley Ranch Water Reclamation Facility

Dudek has extensive three-dimensional simulation capabilities, which we have used to assist agencies in conveying proposed planning and design concepts. The picture shown here is a 3D rendering of our recent planning and design of the Valley Center Municipal Water District Wood Valley Water Reclamation Plant and Charlan Road Seasonal Storage Project. Our 3D simulations will assist in both Engineering Committee and Board of Director presentations, further increasing community support of the District's Recycled Water Program.

2 Identification of Prime Consultant and Subconsultants

DUDEK Dudek is Southern California's leading mid-sized engineering and environmental consulting firm, specializing in water, wastewater, recycled water and stormwater services. For over 35 years, we have served southern California agencies on a variety of planning, design, permitting, construction management, and regulatory projects. Headquartered in Encinitas, we have over 350 employees working in nine offices throughout California, including San Juan Capistrano, Riverside, Los Angeles, Palm Desert, Santa Barbara, Auburn, Sacramento, and San Francisco. We view our role as partners with our clients, working to identify effective, financially prudent solutions to project challenges. Dudek professionals represent a broad spectrum of engineering design and management disciplines relevant to the District's Water Reclamation Plant and Recycled Water Distribution System Pre-Design Project. Our firm provides a balanced mix of civil engineering, environmental science, water / wastewater / recycled water treatment, hydrology, hydrogeology, construction management and plant operations specialists, supported by over 150 San Diego County-based technical and production support staff. The depth of our in-house expertise and support staff allows us to offer a wide range of services while providing responsive and focused attention to local projects. The benefit to the District is a value-based, industry-leading firm that delivers creative solutions, high-quality work product, and enhanced project controls that lower overall project cost and increases client satisfaction.

Dudek Snapshot

- Founded in 1980, more than 350 multidisciplinary employees
- Employee-owned, financially stable
- Headquartered in San Diego County
- #1 Environmental Consultant in San Diego County (San Diego Business Journal 2012)
- #1 Southern California mid-sized environmental and engineering firm (ENR 2012)

TABLE 1. IDENTIFICATION OF RESPONDER - DUDEK

Legal Name and Address of Company	Dudek 605 Third Street Encinitas, CA 92024
Legal Form of Company	California Corporation
Identify Parent Companies	N/A
Name, Title, Address, and Telephone Number of Person to Contact	Michael Metts, PE 605 Third Street, Encinitas, CA 92024 (T) 760.479.4111 (C) 619.417.6304 (E) mmetts@dudek.com
Number of Staff and the Discipline/Title of Each	Dudek has over 350 staff in California. Dudek will be utilizing the following people for this project: Michael Metts, PE – Project Manager, Principal Engineer Steve Deering, PE – Quality Control Manager, Principal Engineer Paul Wilson, PE – Treatment Project Engineer, Project Manager Milind Wable, PhD, PE, BCEE – Treatment Project Engineer, Project Manager Michael Hill, PE – Treatment Project Engineer, Project Engineer Kate Palmer, PE, LEED AP – Cost Estimating, Senior Project Engineer Jane Gray – Grant Funding, Environmental Specialist

ATKINS Atkins, and its legacy firms of PBS&J and John Powell and Associates, has been one of the leading providers of engineering, planning, construction, environmental, and program management services throughout north San Diego County. Incorporated in North America in 1960, the firm has grown by developing deep technical skills and has differentiated itself in a highly competitive marketplace by expanding its resources in emerging technologies and combining those capabilities with a solid understanding of its clients' businesses. We offer comprehensive consulting services to public and private clients facing the challenges of new and aging infrastructure, sustainability and smart growth, program funding, and limited staff. Atkins has the expertise to undertake challenging, time-sensitive infrastructure and planning projects while responding to the critical need for sustainability.

Our clients represent a mix of both public and private sectors and include counties and municipalities, water districts, land developers, airports, power utilities, and contractors as well as regional, state, and federal agencies. Atkins' integrated approach to project solutions builds value for clients and helps advance the best practices of the industries we serve. Atkins' professional experts are recognized locally, nationally, and internationally as technical leaders in their fields of expertise.

TABLE 2. IDENTIFICATION OF RESPONDER - ATKINS

Legal Name and Address of Company	Atkins North America, Inc. 3570 Carmel Mountain Road, Suite 300 San Diego, CA 92130
Legal Form of Company	Corporation
Identify Parent Companies	The Atkins North America Holdings Corporation 4030 West Boy Scout Boulevard, Suite 700 Tampa, FL 33607
Name, Title, Address, and Telephone Number of Person to Contact	Robert (Jud) Warren, PE, BCEE 3570 Carmel Mountain Road, Suite 300 San Diego, CA 92130 (T) 858.514.1016 (E) robert.warren@atkinsglobal.com
Number of Staff and the Discipline/Title of Each	Atkins will be utilizing the following people for this project: Jud Warren, PE, BCEE – Distribution Task Leader, Project Manager Mark Elliott, PE – Master Plan Coordination & Review, Project Manager Rick St. John, PE – Distribution Project Engineer, Project Manager Roman Obzejta, PE – Distribution Project Engineer, Senior Engineer Justin Joseph, EIT – Distribution Project Engineer, Project Engineer Doug Gillingham, PE, BCEE – Distribution Project Engineer, Consultant Paul Garcia – CEQA / NEPA , Environmental Specialist

3 Approach and Scope of Services

3.1 Project Approach

The Rainbow Municipal Water District (District) contracted with Atkins in 2014 to complete updates of its water and wastewater master plan documents. With those updates, the District investigated the feasibility of constructing its own water recycling facility and recycled water distribution system. The Atkins team prepared Technical Memorandum #1 (TM#1) in June 2015, titled *Wastewater Treatment / Reclamation Alternative Study*, summarizing water recycling and distribution alternatives available to the District. TM#1 concluded recycled water production and distribution is both feasible and cost-effective for the District and its ratepayers, with significant savings over the current agreement with the City of Oceanside for wastewater treatment and disposal. Atkins, Dudek, Gillingham Water, and West Coast Civil collaborated in preparation of TM#1.

TM#1 analyses include development of treatment and disposal alternatives, facility siting alternatives, definition of available wastewater volumes, identification of available non-potable water users, distribution system alignment alternatives, and life cycle costs for various alternatives. The resulting conclusions narrowed the District's focus to primarily two potential treatment sites, one near the existing District offices and one near a near-term proposed development site. Each site provides the District with different recycled water production volumes, ranging from 0.9 mgd to 1.5 mgd, and a variety of recycled water distribution alternatives. The purpose of the current project is to expand understanding by developing a preliminary design for the District's future recycled water program, including treatment, disposal, distribution and coordination with ongoing groundwater projects. The District's objectives for the Water Reclamation Plant and Recycled Water Distribution System Pre-Design Report (PDR) are defined as follows:

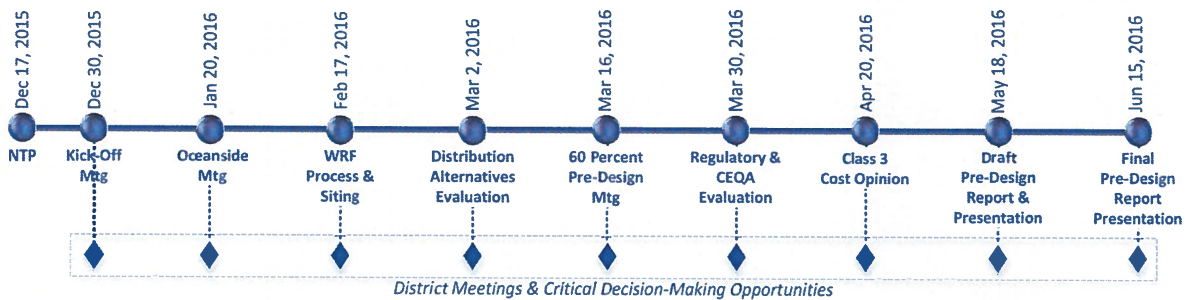
Review/Confirm Master Plan Assumptions. The PDR will refine and/or revise TM#1 assumptions to further define the District recycled water program, including more detailed development of City of Oceanside capital and operational costs and potential for District recovery of monetary contributions to treatment capacity in the City's San Luis Rey Water Reclamation Plant (SLRWRP). Mr. Metts, our Project Manager, assisted the District in negotiations with the City of Oceanside when the current wastewater agreement was developed, and is uniquely qualified to assist the District in reviewing and revising the agreement.

Refine/Improve Master Plan Engineering Conclusions. Previous studies identified two potential sites for the WRF, including one near the District Offices and one near Lift Station No. 1 or 2. The District office site is a former small plant site, decommissioned over 20 years ago and in close proximity to the San Luis Rey River floodplain. The Lift Station No. 1 and 2 sites maximize wastewater capture and may facilitate recycled water conveyance through the Vessels Development. Distributions system layout is highly dependent on plant siting. The goal is to expand program understanding with detailed facility layouts at the focus sites, detailed distribution system route and location, easements and rights-of-way, Total Dissolved Solids (TDS) treatment and brine disposal, and use of Beck Reservoir for wet weather storage or other cost effective uses.

Refine/Improve Master Plan Cost Analyses. As the recycled water program is refined from feasibility to PDR level, program cost is likewise refined. TM#1 developed a Class 4 or 5 cost opinion, with high range accuracy between 20 and 50 percent, which is typical of concept or feasibility level analyses and project definition of approximately 15 percent. The PDR will increase definition to 30 or 40 percent, thereby allowing development of a Class 3 Cost Opinion. The Dudek team projects the PDR cost opinion to be sufficient for subsequent Board budget authorization. Cost refinement eliminates overly-conservative cost analyses by increasing facilities

definition. Increased definition defines the cost impacts of selling or renegotiating District capacity with the City, capital and O&M costs for District-owned facilities, land acquisition, and grant funding availability.

Detailed PDR Milestone Scheduling. Additional PDR detail may result in modification of resulting analysis recommendations. The Dudek/Atkins team will work with District staff to identify any such changes, thereby allowing District control of the PDR effort by potentially eliminating components that are less cost effective. Dudek will meet regularly with District staff to discuss analyses results and considerations as defined above. The Project Schedule, included below, incorporates critical decision milestones allowing District decision-making to parallel PDR development.



A comprehensive understanding of the analyses behind TM#1 is critical to PDR success. The District invested in evaluating the feasibility of recycled water production and distribution. To realize its return on that investment, the District must not spend time reinventing the wheel. For this reason, Dudek continued its collaboration with Atkins. As with TM#1, Dudek focuses on treatment and disposal facilities, while Atkins focuses on recycled water distribution. By continuing the Dudek/Atkins team, the District assures itself of a cost-effective PDR, unparalleled understanding of critical project challenges, and fully developed working relationships with District management and staff. The Dudek/Atkins team is ready to begin work on day one, without bring the project team up to speed – resulting in increased PDR confidence and cost savings for District management, Board members, and ratepayers.

Key Benefit to the District

A project management team approach that ensures coordinated project controls, continuous quality assurance, and collaborative technical assessments to provide creative and practical recommendations.

3.2 Scope of Services

The following discussions identify the Scope of Services for the PDR, including clarification of *the Critical Success Factors* that must be addressed to allow the District to move the Recycled Water Program forward into design and ultimately to implementation.

TASK 100 – Project Management & Information Collection. Our project management approach (Section 4.2) promotes collaborative, hands-on involvement of the Principal-in-Charge/Project Manager and Task Managers. Michael Metts, PE, Dudek Principal and Engineering Services Manager, leads a team that has project [specific expertise in recycled water planning, design, construction, funding and operation](#). The key members of the Dudek/Atkins project team (Section 4.1) has collaborated successfully to deliver treatment plant and recycled water infrastructure projects throughout southern California, emphasizing quality assurance for each deliverable. [Mr. Metts is your primary point of contact](#). For streamlined communications, the Task Managers are privy to communications and available at any time. As a firm principal, Mr. Metts has authority to allocate resources, manage the entire team, and provide technical direction to complete the project on time and within budget. With respect to collection and review of project information, the Dudek/Atkins team is highly familiar with the project, having completed the previous Feasibility Study. We are focused immediately on data collection critical

to support of the PDR, including clarification of availability and cost for maintaining treatment and disposal at the City and recovery of past District investment if SLRWRP capacity is relinquished. Other data collection efforts focus on site selection, TDS control, user demand refinement (focusing on agriculture and landscape nurseries), and grant funding availability.

TASK 200 – Evaluate and Update City of Oceanside Costs. Dudek leads the effort to clarify City of Oceanside cost elements. Mr. Metts was involved in development/negotiation of the existing District agreement, and is familiar with the basis of District requirements and charges. Mr. Metts will meet with District staff to discuss agreement obligations and costs, and assist the District in meeting with the City. We will clarify the City’s capital and operational costs, beyond the information provided for the feasibility study. We will consider ongoing City efforts including Indirect Potable Reuse (IPR) project, La Salina WRP decommissioning, and ongoing agreements with North San Diego County Water Reuse Coalition agencies. Data collected and reviewed will be incorporated into a technical memorandum for District review. Dudek will prepare a draft memorandum of understanding (MOU) or principles of agreement (POA) for recovery of District investment in SLRWRP for District review and presentation to the City, and assist the District in discussions with City staff.

TASK 300 – Review Previous Studies and Prepare Pre-Design Study of Water Reclamation Facility.

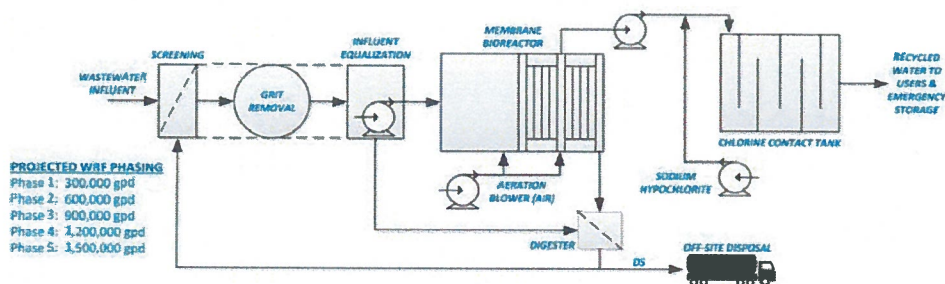
After defining WRF capacity, it is necessary to correlate plant capacity with available recycled water demand, as most water demand is agricultural. Recycled water demand will vary over time with many factors including season, weather, climate, economics, and water conservation. Dudek will refine feasibility level concepts and identify the preferred WRF type and location, as well as brine disposal and recycled water TDS reduction options. Dudek has evaluated District wastewater quality and requirements of recycled water users. We will [renew discussions with target recycled water users, particularly local nurseries and agricultural users](#). We will provide detailed site layout, process flow diagram, and hydraulic profile at the preferred site.

Key Benefit to the District

Dudek has been operating the local small and mid-sized treatment plants for over 20 years, providing the District confidence that Dudek has the necessary skills and knowledge to properly plan the District Water Recycling Facility.

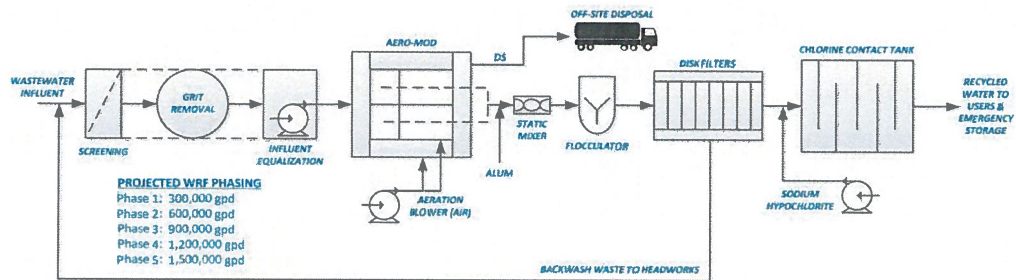
- **Treatment Process Overview.** The WRF site is planned to accommodate phased expansion from an initial capacity of approximately 300,000 gpd up to an ultimate capacity of either 0.9 or 1.50 mgd, depending on the final site selection. Approximately three to five expansions may be required over the next 25 years. The WRF will employ either the membrane bioreactor process followed by chlorine disinfection or an Aero-Mod SEQUOX™ process, an extended aeration, activated process utilizing compartmentalized reactors and clarifiers to accomplish nitrification/denitrification, followed by cloth disk filters and chlorine disinfection. Figures 1 and 2 illustrate the typical process train for each WRF alternative. Additional treatment alternative will be discussed with the District.

FIGURE 1. TYPICAL MEMBRANE BIOREACTOR TREATMENT TRAIN



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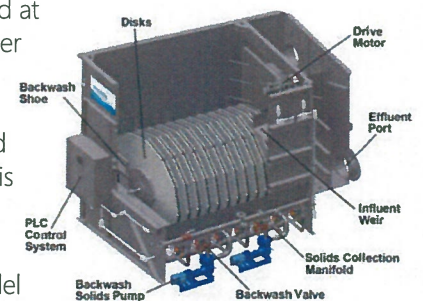
FIGURE 2. TYPICAL AERO-MOD TREATMENT TRAIN



The

PDR provides detailed expansion phasing, including strategies for sludge handling, electrical systems, and instrumentation/SCADA integration. For example, the headworks building and sludge dewatering equipment can be a common building, consolidating odorous processes to a single structure with a common odor control system. Phasing requirements of both the MBR and Aero-Mod processes are considered.

- Headworks & Odor Control.** The WRF will include screening and grit removal prior to influent load equalization (LEQ). Wastewater will enter the sites by gravity, but influent pumping may be required based on site conditions. Screenings and grit are processed before being discharged to dumpsters for disposal. As the headworks building is subject to routine operator access, high ventilation rates are provided to address odors, work environment, and operator comfort. The odor control system is typically an activated carbon scrubber with forced air ventilation.
- Influent Equalization.** The convention for small facilities is to incorporate influent LEQ prior to the biological process or secondary effluent equalization to mitigate impact of high peak flowrates. Small facilities can experience peaking factors of up to four times ADF. Equalization before filtration is recommended to minimize hydraulic loading on the tertiary filters and chlorine contact basins. The Aero-Mod process provides equalization through submerged orifices on the clarifier effluent launder, allowing for one to two feet of level fluctuation. Equalization and emergency storage capacity minimizes impact to the biological process and the sizing of downstream tertiary facilities (i.e., cloth disk filters and chlorine contact basins).
- Coagulation and Flocculation.** Title 22 requires coagulation facilities to be provided ahead of filtration, and coagulant addition be automatically initiated on filter influent turbidity. Coagulation includes the addition of aluminum sulfate or "Alum" (with or without anionic or cationic polymers) using a rapid mix, high-energy chamber. While not specifically required by Title 22, an intermediate flocculation tank improves filterability.
- Filtration.** Cloth disk filters are a well-established technology, employed at facilities throughout southern California (e.g., Eastern Municipal Water District, El Toro Water District, and Camp Pendleton). Cloth disk filters are selected when secondary effluent quality is good (low turbidity). Based on our experience operating MBR and Aero-Mod processes, high-quality effluent conducive to cloth disk filters is projected. Cloth disk filters are the least expensive major filtration technology, requiring minimal infrastructure construction.
- Disinfection.** Chlorine contact basins typically consist of two parallel contact chambers. To comply with Title 22, the WRF is rated with one contact chamber offline and must maintain a 90-minute modal contact time. The contact chambers are sized based on contact time and phased to be constructed to maintain the required hydraulic retention time.



APPROACH AND SCOPE OF SERVICES

- **Electrical and Instrumentation.** Initial construction and future phased expansion requirements are defined by the facility master plan. Electrical capacity is projected based on the peak electrical demand of the plant components. Packaged control panels, located near the process equipment, provides for a distributed control network, with status and alarm I/O routed to the existing PLCs, which are expanded with new I/O racks, as required, to accommodate plant expansion.
- **Geotechnical Considerations.** For PDR purposes, typical geotechnical values are assumed in defining process equipment and building foundations, as well as other geotechnical considerations. Geotechnical investigations will be required prior to final design of the WRF.
- **Surveying.** For PDR purposes, surveying is not required. Site layouts and other drawings will be prepared using GIS based mapping. Surveying will be required prior to final design of the WRF.
- **TDS Reduction.** The WRF master plan will include TDS reduction facilities, typically microfiltration or ultrafiltration followed by reverse osmosis, to assure that water quality is applicable to proposed end users. Dudek has assisted Ramona Municipal Water District with similar efforts for many years. Beck Reservoir will be evaluated for wet weather storage, or as a location for raw water blending to eliminate treatment processes. Brine disposal for the WRF and other sources will be evaluated, including potential brine conveyance to the Oceanside Ocean Outfall and brine hauling.

Based on the preferred site and process selection, Dudek will develop the PDR with planned phasing requirements. The resulting analyses are submitted for District review. We will develop a detailed site plan, process flow diagram and hydraulic profile for the preferred WRF location, which will be used to develop detailed construction and O&M costs.

TASK 400 – Review Previous Studies and Prepare Pre-Design Study of Recycled Water Distribution System. Atkins will lead the recycled water distribution effort. We believe it necessary to develop several project alternatives to assure the most cost effective system. We will meet with District staff to review proposed pipeline alignments, and alternatives. The Dudek/Atkins team developed the initial master reuse layout, thereby providing the District the best understanding of hydraulic and major users to optimize the distribution system.

We propose one set of alternatives considering recycling the maximum wastewater flow, and a second set of alternatives considering targeted customers based upon demand quantity/quality and distance from each WRF site. RWQCB and seasonal requirements for storage require large storage availability sized to anticipate fluctuations in both recycled water production and demand. Beck Reservoir is considered in each alternative as possible storage. Combined use of the Beck site may be considered where seasonal and wet weather storage is required, and a portion of the reservoir is divided and used for treated water. Proposed alternatives include:

- WRF at District Office site, maximum recycled water production and delivery
- WRF at Lift Station No. 2 site, maximum recycled water production and delivery
- WRF at District Office site, targeted recycled water supply based on quantity and quality
- WRF at Lift Station No. 2 site, targeted recycled water supply based on quantity and quality
- Optional Alternative that combines Alternatives 1 and 3
- Optional Alternative that combines Alternatives 2 and 4

Land availability for pipeline routing, pump stations, tanks, and potential use of developer land will be identified for evaluation. Monetary and non-monetary factors are used to compare alternatives. Cost factors include: capital cost, power cost, O&M cost, and other life cycle costs. Non-monetary factors include: economic conditions, community benefits, and environmental stewardship. The Dudek/Atkins team will work with District staff to gain consensus on criteria weighting factors and the analysis conclusions. For the preferred system configuration, we will describe the system components, and document design criteria, identify recommended

pump station/storage sites, and prepare preliminary plan and profile drawings for pipeline alignments. The PDR includes Class 3 cost opinions (Task 600). Agriculture users will be the primary focus for distribution system. The water quality needs of agriculture users are considered for extending the system to new users. Avocados, citrus, and nurseries are the targeted customers, with varying water quality needs.

TASK 500 – Evaluate Regulatory and Permitting Requirements. Dudek will summarize the regulatory requirements of a District-owned WRF. Several agencies regulate recycled water production, distribution, and use. The California Department of Public Health (CDPH) publishes public health and safety requirements to avoid risk associated with recycled water use (Titles 17 and 22 of the California Code of Regulations). Permits to oversee production, conveyance, and use of recycled water are granted by the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs). Local (County) Departments of Public Health have guidelines and inspection requirements for recycled water. A number of local Districts adopt ordinances and recycled water use requirements, incorporating regulations imposed by other regulatory agencies. Recycled water users with existing irrigation systems require retrofitting, requiring specific handling by the CDPH and other local agencies. Regular monitoring and reporting is required assuring operation conformance with discharge requirements. Dudek will summarize the permitting requirements, along with the process and costs to acquire each permit.

TASK 600 – CEQA Processes and Environmental Constraints. Atkins will conduct the CEQA process and prepare the preliminary environmental constraints memorandum, providing a preliminary assessment of environmental constraints for each WRF site and the recycled water system alignments. The memorandum use CEQA Guidelines (Appendix G, Initial Study Checklist) to identify potential environmental impacts and mitigation in accordance with CEQA and NEPA (if applicable) requirements. The initial study checklist is completed based on publicly available information, including windshield surveys, aerial photography review, and review of environmental databases (i.e. the California Natural Diversity Database, California Native Plant Society Inventory of Rare and Endangered Plants, the United States Fish and Wildlife Endangered Species List, and the archaeological site records at the South Coast Information Center). The memorandum determines the appropriate CEQA approach for up to three project alternatives, identifying technical studies required to support environmental compliance and a list of regulatory permitting requirements and consultations. The CEQA process estimates environmental compliance and permitting costs, and provides an environmental compliance schedule. No official CEQA or NEPA planning documents (MND, EA, EIR, or EIS) will be provided for the PDR. Agency consultation and preparation of permit applications are not included at this time.

TASK 700 – Project Cost Opinions & Funding Options. Dudek assists public agencies in obtaining funding for facilities and infrastructure through various grant and loan opportunities. Ms. Jane Gray, Dudek Grant Funding Specialist, works with our clients to obtain funding through State and local grant and loan programs, including the Clean Water State Revolving Fund (CWSRF) program and proposition grant funding, among others. We have secured nearly \$130

TABLE 3. DUDEK PROJECTS FUNDED BY CWSRF

Client & Project Name	SRF Loan Amount
City of Vista, Sewer Program Management	\$30M
City of South Pasadena, SRF Assistance for Sewer Rehabilitation Program	\$10M
City of Coachella, Wastewater System Expansion, Program Management, and Funding	\$25M
San Elijo Joint Powers Authority, San Elijo Water Reclamation Facility	\$26M
Yucaipa Valley Water District, Yucaipa Valley Regional Brineline	\$15M
Santa Ynez River Water Conservation District, Santa Ynez Well Design	\$2.5M
Woods Valley Rach Water Reclamation Facility & Charlan Road Seasonal Storage Facility	\$15M
City of Corona, Corona WRF2 Tertiary Filtration Project and Headwork Rehabilitation Project	\$10M
Encina Wastewater Authority, Encina Wastewater Treatment Plant Expansion CEQA+ Documentation	
Total Amount of SRF Loans	\$133.5M

11-15

million of SRF funding through application assistance, design, permitting, and construction management, including \$81 million in the past three years (see Table 3). Dudek has direct experience delivering over \$50 million of SRF-funded treatment plant projects including the City of Coachella WWTP Expansion, the San Elijo Recycled Water Program, and most recently, three individual treatment plant projects for the City of Corona, Department of Water and Power. We successfully assisted the City of Coachella with acquisition of over \$2.0 million is grant funding through the USDA, and recently assisted the Joshua Basin Water District in acquiring over \$6.0 million in grant funding from the CDPH and DWR.

TABLE 4. SUMMARY OF COST OPINION CLASSES

COST OPINION CLASS	Primary Characteristic	Secondary Characteristic			
	LEVEL OF PROJECT DEFINITION Expressed as % of Complete Definition	END USAGE Typical Purpose of Cost Opinion	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical Variation in Low And High ranges (a)	PREPARATION EFFORT Typical Degree of effort relative To Least Cost Index of 1 ^(b)
Class 5	0% to 2%	Concept Screening	Capacity Factored Parametric Models, Judgment or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Model	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget Authorization, or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid/ Tender	Detailed Unit Cost with Forced Detailed Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost with Detailed Take-Off	L: -3% to -10% H: +3% to +15%	5 to 100

Notes: (a) The state of process technology and availability of applicable reference cost data affect the range markedly. The +/- value represents typical percentage variation of actual costs from the cost estimate after application of contingency (typically at a 50% level of confidence) for given scope.

(b) If the range index value of "1" represents 0.005% of project costs, then an index value of 100 represents 0.5%. Estimate preparation effort is highly dependent upon the size of the Project and the quality of estimating data and tools.

Dudek has extensive experience in project cost estimating in accordance with the American Association of Cost Engineers (AACE). Cost opinions provided in the feasibility study were considered Class 4 or 5, based on overall project definition. As the PDR increases project definition to between 10 and 40 percent, we anticipate the cost opinion to represent a Class 3 category (see Table 4). As requested, Dudek has included an optional task for increasing the accuracy of the cost estimate. However, without completing the initial stages of design, it is difficult to achieve better than a Class 3 cost opinion. Because the Dudek/Atkins team was involved in feasibility study development, we are prepared to provide the District with a Class 3 cost opinion under this project.

There are planned developments that may offset construction costs, if development proceeds on a similar schedule. Demand over time, combined with economic influences and California water supply challenges, will affect the cost to design, finance, construct, operate, and maintain the proposed recycled water program.

TASK 800 – Evaluate Overall Project Feasibility. The Dudek/Atkins project team will provide the District with sufficiently detailed information to recommend to the Board of Directors a determination on project feasibility for a District-owned water reclamation facility and recycled water distribution system, including a detailed cost opinion from which the Board may budget the next phases of work for the recycled water program. The PDR will also discuss and highlight additional construction issues, constraints, uncertainties, risks, or other challenges that may exist.

TASK 900 – Prepare Draft and Final Pre-Design Reports and Presentations. The Dudek/Atkins team will prepare the draft PDR, outlining analyses results and recommendations. Dudek will submit the draft PDR to the District for review and comment. We will meet with District staff to discuss the draft PDR and incorporate District comments. Based on District review, the Dudek/Atkins team will prepare and deliver a presentation on PDR results to the District Engineering Committee. Upon receipt of comments, Dudek will prepare the final PDR incorporating District comments. Following preparation of the final PDR, The Dudek/Atkins team will present the results to the Engineering Committee and Board of Directors, as directed by the District General Manager.

4 Project Manager and Team Qualifications

4.1 Project Organization and Key Team Members

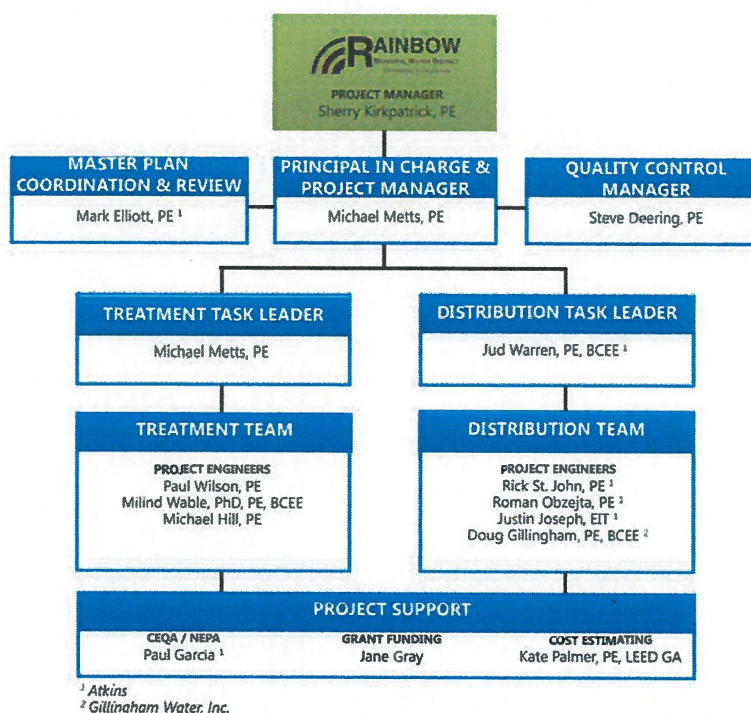
Dudek will serve as the prime consultant providing overall management, engineering, and responsibility for coordinating with District staff. Mr. Michael Metts, PE, Principal, with over 32 years of industry experience, serves as Project Manager and Principal in Charge for your project. In addition, Dudek has partnered with Atkins to sustain the momentum of the previous work, and to help the District realize the investment made toward its future recycled water program. Our proposed team structure includes Mr. Metts as the Treatment Task Leader and Mr. Robert (Jud) Warren, PE, as the Distribution Task Leader, thereby allowing development of the project through coordinated, parallel efforts. The treatment effort is supported by Mr. Steve Deering, Dr. Milind Wable and Mr. Paul Wilson, each providing extensive expertise in treatment facility planning, design and implementation. Similarly, Mr. Warren is supported by Mr. Justin Joseph, Mr. Rick St. John, Mr. Doug Gillingham and Mr. Paul Garcia for development and evaluate of the recycled water distribution system and environmental planning. Our team is highly active throughout the state in WaterReuse and CWEA, bringing those experiences to your project. The Dudek/Atkins team has no learning curve with respect to the District's recycled water program, and will cost-effectively develop the PDR within a minimum duration.

Benefit to the District

The Dudek/Atkins team is currently completing the 2015 Water and Wastewater Master Plan and brings you the same qualified team, reinforcing a strategic, San Diego-focused relationship that delivers unparalleled expertise in recycled water planning and design.

Figure 3 provides our project organization chart, illustrating the roles and responsibilities of key people assigned to your project. Dudek/Atkins team members are dedicated to your project for its duration to the extent necessary to complete their assigned tasks. No changes in staff assignments will occur without prior written approval from District staff. Resumes for all staff can be found in Appendix A.

FIGURE 3. PROJECT OGRANIZATION



Key Project Team Members



32
Years
Experience

Michael Metts, PE
Principal in Charge &
Project Manager



40
Years
Experience

Steve Deering, PE
Quality Control Manager



30
Years
Experience

Milind Wable, PhD PE, BCEE
Treatment Project Engineer



30
Years
Experience

Paul Wilson, PE
Treatment Project Engineer



30
Years
Experience

Mark Elliott, PE
Master Plan Coordination &
Review



34
Years
Experience

Jud Warren, PE, BCEE
Distribution Task Leader



30
Years
Experience

Roman Obzeja, PE
Distribution Project Engineer

Qualifications

- Principal Engineer at Dudek with over 32 years of experience in planning and designing water, wastewater, and recycled water treatment and distribution facilities
- Served as District Engineer for several Southern California water and wastewater agencies, where he has assisted with the development of a variety of regional water resource and recycled water programs.
- Experienced in design of MBR treatment facilities

Project Experience

- 2015 Updates to the Water and Wastewater Master Plans, Rainbow Municipal Water District
- Lee Lake Reclaimed Water System Expansion, Temescal Valley Water District (fmrly. Lee Lake Water District)
- San Eljo Water Reclamation Facility and Recycled Water Expansion, San Eljo Joint Powers Authority
- Yucaipa Valley Brine/line Expansion, Yucaipa Valley Water District
- District Engineering, Ramona Municipal Water District
- District Engineering, Joshua Basin Municipal Water District

Registration & Education
Civil Engineer, CA No. 42586
BS Civil Engineer, University of Kentucky

Qualifications

- 40 years of experience in planning and design of water, wastewater, and recycled water treatment and distribution systems
- Has been a Principal Engineer at Dudek for 30 years
- Serves as a District Engineer and value engineer with various Southern California public agencies
- Expert in treatment plant design, including MBR systems

Project Experience

- Woods Valley Ranch Water Reclamation Facility Expansion, Valley Center Municipal Water District
- Seelye County Water Reclamation Facility, Seelye County Water District
- San Eljo Water Reclamation Facility and Recycled Water Expansion, San Eljo Joint Powers Authority
- Water Reclamation Facility No. 2 Tertiary Treatment Upgrade, City of Corona
- District Engineering, Leucadia Wastewater District

Registration & Education

- Civil Engineer, CA No. 26514
- NAASCO Certified PACOP, MAOP, ITCP
- MS Sanitary Engineering, University of California, Berkeley
- BS Civil Engineering, Tufts University

Qualifications

- 30 years of experience in wastewater and recycled water facility design
- Extensive experience in water and wastewater design and consulting, product development, and research & development
- Expertise in process design, including MBR systems
- His experience covers planning, alternative and technology evaluations, laboratory and pilot studies, process simulation, construction, commissioning, operational troubleshooting, and operator training

Project Experience

- North City Water Reclamation Facility, City of San Diego
- City of Vancouver's Marine Park Water Reclamation Facility in Washington
- Salt Lake City Water Reclamation Plant
- South Bay International Wastewater Treatment Plant

Registration & Education

- Civil Engineer, CA No. 71986
- Ph.D. Civil Engineering, Virginia Polytechnic Institute and State University (Virginia Tech)
- MS Environmental Engineering, Asian Institute of Technology (Bangkok, Thailand)
- BS, Chemical Engineering, Indian Institute of Technology (Bombay, India)

Qualifications

- Over 30 years of experience in completing planning and design of wastewater and recycled water treatment facilities
- He has a significant background in wastewater treatment plant design, pump design, and construction administration
- He is knowledgeable in all project phases including presentations to client, specification preparation, design review, and cost estimating

Project Experience

- Woods Valley Ranch Water Reclamation Facility Expansion, Valley Center Municipal Water District
- WRP No. 7 Biosolids Upgrade, Coachella Valley Water District
- Treatment Facility Renovations, Orange County Sanitation District

Registration & Education

- Civil Engineer, CA No. 27386
- Grade 4
- MS Sanitary and Hydraulic Engineering, University of Minnesota
- BS Civil Engineering, University of North Dakota

Qualifications

- 30 years experience in water, wastewater, and recycled water planning in San Diego County
- Completed major facility planning studies for many North County cities, public utility districts and municipal water districts
- Currently managing the update to the existing District water and sewer models which will serve as the basis for the master plan update
- Worked as a project engineer on the 1985 District sewer master plan and maintains a good understanding of the sewer collection system

Project Experience

- 2015 Updates to the Water and Wastewater Master Plans, Rainbow Municipal Water District
- Water Master Plan Update, City of Escondido
- Water Facilities Master Plan and Atlas Map Update, Rincon del Diablo Municipal Water District
- Potable Water System Master Plan, City of Carlsbad

Registration & Education

- Civil Engineer, CA No. 42064
- BS Civil Engineering, San Diego State University

Qualifications

- 30 years experience in engineering, management, and consulting overseeing the planning, design, and rehabilitation of water and wastewater projects
- Responsible for the planning and design of wastewater conveyance projects incorporating large-diameter pipeline, condition assessment, and relining.
- He is also experienced in wastewater treatment involving headworks, liquid stream, activated sludge, process handling, odor control, and effluent reclamation

Project Experience

- Reservoir Design and Construction, City of San Diego
- Twin Oaks Valley Water Treatment Plant, San Diego County Water Authority
- Capital Improvement Projects Program Evaluation, Santa Clara Valley Water District
- Camp Pendleton Desalination Feasibility Study, San Diego County Water Authority

Registration & Education

- Civil Engineer, CA No. 43272
- BS Civil Engineering, University of Houston

Qualifications

- 30 years experience specializing in water and wastewater systems, hydraulics and hydrology, pipeline design and construction, and computer applications related to water and wastewater systems
- Broad experience in the planning, design, bid, and construction support services for a new as well as rehabilitation and replacement of existing water resource infrastructure
- Projects have included design of pipelines, potable and recycled water, sewer, and storm drains, including pump stations

Project Experience

- Wastewater Master Plan Update, City of Coronado
- Citywide Sewer Asset Management Plan and Rate Study, City of Encinitas
- Black Mountain Ranch Water Studies, Yucaipa Valley
- HI Desert Wastewater Collection System Design Services, HI Desert Water District
- SCADA Design Services, County of San Diego

Registration & Education

- Civil Engineer, CA No. 43272
- BS Civil Engineering, University of Houston

4.2 Project Management Approach

Our management approach commits our technical expertise and underlying support to complete your Pre-design for the Water Reclamation Plant and Recycled Water Distribution within identified scope and budget constraints. Our management process begins with the Project Management Plan (PMP), identifying each team member's responsibilities, project communications protocols, critical success factors, and risk management and quality control measures. Budget and schedule tracking is maintained with an earned-value (EV) tracking process, where progress is tracked using task-by-task completion/invoicing to assess budget and schedule status. Monthly reports, as requested, accompany monthly invoices, providing summaries of completed work and upcoming work and address scope or budget discussions.

We have assigned Michael Metts, PE, as our project manager. He understands the importance of identifying client's critical success factors for each project. Mr. Metts is part of our Dudek Project Management Training team, mentoring other project managers in successful project management. Working with Mr. Metts are three senior/principal project managers, including Steve Deering, PE, Milind Wable, PhD, PE, BCEE, and Mark Elliot, PE, Atkins. Each will work with Mr. Metts to lead the components of your project.

- **Initial Kick-off Meeting.** The kick-off meeting documents contact information and responsibilities for each team member (consultant and client), initiates dialog between Dudek and the District, provides guidelines for project quality control, and details District expectations for a successful project (critical success factors). The Dudek team will provide an initial data request at the kick-off meeting, itemizing specific data needs for each plan component.
- **Close Coordination with District Staff.** Our consultant/client partnering encourages close working relationships between the Dudek team and District staff. Interactions between various staff take place at frequently, typically daily. As our project manager, engineers, planners, and principals have worked together for many years, communications networks are well established.
- **High-Quality Deliverables.** Our approach sets goals for technical excellence and high-quality deliverables. We understand that without achievement of these goals, the District will not have confidence in final recommendations. Clear and concise documents are critical, making maximum use of word processing, publishing, graphics, and mapping capabilities. Reports and presentations will reflect well on the District throughout your project.

4.3 Capacity to Perform

The Dudek/Atkins team is fully capable of performing this project, within current and planned staffing and workload conditions. We have purposefully maintained the same team as provided to the District on the previous Feasibility Study. Dudek has assumed the prime consultant role for this contract, reflecting our understanding of the District's need for the entire team to perform within the schedule and budget constraints. For this project, Dudek has a greater capacity to perform the role of Project and Team Manager. Mr. Metts, the proposed Project Manager, is available to the District for this project. He has been with Dudek for over 23 years, assuring the District of consistent and reliable project coordination and communication. Similarly, we have minimized the role of Mr. Elliott with regard to this project, assuring the District of his focus and attention to completion of the Water and Sewer Master Plan Update Project. Mr. Elliott is available for this project, on an as needed basis. Atkins has assigned similarly qualified engineers and scientists for completion of this project.

All of the individuals proposed for this project and available to the extent necessary to complete your project on time and under budget. No substitutions will be made without the expressed consent of the District. Mr. Metts will not be reassigned for any reason for the duration of this project.

5 Experience and Past Performance, Including Cost and Schedule Control

The selected projects demonstrate our team's relevant expertise in planning, design and implementation of recycled water infrastructure projects, including state-funding, wastewater treatment, Title 22 requirements, design and operation of Aero-Mod and MBR facilities, and recycled water infrastructure. Dudek is recognized throughout southern California for its expertise in the planning, design, construction and operation of small to mid-sized water reclamation facilities, including TDS reduction and brine management and disposal. Atkins is uniquely qualified to identify location and demand of potential recycled water users, including existing, near-term and long-term demands. The Dudek/Atkins team provides the District with unparalleled understanding of critical project challenges and fully developed working relationships with District management and staff.

2015 Water and Wastewater Master Plan

Client:	Rainbow Municipal Water District
Client Reference:	Sherry Kirkpatrick, Engineering Manager, 760.728.1178
Project Budget & Value of Completed Work:	\$269,000
Project Schedule & Time to Completion:	12 months
Construction Cost:	NA - study

Atkins & Dudek are preparing water and wastewater master plan updates, including an evaluation of a District-owned water reclamation plant, to serve as the basis for critical infrastructure decisions and capital fees. The Rainbow Municipal Water District (District) currently provides potable water supplies to its customers through connections to the San Diego County Water Authority's First and Second Aqueduct Systems. Historically, most of the District's demands were related to agriculture and the irrigation of avocado groves and other crops. In response to the rising cost of water, and reductions in agricultural rate programs, the demand has been significantly reduced. It is important for the District to develop local water sources to improve reliability and to stabilize water rates.



The District also provides wastewater (sewer) services to a portion of their water customers. Currently, the wastewater is conveyed to the City of Oceanside's San Luis Rey Plant for treatment and then disposal through an ocean outfall. The District has upgraded portions of the trunk sewer system in conjunction with the Caltrans Highway 76 improvement project and more sewer improvements are scheduled in the capital improvement program. Hydraulic models of both the water and wastewater systems were updated with 2013 demands and loadings and calibrated by Atkins in late 2014. This work includes an estimate of the current available sewer capacity, and identifies hydraulic bottlenecks in the trunk sewer system. The work also includes estimates of the 2030 demands and loadings, the preparation of year 2030 models of the water and wastewater systems, and the preparation of a phased capital improvement program.

There is the potential for a considerable amount of new development both within and outside the current District boundaries in the near future. Much of this development is near the 1-15 and SR-76 corridors and could amount to 2,500 equivalent dwelling units (EDU) within the boundaries and 1,500 outside. Most critical among the infrastructure decisions is to build a District-owned wastewater reclamation plant, or to continue to convey

EXPERIENCE AND PAST PERFORMANCE

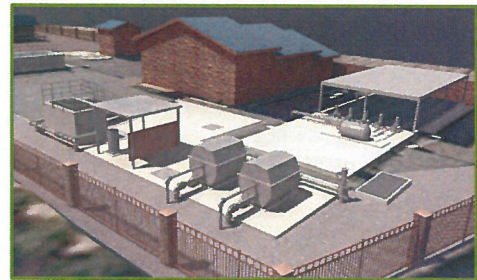
wastewater to Oceanside. Associated with a District-owned plant is the development of a recycled water supply and the need to assess the short-and long-term markets for irrigation water, and the longer term potential for groundwater recharge and indirect and direct potable reuse. Associated with the Oceanside option is capacity in the trunk sewers and lift stations, and the purchase of additional treatment and disposal capacity. A variation on the centralized District-owned plant is smaller satellite "scalping" plant(s) located to serve specific groups of customers.

As part of the master plan update, the Atkins team prepared a feasibility study (Wastewater Treatment/Reclamation Alternatives Study Technical Memo No. 1) of a District-owned wastewater reclamation plant. The study should include an estimate of logical plant capacity, a brief evaluation of sites, a conceptual facilities layout including wet weather storage, identification of reuse opportunities, and estimate of construction and operation and maintenance costs, and a lifecycle cost analysis.

Woods Valley Ranch Water Reclamation Facility Expansion

Client:	Valley Center Municipal Water District
Client Reference:	Fernando Carrillo, 760.749.1600
Project Budget & Value of Completed Work:	\$883,793
Project Schedule & Time to Completion:	Design 10/13 – 10/15, Currently bidding
Construction Cost:	\$10.47M

Dudek was contracted by the District for the design of the Phase 2 Expansion of the Woods Valley Ranch Water Reclamation Facility (WRF) Project to support the phased development of the South Village Wastewater Service Area. The WRF expansion will triple the capacity of the existing facilities to 0.275 million gallons per day (MGD) and will be an integral part of its ultimate expansion to 0.475 MGD. The expansion phases are integrated into existing 0.75 MGD membrane bioreactor plant and chlorine disinfection process.



The Phase 2 Expansion will construct new influent pump station, raw screenings facilities, influent equalization, biological nutrient removal wastewater treatment process (pre-selected, negotiated Aero-Mod process) and tertiary filtration (cloth disk filters), 24-hour off-spec water storage, and upgrade to the disinfection systems. The Project, funded by a Clean Water State Revolving Fund (SRF) loan, was fast-tracked to meet schedule milestones dictated by funding and capacity requirements. Careful planning and construction staging and sequencing were considered to fit the facilities on the 1 acre site. Process selection and civil/mechanical systems were carefully arranged to fit within constraints of the existing hydraulic profile and height limitations for process tanks.

The exterior of the process tanks were designed with block veneer and faux mansard roof architectural treatments to disguise the industrial structures. The site, underlain with loose alluvial soils required extensive overexcavation to provide stable foundations under structures. The extensive soil remediation requirements and site constraints required the use of vertical shoring. The project is currently in construction.

Rincon 2010 Recycled Water Master Plan

Client:	Rincon del Diablo Municipal Water District
Client Reference:	Randy Whitmann, 760.745.5522
Project Budget & Value of Completed Work:	\$214,990
Project Schedule & Time to Completion:	12 months & 12 months
Construction Cost:	NA - study

Atkins prepared the Recycled Water Master Plan for Rincon Del Diablo Municipal Water District (District) and the associated feasibility study for the Harmony Grove development. The District began delivery of recycled water to customers in October 2004. The District's service area includes one of the largest recycled water users in San Diego County, the Semptra Energy Power Plant. The District's \$2.7 million recycled water project was built using State loan and grant funds. The District currently administers 69 recycled water meters, two recycled water pump stations, and approximately 5.8 miles of recycled water pipeline, providing recycled water for landscaping to homeowner associations and several commercial businesses, including a local brewery and new state-of-the-art hospital facilities and the cooling tower for the Power Plant.



Atkins' Harmony Grove feasibility study reviewed the District's existing recycled water system, as well as the potential future recycled water uses and expansion of the program within the District.

Atkins' Recycled Water Master Plan included the evaluation of system infrastructure, demand patterns, operational parameters and plans for potential expansion of the Hale Avenue Resource Recovery Facility (HARRF); identification of potential recycled water markets and the infrastructure required to supply these markets with recycled water from the existing system. The plan also included updating the District's hydraulic model of the recycled water system to evaluate the potential expansion of the system to serve these markets. In addition, Atkins provided a review of plans for the Harmony Grove development and a new water reclamation facility; evaluated opportunities for further integration with the District's recycled water system; and proposed wet weather WRF operations, including opportunities for groundwater recharge.

Challenges included integrating a new recycled water source into the system, developing a fire protection system for large industrial users with recycled water, and converting existing potable water tanks to recycled water to increase reliability. Atkins assisted Rincon in evaluating conversion of an existing potable water storage facility to a recycled water storage facility, which would result in a potential savings of \$2 million.

6 Proposed Total Professional Fee Schedules Submitted Under Separate Cover

As requested in the RFP, the Fee Proposal, correlated to the submitted Scope of Services, is provided in a separate, sealed envelope.

7 Exceptions to this RFP

Dudek has reviewed the RFP and takes no exceptions to the RFP.

APPENDIX A

Resumes

Michael Metts, PE

Principal in Charge & Project Manager

Michael Metts, Dudek Engineering Services Manager, has over 31 years of experience in civil engineering and is a registered engineer in the State of California. His engineering experience encompasses water, wastewater and recycled water engineering design, permitting, water resources planning, facility design, and construction management and assistance. He has provided project management and principal in charge services throughout the southwestern United States. Mr. Metts' project experience encompasses the evaluation and expansion of existing facilities as well as the design of new facilities, allowing him to anticipate project challenges, to the benefit of his clients. He is committed to maintaining clear and open communication with the client, while maintaining control of the project budget and schedule, as well as proactively delivering cost-effective and innovative project solutions.

EDUCATION

University of Kentucky
BS, Civil Engineering, 1983

LICENSE

Professional Civil Engineer CA No. 42586

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
American Water Works Association
California Water Environment Association
Water Environment Federation
National Society of Professional Engineers
American Public Works Association

Project Experience

Lee Lake WWTP Reclaimed Water Facilities Expansion, Corona, California. Mr. Metts was the principal-in-charge for the preliminary design, final plans, and specifications. Engineering services were provided for a 0.68 mgd expansion to the existing water reclamation facility. The design included new facilities for sequencing batch reactors, influent pumping, chlorine disinfection, sludge digestion, sludge dewatering, flow equalization pumping/storage, and reclaimed water pumping.

San Elijo Joint Powers Authority Water Reclamation Facility. Mr. Metts provided design services for the design of a 2.2 mgd reclaimed water treatment facility and distribution system. The designs included 80,000 feet of up to 24-inch-diameter PVC distribution piping, five pump stations, and two storage tanks. Multi-agency coordination was a critical success factor for this project.

Northeast Water Reclamation Plant, Mesa, Arizona. Senior project engineer for the conceptual and preliminary design of a 16 mgd water reclamation facility including on-site underground storage and recovery facilities. Additional facilities included VOC/odor-control facilities and an on-site effluent distribution system pumping station.

Los Angeles/Glendale Water Reclamation Plant Expansion, Los Angeles, California. Senior project engineer for expansion of the existing 20 mgd plant to 50 mgd average daily treatment capacity. Responsibilities included design of preliminary, primary, secondary, tertiary, and VOC/odor-control facilities. Additional planning was conducted for further expansion of the facility to 100 mgd capacity, including solids-handling facilities.

Scottsdale Water Campus Water Reclamation Plant, Scottsdale, Arizona. Senior project engineer for the conceptual and preliminary design phases of a planned 40 mgd water reclamation plant. Project components included design of preliminary treatment and VOC/odor-control facilities. Additional project components included advanced water treatment, underground storage and recovery, and indirect potable water reuse.

Recycled Water Conversion Projects, City of San Juan Capistrano, Utilities Department, San Juan Capistrano, California. Mr. Metts was the project manager responsible for performing site evaluations, construction plan development, cross-connection test coordination, and City coordination. The projects consisted of the design, permitting and construction of several recycled water system conversions to the City's irrigation systems to maximize the use of available recycled water resources and increase recycled water use by 600 acre-feet per year, and meet the requirements of its grant funding obligations under the Orange County Integrated Regional Water Management Implementation Program.

Rancho California Indirect Potable Reuse Project, Rancho California Water District, San Diego, California. Mr. Metts, with a team of consultants, assisted in definition of a series of IPR concepts, including advanced treatment alternatives, brine concentrate management and disposal options, and groundwater systems analysis. Each concept was evaluated for potential facility siting, project costs, non-monetary benefit, regulatory compliance, and attractiveness relative to regional partnering and funding opportunities. Project alternatives included treatment siting alternative, which led to varying components of recycled water feed, product water and brine conveyance options. The project also included varying levels of capacity tagging from 3,000 afy to 5,000 afy, up to a maximum of 10,000 afy. Brine concentrate minimization, as well as a zero discharge option, alternatives were also evaluated. Dudek prepared the brine management analyses and participated in development of the overall project alternative costs, leading to identification of the resulting recommended project alternatives.

Northern Service Area Reclaimed Water Distribution System Master Plan, San Diego and Poway, California. Project manager and lead engineer for the planning and design of reclaimed water distribution facilities that serve agricultural, industrial, and recreational reclaimed water markets in northern San Diego and Poway. Elements of the project included reclaimed water market assessment, development of a comprehensive reclaimed water distribution system using a hydraulic analysis program, and development of the operational and phasing considerations for project implementation.

Yucaipa Valley Water District Phase I Non-Potable Water Distribution System, Yucaipa, California. Mr. Metts was the project manager for Phase I of the Yucaipa Valley Water District's Non-Potable Water Distribution System. Engineering services included preparing of a preliminary design report, completing final design documents, and subsequent construction services. The project focuses on the physical facilities needed for transport and delivery of both raw and recycled water to recycled water customers, as well as a proposed wetlands habitat. The project includes definition of facilities for environmental review and construction within jurisdictional timelines. Phase 1A has recently completed construction and included 3,600 linear feet of 24-inch pipeline and 5,700 linear feet of 12-inch pipeline. Phase 1B consists of 12-inch and 24-inch ductile iron pipe and appurtenances.

San Pasqual Wastewater Management and Water Reclamation Facilities Plan, San Pasqual, California. Senior project engineer for evaluation and layout of reclaimed water distribution system alternatives in the San Pasqual Valley of northern San Diego County, including hydraulic modeling and analysis, recommendation of the preferred system, and development of phasing and implementation recommendations.

San Luis Obispo Water Reuse Master Plan, San Luis Obispo, California. Dudek prepared a water reuse master plan for the City of San Luis Obispo. The objective was to identify prospective recycled water users throughout the city and to develop distribution system improvements to efficiently deliver up to 600

AFY. Project involved a parcel-based analysis of water consumption data, irrigated areas, and demand patterns for all water connections, using GIS applications.

Las Virgenes MWD Recycled Water Pipeline Design, Las Virgenes, California. Dudek assisted the District with doubling the capacity of its recycled water system by constructing a 9,000-foot, 24-inch pipeline to complement an existing 18-inch pipeline. This project allowed the District to route excess recycled water to various irrigation locations within its service area. Project challenges included impenetrable volcanic rock in the pipeline alignment, the alignment ran a heavily-trafficked route and crossed through a state park.

Yucaipa Valley Water District Water, Wastewater, and Reclaimed Water Master Plan Updates, Yucaipa, California. Mr. Metts managed the efforts to develop the system mapping and modeling analyses for existing and projected water, wastewater, and reclaimed water infrastructure. GIS-based mapping and modeling techniques were used to identify the existing parcel base and facilities. This information was then used for hydraulic models to prepare simulations of each system.

North Poway Reclaimed Water Distribution System Master Plan, Poway, California. Senior project engineer for the hydraulic model development and analysis of reclaimed water distribution servicing the northern portion of the City of Poway. This included alignment determination and sizing and location of pump stations and reservoirs, recommendation of the preferred distribution system, and development of implementation recommendations.

Lee Lake Water District Water, Wastewater, and Non-Potable Water Model Updates, Corona, California. Mr. Metts prepared hydraulic model updates for the Lee Lake Water District's water, wastewater, and non-potable water systems. The updates were made to provide Lee Lake with information on how to provide non-potable water for use in construction and irrigation.

Local Projects Program Survey, Metropolitan Water District of Southern California, San Diego County, California. Senior project engineer for the survey of all existing reclaimed water projects not included in the Local Projects Program (LPP). The information was used to determine LPP eligibility. Similar information was gathered for projects included at the program's inception to document participation and specific details of those projects.

Valley Sanitary District Master Plan and GIS, Indio, California. Mr. Metts served as principal-in-charge for the development of Valley Sanitary District's sewer GIS, hydraulic model, sewer master plan, and capital improvement program.

Carpinteria Sanitary District Master Plan and GIS, Carpinteria, California. This master plan included a GIS-based mapping system with functional links to their maintenance management system (MMS) and the internal billing database. The project also included development of a hydraulic model used to analyze system hydraulics for current and future flow conditions and to identify remedial system improvements. The recommended capital improvements were summarized in a comprehensive collection system capital improvement plan that incorporates rehabilitation projects previously identified in a system-wide condition assessment project, also completed by Dudek. All findings and recommendations were presented in a wastewater collection system master plan document.

Yucaipa Valley Water District Phase I Non-Potable Water Distribution System, Yucaipa, California. Mr. Metts was the project manager for Phase I of the Yucaipa Valley Water District's Non-Potable Water

Distribution System. Engineering services included preparing of a preliminary design report, completing final design documents, and subsequent construction services. The project focuses on the physical facilities needed for transport and delivery of both raw and recycled water to recycled water customers, as well as a proposed wetlands habitat. The project includes definition of facilities for environmental review and construction within jurisdictional timelines. Phase 1A has recently completed construction and included 3,600 linear feet of 24-inch pipeline and 5,700 linear feet of 12-inch pipeline. Phase 1B consists of 12-inch and 24-inch ductile iron pipe and appurtenances.

Ramona Municipal Water District Waterline Replacement and Looping Project, Ramona, California. Project engineer for design and construction of approximately 16,000 linear feet of water line replacement and looping extensions within the older portions of the Ramona Municipal Water District's service area. Project included identification and location of system facilities, replacement of multiple waterline facilities while maintaining service and fire water availability, and design of looping installation to increase reliability.

Reclaimed Water Distribution System, Mesa, Arizona. Project engineer for the development of a 20 mgd reclaimed water distribution system, including pumping facilities, distribution piping, and operational storage reservoirs. Additionally, underground storage and recovery facilities were sited and designed into the system.

District Engineering

Joshua Basin Water District, Joshua Tree, California. Mr. Metts has been the district engineer for Joshua Basin since 2004. He attends board meetings, performs plan reviews, prepares construction documents, manages construction, assists with the selection and application of funding mechanisms, and oversees regulatory compliance for capital improvement projects.

Rainbow Municipal Water District, Rainbow, California. Mr. Metts was the District Engineer for the Rainbow Municipal Water District. As District Engineer, he was responsible for completing an urban water management plan, assisting in the development of service and capacity charges, and developing a 10-year capital improvement plan that totaled over \$90 million. Mr. Metts administered the capital improvement plan on behalf of Rainbow Municipal Water District.

Lee Lake Water District, Corona, California. Mr. Metts was the District Engineer for Lee Lake Water District. He prepared an urban water management plan and coordinated water transport (wheeling) of western supply water through the service area to adjacent water agencies. To develop funding for needed infrastructure improvements, Mr. Metts helped develop a community service district.

San Diego County Water Authority (Water Authority) Right-of-Way Encroachment Plan Review Services and Miscellaneous Engineering, San Diego County, California. Mr. Metts is the principal-in-charge for plan checks on projects that encroach into the Water Authority's right-of-way. Mr. Metts is also responsible for assigning construction inspection and engineering staff to provide pipeline structural reviews in addition to other engineering services as required by the Water Authority.

Steve Deering, PE

Quality Control Manager

Steve Deering has been a principal engineer of Dudek for 30 years. He has over 40 years' experience with planning, designing, and managing water, wastewater, and reclaimed water facilities. With Dudek in the mid-1980s, he was an early advocate of the local benefits of recycled water facilities. Mr. Deering is also an advocate for the use of trenchless technologies for pipeline rehabilitation and for new pipeline installation, when appropriate. Because of Mr. Deering's outstanding technical knowledge, he is routinely called upon to participate on design review and value engineering teams.

Project Experience

Valley Center Municipal Water District, Woods Valley Ranch WRF Phase 2 & Charlan Road Seasonal Storage, Valley Center, California. Mr. Deering served as the

Principal-In-Charge to support this project for the phased development of the South Village Wastewater Service Area within the District. The WRF expansion will triple the capacity of the existing facilities to 0.275 million gallons per day (MGD) and will be an integral part of its ultimate expansion estimated to be 0.475 MGD. The Phase 2 Expansion also introduced a new wastewater treatment process (Aero-Mod and Cloth Disk Filters) as well as adding 48-acre feet (AF) of seasonal storage for recycled water. The Project had an abbreviated schedule for completion to comply with California Clean Water State Revolving Fund (SRF) loan funding stipulations.

Water Reclamation Facility 2 – Tertiary Filtration Upgrades, City of Corona, California. Mr. Deering is the Principal Engineer for the 4 mgd tertiary treatment project utilizing dual-media gravity filters with concurrent air scour backwash. Filter pretreatment facilities include coagulation and pre-chlorination. The process flow scheme would not accommodate secondary effluent storage so the filter feed pump station consisting of dual, variable-speed, vertical turbine pumps is designed to automatically match pumping rate to secondary effluent production. Backwash wastewater is equalized in a 100,000 gallon equalization tank from which it is pumped to an existing submerged microfiltration system which is being repurposed to treat the backwash wastewater to Title 22 recycled water quality. By optimizing granular media filter design to maximize run times and treating backwash wastewater through microfiltration, the combined filtration process boasts a 97% recovery rate. Disinfection facilities were upgraded to the full 4 mgd tertiary treatment capacity by adding sodium hypochlorite storage and feed systems and a control scheme that incorporates filter pre-treatment and online chlorine residual monitoring for automated chlorine disinfection.

San Elijo Joint Powers Authority Reclaimed Water Facilities. Project officer and manager for the feasibility study, facilities plan, State Revolving Funds coordination, and final design of the SEJPA reclaimed water facilities. Design included 84,000 feet of distribution piping, two reservoirs, two booster pump stations, and a 2.48 mgd tertiary upgrade to the SEJPA Water Reclamation Facility. As project manager, Mr. Deering coordinated with major reclaimed water customers. Mr. Deering was also involved in successful lobbying and application for Title 16 Bureau of Reclamation grants for several north San Diego County agencies. On-site recycled water retrofit evaluations were made for the Del Mar Fairgrounds and San Dieguito County Park. Recycled water is used for dust control on the Del Mar Race Track.

EDUCATION

University of California, Berkeley
MS, Sanitary Engineering, 1977

Tufts University

BS, Civil Engineering, 1972

LICENSES AND CERTIFICATIONS

Professional Civil Engineer CA No. 26514
NASSCO PACP & MACP

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)

American Water Works Association (AWWA)

California Water Environment
Association (CWEA)

Water Environment Federation (WEF)

Poway Water Reclamation Master Plan, Poway, California. Project manager for the planning and preliminary engineering of an 8 mgd live stream discharge nutrient removal Title 22 reclamation treatment plant.

Rancho Cielo Reclaimed Water Facilities, Rancho Cielo Sanitation District, Rancho Santa Fe, California. Project manager for conceptual design of a reclaimed water distribution system, initially consisting of one 70-acre-foot reservoir, three distribution pressure zones, two booster pump stations, and 22,000 lin. ft. of distribution piping.

San Elijo Joint Powers Authority Recycled Water Feasibility and Facilities Plans, Encinitas, California. Project Manager for the feasibility and facilities planning for the California State Revolving Fund (SRF) Title 22 treatment, pumping, 83,000 feet of distribution, and storage for 2.6 mgd peak capacity and 1,800 acre-feet per year recycled water use.

Rancho Del Rayo Reclaimed Water Source, Rancho Santa Fe, California. Mr. Deering performed permit coordination and final design of reclaimed water transfer and storage facilities for irrigation of over 200 acres of fenced pasture for racing stables. Mr. Deering prepared retrofit plans and conducted a review of the secondary effluent from the Whispering Palms Community Services District Wastewater Treatment Plant. This facility currently continues in operation.

Horsethief Canyon Water Reclamation Facility (HCWRF) Re-Rate Report, Elsinore Valley, California. Mr. Deering managed the preparation of a re-rate report to increase capacity at the HCWRF from 0.5 mgd to 0.6 mgd. The report included the estimated increase in flow to the plant and evaluated each unit's operation with regard to performance under the proposed increase in wastewater flow. Different options were evaluated for expansion, and cost estimates were presented to implement a capacity expansion. Additional consideration was given to operational problems that the plant was experiencing.

Alberhill Water Reclamation Facility, Elsinore Valley Municipal Water District, Lake Elsinore, California. Mr. Deering served as Principal-In-Charge for a treatment plant alternative and cost analysis study. Dudek provided a concise technical memorandum that incorporated a review of previous studies in the context of either an upgrade and expansion of the existing 500,000 gpd Horsethief Canyon Ranch WRF to 600,000 gpd versus construction of a new 100,000 gallons per day (gpd) wastewater treatment plant specifically for Richland Communities at the nearby Alberhill parcel owned by the District. Richland Communities is in need of service for approximately 354 new residential connections. The goal of the technical memorandum was to facilitate implementation of immediate and long-term wastewater system capacity and treatment.

Leucadia Wastewater District, Carlsbad, California. Mr. Deering provided sewer system plan checking from 1973 to 1985. From 1986 to 1996 he was an elected Director of the LWD Board of Directors with appointment as Vice-President. Following a one-year hiatus from the Board position, he was competitively selected as District Engineer and has served in that role since. As District Engineer, Mr. Deering is responsible for attendance at Board and Engineering Committee meetings, preparation of standard specifications, sewer and recycled water master planning, review of interagency and developer agreements, and engineering oversight of the design and construction of a \$5 million annual capital improvement program.

Ramona Municipal Water District, Ramona, California. As Project Engineer, Mr. Deering assisted in the design of Lake Ramona in the early 1980s. He was also the Interim District Engineer from June 1992 to June 1993, providing developer plan checking/approval and capital improvement program coordination. Currently, he supports other Dudek personnel in a similar ongoing contract with the District.

Paul Wilson, PE

Treatment Project Engineer

Paul Wilson is a senior project manager with Dudek. Mr. Wilson has over 30 years of experience. He has a significant background in facilities operations, pipeline design, wastewater treatment plant design, water and wastewater pump station design, and construction administration. Mr. Wilson is knowledgeable in all project phases including presentations to client, specification preparation, design review, cost estimating, team leadership, and safety compliance. He has extensive experience in completing condition assessments and evaluations, controlling multi-million dollar budgets, and preparing comprehensive engineering reports.

EDUCATION

University of Minnesota
MS Sanitary and Hydraulic Engineering

University of North Dakota
BS Civil Engineering

LICENSES & CERTIFICATIONS

Professional Civil Engineer
CA PE No. 27386

Construction Document Technologist (CDT)
Wastewater Treatment Plant Operator –
Grade 4

Project Experience

Valley Center Municipal Water District, Woods Valley Ranch WRF Phase 2 & Charlan Road Seasonal Storage, Valley Center, California. Mr. Wilson served as the Project Engineer to support this project for the phased development of the South Village Wastewater Service Area within the District. The WRF expansion will triple the capacity of the existing facilities to 0.275 million gallons per day (MGD) and will be an integral part of its ultimate expansion estimated to be 0.475 MGD. The Phase 2 Expansion also introduced a new wastewater treatment process (Aero-Mod and Cloth Disk Filters) as well as adding 48-acre feet (AF) of seasonal storage for recycled water. The Project had an abbreviated schedule for completion to comply with California Clean Water State Revolving Fund (SRF) loan funding stipulations.

WRP No. 7 Biosolids Upgrades Project, Coachella Valley Water District, Coachella, California. Mr. Wilson is the Project Engineer for the WRP No. 7 Biosolids Upgrades Project. WRP No. 7 is a 5 mgd water reclamation facility located in Indio, California. The existing Biosolids dewatering process consisting of gravity belt thickeners and belt filter presses are reaching the end of their useful life and the facility lacked appropriate redundancy. The District retained Dudek to design a replacement facility for an equivalent planned 10 mgd liquid stream capacity. Dudek performed a thorough life cycle cost analysis of leading dewatering equipment including belt presses, screw presses and centrifuges, including extensive pilot testing of candidate technologies, selecting centrifuges as the preferred, lowest cost dewatering technology. Dudek is completing final design of the 10,000 sqft dewatering building consisting of gravity belt thickeners to increase waste activated sludge concentration to 2.5%, a new thickened sludge holding tank, sludge feed and chemical facilities, new dewatering equipment, an enclosed sludge loading bay, and a 4,000 cfm biological odor control system.

Treatment Facility Renovations, Orange County Sanitation District, Fountain Valley, California. Steered ongoing project to renovate and rehabilitate primary treatment facilities at 140 mgd wastewater treatment plant including on-site inspection of facilities, review of prior renovations and designs, recommendations for improvements, life cycle cost analyses, and preliminary drawings.

San Ricardo Well Rehabilitation, Goleta Water District, Goleta, California. Mr. Wilson was the Project Engineer for the condition assessment and design of improvements to the 800 gpm San Ricardo Well. The stainless steel casing exhibited cracking induced by hydrogen sulfide embrittlement and screen sections produced unacceptable sanding. Dudek performed well production testing, video inspection, and caliper

surveys to collect data necessary to design a well liner solution. Dudek designed a well liner incorporating a proprietary integral screen/media product. Dudek specified new deeper submersible well pump, discharge column, and replacement discharge head to restore well capacity up to 800 gpm.

Well Master Plan and Rehabilitation Project, Goleta Water District, Goleta, California. Mr. Wilson is the Project Engineer for the condition assessment and master planning of upgrades to seven existing potable water wells. Dudek will perform condition assessment, production testing, and develop rehabilitation plans for each well. Each well site has an iron/manganese wellhead treatment system (oxidation/filtration). Dudek will develop design-build specifications to implement well rehabilitation recommendations including mechanical and electrical systems and upgrades to control systems. The well rehabilitation projects will be implemented as part of the District's drought emergency response program.

Carlsbad Desalination Project, Poseidon, Carlsbad, California. Mr. Wilson served as senior project engineer for the design of a product water buffer, storage tanks, and product water pump station. He participated in design-build efforts for FRP piping, swiftly responded to civil site and/or city permitting issues, managed connection to existing NRG cooling water channel, and actively contributed to initial project set-up and management.

Magnolia Trunk Sewer Rehabilitation, Orange County Sanitation District, Fountain Valley, California. Mr. Wilson led the design and rehabilitation of Magnolia Trunk Sewer for Orange County Sanitation District (OCSD) featuring slip lining existing 72", 60" and 48" sewer with FCMP pipe. He evaluated the sewer capacity to determine optimum size of liner pipe and determined best bypass alternatives.

OCSD Coast Trunk Sewer Rehabilitation, Orange County Sanitation District, Huntington Beach, California. Mr. Wilson directed and coordinated up to nine subcontractors and three public entities in inspection and evaluation for 54"/84" trunk sewer feeding into OCSD's Treatment Plant No. 2. He prepared PDR detailing surveys conducted by Malcolm Pirnie and other subcontractors, identified alternatives for sewer repairs, and led selection process using vital input from District personnel.

Primary Screenings and Grit Rehabilitation Facilities, County Sanitation Districts of LA County, Los Angeles, California. As Deputy Project Manager for 350 mgd JWPCP facility, oversaw preliminary and final design of modifications to four existing grit chambers, modifying from flat bottom chain and bucket grit chambers to hopper bottoms with grit pumps.

Hydraulic Capacity and Reliability Study, San Jose/Santa Clara Water Pollution Control Plant, Santa Clara, California. Planned and developed conceptual design level facilities including new headworks, grit chambers, grit dewatering and influent pumping facilities for 400 mgd water pollution control plant.

Point Loma Wastewater Treatment Plant Chemical Feed System Upgrade, City of San Diego, San Diego, California. Managed contract administration during construction of improvements designed by Malcolm Pirnie for ferric chloride and polymer mixing and metering systems at 200 mgd wastewater treatment plant.

City of San Diego Condition Assessment Project, City of San Diego Public Works Department, San Diego, California. Chosen as Lead Project Engineer for \$5M condition assessment with City of San Diego, holding direct responsibility for ultrasonic inspection of PS 77 Pump Station Sewer Force Main.

Milind Wablé, PhD, PE, BCEE

Treatment Project Engineer

Milind Wable has extensive experience in water and wastewater design and consulting, product development, and research & development. His experience covers planning, alternative and technology evaluations, laboratory and pilot studies, process simulation, design, bid/tendering, construction, commissioning, operational troubleshooting, and operator training for delivery of over 100 water, wastewater, and infrastructure projects globally. The projects include large, complex facilities such as the \$250 million project to expand the secondary treatment capacity at Orange County (California) Sanitation District Plant 1 by 300 MLD for a total capacity of over 1 BLD. These projects have benefited from balanced combination of technical expertise, hands-on experience, and project execution skills.

In addition to traditional design-bid-build project delivery, significant experience in the spectrum of alternative procurement, delivery, and financing mechanisms, including DB, DBO, DBOOT, turnkey, EPC, and PPP – in the US as well as international markets. He led the wastewater treatment technical team for several of the first successful military utility privatization projects in the United States.

Mr. Wable is active in US and international professional organizations. He has served on task forces for various publications as well as provided peer review of conference and other publications for the Water Environment Federation (WEF) as well as the International Water Association (IWA). Current and/or former active member of WEF's Research symposium and the Municipal Wastewater Treatment Design Committee as well as a key participant in the Water Environment Research Foundation's (WERF) Program Directed Research initiative, which oversees and directs multiple teams implementing the highest research priorities identified by WERF subscribers and stakeholders.

Project Experience

Multiple projects at the South Bay International Wastewater Treatment Plant (SBIWTP) in San Diego. Project Manager. Led and facilitated the formation of a group of regional experts to help set the direction for a series of efforts to improve total suspended solids (TSS) removals from the Chemically Enhanced Primary Treatment (CEPT) process. Extensive jar testing was conducted to test the effect of a wide range of chemicals, doses, application

EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech)
Ph.D., Civil Engineering

Asian Institute of Technology (Bangkok, Thailand)

MS., Environmental Engineering

Indian Institute of Technology (Bombay, India)

BS, Chemical Engineering

CERTIFICATIONS

Professional Civil Engineer,
CA No. 71986,
OR No. 17046
Guam No. 1378

Board Certified Environmental Engineer
(BCEE - American Academy of Environmental Engineers)

PROFESSIONAL AFFILIATIONS

Member, Water Environmental Research Foundation (WERF) Program Directed Research – Issue Area Team (IAT) for the Optimization of Wastewater and Solids Operation (OWSO)

Member, WERF Program Directed Research – Exploratory Group on “Solids Volume Reduction”

Member, WEF Program Committee – Research Symposium (Oct 2007 – 2012)

Member, WEF Municipal Wastewater Treatment Design Committee (2005 – Present)

Member, WEF Task Force on Upgrading and Retrofitting Water and Wastewater Treatment Plant (2003-2005)

Member, WEF Task Force on Wastewater Residuals Stabilization (1994 – 1999)

Member, WEF Asia/Pacific Rim Steering Committee (1992-1997)

Member, Water Environmental Federation (WEF)

Member, California Water Environmental Association (CWEA)

Member, International Water Association (IWA)

points, and mixing intensities. The jar testing protocol was designed to approximate a batch simulation of the existing process flow configuration, including detention times and mixing intensities. Beyond generic information obtained from typical jar testing, this unique and innovative approach yielded results specific to the SBIWTP. Based on the jar testing results customized for the SBIWTP, full-scale implementation and testing some of the recommended operational modifications is currently underway. In consultation with the regional experts and stakeholders, a Technical Implementation Plan (TIP) has been developed that provides a structured framework and a formal process for testing the performance impacts of key variables on a full-scale basis. These variables include chemical doses, dilution ratios, and application points.

Salt Lake City Water Reclamation Plant. Troubleshooting, pilot testing, and plant upgrade services. Employs the BFAS process to treat dilute deicing wastewater from the SLC International Airport along with municipal wastewater. Based on a comprehensive process analysis of the entire plant, identified the conditions and factors causing permit violations. Interim and long-term improvements were recommended, which helped negotiate a compliance agreement with the state regulatory agency. As part of the long-term improvement program designed a pilot trickling filter system to test the performance of various plastic and rock media and the effects of operating variables such as loading rates, distributor speed, and flushing intensity. A detailed testing plan determined the impact of these variables on deicing waste treatment efficiency. The highly significant data helped provide the most effective capital improvements at the plant.

90-mgd San Diego North City Water Reclamation Plant Process engineer on design team with responsibility for nitrification, denitrification, and phosphorus removal process modeling. Responsibilities on this project also included elements of secondary clarification, filtration, and chlorine disinfection design. Co-authored portions of the O&M Manual.

City of Vancouver's Marine Park Water Reclamation Facility in Washington. As lead process operations trainer, prepared and conducted operator training workshops to train contract operations personnel in operation and maintenance. The training helped focus efforts of the operations staff on critical aspects of process control, resulting in more informed and efficient plant operation. The project includes preliminary, primary, and activated sludge secondary treatment, followed by UV disinfection.

Design-Build of the Southern Regional Tertiary Treatment Plant (SRTTP) for the Marine Corps Base Camp Pendleton (MCBCP). Task and facility lead for the Sequencing Batch Reactors (SBR) portion of this design-build project. The project involved design-build project delivery of a new 5 mgd, \$40 million tertiary treatment facility that can flexibly produce effluent meeting two different sets of stringent effluent quality requirements for two different disposal options. The primary mode of operation will be 100 percent irrigation reuse of the effluent, which must therefore meet the California Title 22 standards for reuse. The design also provides a backup mode of operation – surface water discharge to a water quality limited stream. In this mode, the plant is designed to meet assumed Best Available Technology (BAT) limits of 5 mg/L for total nitrogen (TN) and 1 mg/L for total phosphorus (TP). Role on this project included complete responsibility for the nitrification-denitrification (NDN) facility, including evaluation of alternatives; process design; equipment sizing, selection, and specification; and coordination with vendors and construction contractors to facilitate smooth implementation of design-build project delivery.

Michael Hill, PE

Treatment Project Engineer

Michael Hill is a project engineer specialized in water/wastewater treatment and infrastructure projects and is experienced in all phases of engineering from planning, design, and construction. Mr. Hill is a strong civil/mechanical systems designer and possesses expertise in treatment plant hydraulics, pumping systems, aeration systems, various process equipment systems. He is responsible for detailed design and layout, civil/mechanical calculations and analysis, equipment selection, cost estimation, and development of plans and specifications. Mr. Hill is also experienced in construction inspection and other engineering services during the construction phase.

EDUCATION

San Diego State University
BS, Civil Engineering, 2009
Magna Cum Laude

LICENSSE

Professional Civil Engineer, CA No. 80727

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

Project Experience

Valley Center Municipal Water District, Woods Valley Ranch WRF Phase 2 & Charlan Road Seasonal Storage, Valley Center, California. Mr. Hill served as the Project Engineer to support this project for the phased development of the South Village Wastewater Service Area within the District. The WRF expansion will triple the capacity of the existing facilities to 0.275 million gallons per day (MGD) and will be an integral part of its ultimate expansion estimated to be 0.475 MGD. The Phase 2 Expansion also introduced a new wastewater treatment process (Aero-Mod and Cloth Disk Filters) as well as adding 48-acre feet (AF) of seasonal storage for recycled water. The Project had an abbreviated schedule for completion to comply with California Clean Water State Revolving Fund (SRF) loan funding stipulations.

Water Reclamation Facility 2 Tertiary Treatment Project, City of Corona, Corona, California. Mr. Hill served as a Project Engineer for the design of 4.0 mgd tertiary facilities for the City of Corona's Water Reclamation Facility No. 2. Design includes flocculation, granular media filtration, flow equalization, chemical facilities, pumping facilities and associating piping and instrumentation. His responsibilities included design, layout, equipment selection, hydraulic calculations, stormwater disposal design, and development of contract documents.

Water Reclamation Facility 2, Headworks Upgrades Project, City of Corona, California. Mr. Hill is serving as the Project Engineer for the final design of various headworks upgrades to The City of Corona's Water Reclamation Facility 2 (WRF2, 3mgd capacity). Improvements include replacement of an inoperable rotating drum screen and a poorly performing grinder with inclined bar/filter units, washer/compactor, and a screenings sluice conveyance system; replacement of existing grit aeration blowers with high speed turbo blowers; installation of new 316 stainless air piping for the grit tank and channels; and complete concrete rehabilitation and application of epoxy liner to the channels, splitter box, and grit tank.

Water Reclamation Facility 1, Screenings Upgrades Project, City of Corona, California. Project engineer assisting the City in final design of replacement of the screenings removal and handling equipment at its Water Reclamation Facility 1 (WRF1, 11.5million gallons per day (mgd) capacity). Improvements include replacement of poorly performing rotating drum screens with inclined bar/filter units and new washer/compactor equipment. The facility will be retrofit with duty/standby units.

San Elijo Water Reclamation Facility Emergency Power Project, San Elijo Joint Powers Authority, Cardiff, California. Mr. Hill is the Project Engineer for the Emergency Power Project at San Elijo Water Reclamation Facility (SEWRF). Following failure of one of the units, the Authority contracted with Dudek and subconsultant Moraes Pham and Associates to evaluate the emergency power systems. Dudek prepared a preliminary design report that recommended replacement of the two generators with a single larger unit sized to accommodate anticipated critical future loads. Dudek is now at 75% design level (final design scheduled for December 2013) for demolition of the old generators and installation of a new 800 kW generator. To maintain compliance with current Fire Code and AQMD requirements, Dudek selected an outdoor-rated, sound-attenuated generator with integral base-mounted diesel fuel tank sized for 12-hours of run time. The abandoned generator rooms will be repaired and repurposed as maintenance and storage spaces.

Corona Del Mar Water Treatment Plant, Goleta Water District, Goleta, California. Mr. Hill is the Project Engineer for the Process Evaluation Study and Residual Management Design Project. The Corona Del Mar Water Treatment Plant (CDMWTP) is a 24 mgd conventional water treatment facility that treats water from Lake Cachuma and serves customers within the City of Goleta and the UC Santa Barbara campus. The District contracted Dudek to perform comprehensive plant performance evaluation focused on chemical treatment, filter performance, and residual management in response to changing regulations. Dudek commissioned field investigations including filter coring and backwash surveillance to analyze filter performance and media characteristics. In response to the Disinfection/Disinfection Byproduct Rule (D/DPR), the District began enhanced coagulation that the Dudek team confirmed is effectively reducing total organic carbon (TOC), but also significantly increases the sludge production on the existing sludge drying lagoons and backwash wastewater basin. Dudek evaluated the sludge wasting procedures from the sedimentation tanks and solids and hydraulic loading on the residual management facilities. Based on the recommendations of the Study, Dudek is currently producing construction plans and specifications for the immediate near-term projects.

Percolation Ponds Design, Lee Lake Water District, Lee Lake, California. Design of the 2-MG recycled water reservoir, relocated 1,600-gpm booster pump station, 10-ft diameter clearwell, 2 percolation basins totaling 2.5-acres in surface area. Project also includes multiple 12-inch and 18-inch pipelines to fill/drain reservoir and fill the percolation basins, and perimeter and basin maintenance access roads. Mr. Hill provide engineering services during construction include submittal and RFI review.

Water Reclamation Facility Influent Flow Equalization Basin, Lee Lake Water District, Corona, California. As project engineer, Mr. Hill was instrumental in the hydraulic design and layout of an in-line influent equalization tank incorporating a submersible pump station and jet aeration mixing. The influent equalization basin will alleviate treatment performance issues in the facility's sequencing batch reactor system caused by hydraulic challenges resulting from highly fluctuating diurnal flowrates.

RIX Tertiary Filter Pump Modifications, San Bernardino Municipal Water Department, California. The Department operates the Rapid Infiltration and Extraction (RIX) facility to filter and recycle or dispose of up to 40 mgd of treated effluent. During periods of reduced infiltration basin performance (e.g., during winter months), conventional filters (parallel trains: Dynasand media filters and Aquadisk cloth filters) provide supplemental tertiary treatment capacity at the RIX facility. The conventional filters are fed from a single, constant speed, "tertiary filter pump" installed in infiltration basin Turnout No. 2. The Department will be installing a second tertiary filter pump and make system modifications to increase the capacity of the pump station to 11 mgd (7,634 gpm). The Department wishes to be able to simultaneously pump to both the Dynasand media filters and Aquadisk cloth filters. Mr. Hill developed the control description to allow the Department to automatically modulate control valves to send specified flow rates to each conventional filter.

Kate Palmer, PE, LEED GA

Cost Estimating

Kate Palmer has worked as a professional engineer throughout California for the past 14 years. Her engineering responsibilities include project engineering and management, consisting of systems analysis, modeling, planning, and design of water, wastewater, and reclaimed water facilities.

Project Experience

Rancho California Indirect Potable Reuse Brine Conveyance Preliminary Design, Rancho California Water District, Temecula, California. Ms. Palmer serves as a Project Engineer for this project and is responsible for the preliminary

alignment and hydraulic evaluation of over 16 miles of 10-inch diameter HDPE brine conveyance pipeline and appurtenances as well as brine storage and pumping facilities. The project includes a detailed economic evaluation of these facilities in conjunction with evaluation of different indirect potable reuse treatment alternatives and locations.

Mountain View Moffett Field Recycled Water Pipeline, Palo Alto Regional Water Quality Control Plant, California. Ms. Palmer developed a facility plan including: market assessment of recycled water customers, creation of hydraulic model, analysis of alternative pipeline materials/alignments, and preparation of preliminary cost estimates. Ms. Palmer was also responsible for project design including over five miles of 15- to 30-inch pipe and appurtenances and six miles of 6- to 12-inch laterals for recycled water service.

Chino II Riverside Product Water Pipeline Project, Chino Basin Desalter Authority, Eastvale/Jurupa Valley, California. Ms. Palmer served as a Project Engineer for this project consisting of alignment analysis and design of approximately two miles of new 30-inch diameter CML&C water pipeline and appurtenances for the Chino Desalter Phase 3 expansion to complete connection from Hamner Avenue, along Riverside, to the Chino II Desalter Facility. Ms. Palmer implemented the design standards of several different agencies, including the City of Eastvale, City of Jurupa Valley, Jurupa Community Services District, and Caltrans, within existing CDA agreements to maintain the design standards of the jurisdiction in which the infrastructure is constructed. The new alignment crosses through an existing Caltrans right-of-way on Riverside Drive, beneath Interstate 15 and Ms. Palmer was able to negotiate the use of open-cut construction through the Caltrans right-of-way to reduce project costs and schedule delays. In addition to designing 11,000 linear feet of pipeline, Ms. Palmer was responsible for combining the designs of other design consultants for multiple segments of the product water pipeline into a single overall project bid package to accommodate multiple jurisdictional agency requests. Ms. Palmer reviewed submittals and RFIs during construction, including specialized steel pipeline line-lay shop drawings.

Chino Well Field Raw Water Pipeline, Chino Basin Desalter Authority, Chino, California. Ms. Palmer served as a Project Engineer for this raw water pipeline project. This project assisted in the expansion of the Chino Desalter system by conveying raw water from three new wells to the Chino 1 Desalter Plant. The project included alignment, hydraulic analysis, and design of almost two miles of new 12-inch and 16-inch diameter PVC pipeline and appurtenances. Ms. Palmer coordinated permitting with several different

EDUCATION

Stanford University
MS, Civil & Environmental Engineering, 2003

Michigan State University

BS, Biosystems Engineering, 2001

LICENSE AND CERTIFICATIONS

Professional Civil Engineer

CA No. 68695 LEED Green Associate

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

WaterReuse Association

agencies, including the City of Chino and the San Bernardino County Flood Control District. Ms. Palmer also completed RFIs and submittal responses during construction of the project.

Unit AA Raw Water Pipeline, Olivenhain Municipal Water District, California. Ms. Palmer was responsible for completion of hydraulic analysis and design of three miles of 48-inch diameter steel raw water pipeline and appurtenances. She also completed design of new turnout facilities at San Diego County Water Authority Pipeline 5 for the new 48-inch Unit AA pipeline.

Southeast Water Reliability Project, Central Basin Municipal Water District, Carson, California. Ms. Palmer provided quality assurance/quality control on contract documents for approximately 4 miles of 30-inch diameter steel recycled water transmission pipeline from the City of Vernon to the City of Pico Rivera, connecting to the existing recycled water network system at each end. Ms. Palmer also completed RFIs and submittal responses during construction of the project, including all shop drawings/lay length sheets for steel pipeline.

CTP Export Sludge Force Main Project, South Orange County Wastewater Authority, Laguna Niguel, California. Ms. Palmer serves as Project Engineer for this project and was responsible for the design of 4 miles of new 6-inch diameter HDPE export sludge force main and appurtenances for replacement of existing dual 4-inch diameter export sludge force mains from the Coastal Treatment Plant to a new connection at the Regional Treatment Plant. The pipeline conveys sludge through environmentally-sensitive park lands and the design takes into consideration special biological, archaeological, and erosion concerns with the use of less disruptive construction techniques such as jack and bore trenchless installation.

6-19 Southwest Costa Mesa Trunk Sewer, Orange County Sanitation District, Fountain Valley, California. Ms. Palmer served as Project Engineer on the project, which included an alternative analysis for a new truck sewer alignment. Ms. Palmer evaluated alternative hydraulics, permitting and environmental constraints, overall capital costs, operation and maintenance costs, and developed implementation plans, which were refined with a fine screening process, resulting in one alternative carried forward for a future project.

Crow Street Water & Sewer Pipelines, Yucaipa Valley Water District, California. Ms. Palmer served as a Project Engineer for this project consisting of the design of approximately one half mile of new 16-inch diameter ductile iron water pipeline, 24-inch diameter ductile iron recycled water pipeline and 24-inch diameter HDPE sewer pipeline and associated appurtenances on Crow Street serving the Wochholz Water Recycling Facility.

Trunk "D", County of San Diego, California. Ms. Palmer served as a Project Engineer for this project consisting of design of approximately one half mile of a new 18-inch diameter PVC and HDPE gravity trunk sewer, including jack and bore trenchless construction installations through Caltrans right-of-way. Ms. Palmer also completed RFI and submittal responses during construction.

City Wide Pump Station Upgrade Project, SPS 84 Upgrades, City of San Diego, California. Ms. Palmer completed hydraulic analysis and design of a new 1,200 gallon per minute sewage pump station as well as one half mile of new 12-inch diameter PVC gravity sewer and two miles of new 12-inch diameter PVC force main and appurtenances.

Jane Gray

Grant Funding

Jane Gray is an environmental specialist and project manager with over 11 years' project management and environmental planning experience, specializing in agricultural resource and policy planning, policy analysis, land use planning, and project development and entitlement services. Ms. Gray has worked as a project manager, analyst, and environmental planner for various nongovernmental and public agencies responsible for projects varying from small-scale development and infrastructure planning in developing economies to private residential and commercial development.

EDUCATION

Universität Dortmund, Dortmund, Germany
MS, Regional Planning and Management, 2001
State University of New York, Buffalo
BS, Social Work, 1995

PROFESSIONAL AFFILIATIONS

American Public Works Association

Project Experience

Grant Manager and Proposition 50 Grant Administration, City of Guadalupe, Guadalupe, California. Manages and administers the grant funds received by the city for the Wastewater Treatment Plant Improvement project under Proposition 50. Complies with all reporting requirements and interfaces with the county, state, and Regional Water Quality Control Board (RWQCB) on project-related issues and waste discharge requirements and compliance.

Grant Manager, Cuyama Community Services District, New Cuyama, California. Manages and administers the grant funds received by the district for two projects funded under Proposition 50. Prepares project assessment evaluation plans, quality assurance project plans, and other requirements of the state contract. Prepares and submits all invoices and supporting documentation in fulfillment of the state contract requirements, and assists in determination of grant-eligible work tasks and project scoping. Interfaces with the county, state, and RWQCB on project-related issues and National Pollutant Discharge Elimination Systems (NPDES) and waste discharge requirements and compliance. Interfaces with the California Department of Public Health on water system compliance and other grant opportunities for the district.

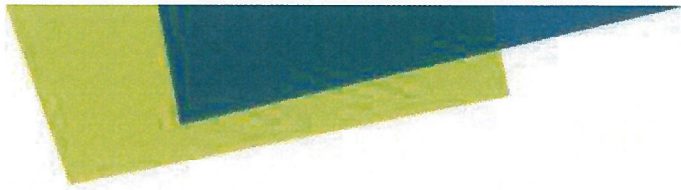
On-Call Grant Services, Water and Wastewater Divisions of Public Works, City of Santa Barbara, California. Assesses priority projects for the city and alignment with relevant state and federal grant programs. Serves as liaison for various funding organizations and entities and the city for successful project presentation. Prepares grant applications for the city's Water and Wastewater Divisions, advocates on behalf of the projects, and carries them through to funding realization.

Santa Barbara Countywide Integrated Regional Water Management (IRWM) Program Santa Barbara County Water Agency (SBCWA), Santa Barbara, California. The position entails overall program management assistance and coordination of more than 30 agencies and nonprofits involved in regional benefit projects for competitive grant applications and over 120 stakeholders. Coordinates and manages the public stakeholder process and all public outreach efforts associated with the IRWM program.

Santa Barbara Countywide IRWM Program Grant Applications, Proposition 84 and Proposition 1E, SBCWA, Santa Barbara, California. As extension of SBCWA staff, was part of a team that generated a Regional Acceptance Process application required for competition in the multiple rounds of funding associated with Proposition 84 and Proposition 1E under IRWM provisions. Participated in generation of the Proposition 84 Planning Grant Application submitted to the California Department of Water Resources (DWR) on September

28, 2010, and in the Proposition 84 Implementation Application submitted to DWR on January 7, 2011. The Implementation Grant Application was prepared on behalf of Santa Barbara County and six other jurisdictions/districts.

Santa Barbara Countywide IRWM Proposition 50, SBCWA, Santa Barbara, California. Provides project management assistance as extension of staff for the SBCWA in administration of grant funds received under Proposition 50. In addition to reviewing and coordinating the data-gathering and reporting requirements associated with the 14 projects under IRWM, serves as liaison with the State Water Resources Control Board on a variety of contentious issues related to select projects. Has provided key and effective support to the project proponents, county, and state to facilitate solutions and ease strained relations.



Mark B. Elliott, PE

Team Liaison

Mark Elliott is a project director at Atkins with 30 years of water, wastewater, and reclamation planning experience in San Diego County. He has completed major facility planning studies including water, wastewater, and recycled water master plans for many local city offices, public utilities districts, and municipal water districts. He currently serves as project manager on the Rainbow Water and Sewer Master Plan Update.

Mr. Elliott has served as team lead on a variety of master planning projects. He has led more than 20 water/wastewater master planning projects in Arizona and California over the past 5 years. Mr. Elliott's project experience includes:

Mr. Elliott's Atkins project experience includes:

Rainbow MWD 2015 Updates to Water and Wastewater Master Plans, Escondido, CA. 2015 Updates to the Water and Wastewater Master Plans, Rainbow Municipal Water District, CA. Atkins was retained by Rainbow to update the District's water and wastewater master plans, including a feasibility study for a District owned Wastewater Treatment/Reclamation Plant, comprehensive water supply evaluation, complete water and wastewater capital improvement programs and water and sewer capacity fee methodology recommendations. Mr. Elliott currently serves as project manager responsible for leading the Water, Wastewater and Treatment Plant engineering teams. In this capacity, Mr. Elliott facilitated several workshops with key stakeholders, including District Committees and the Board. He also has helped facilitate future development plan integration into long term infrastructure plans for the District including developing the framework for updated capacity fees. Mr. Elliott oversee the calibration and optimization of water and sewer hydraulic modeling for the District systems.

Water Master Plan Update, City of Escondido, CA. Project manager for the facilities master plan updates to a 10-year-old master plan. He has extensive knowledge of the water supply, water treatment plant operations, and water distribution systems for the City of Escondido. He directly managed the successful calibration of an extended period simulation hydraulic model of the city's water system. As part of the calibration, the project team spent considerable time working one-on-one with water treatment plant and distribution system operators to thoroughly understand the operations of the City's complex water system.

Rincon del Diablo Water Facilities Master Plan and Atlas Map Update, Rincon del Diablo Municipal Water District, Escondido, CA. Project manager for the preparation of the master plan that addresses not only the traditional "pipes, pumps, and tanks" master planning effort, but also takes a broader view of alternative water supplies and risk reliability analysis. Atkins evaluated and documented existing conditions and the capacity of existing potable and recycled water systems, reviewed water demand impacts of future development in accordance with adopted land use plans, evaluated current design criteria, updated the GIS-linked potable water hydraulic model, and recommended prioritized system improvements. As part of the water system model development, Atkins also prepared a new atlas map book by converting the District's existing AutoCAD drawings to a new GIS platform for ease of use, updating, and integration with the new water model.

Potable Water System Master Plan, City of Carlsbad, CA. Project manager for

Education

B.S., Civil Engineering, San Diego State University, 1984

Registrations/licenses

Professional Engineer
California 42064, 1987

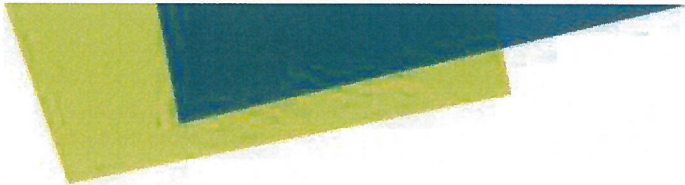
Professional affiliations

WaterReuse Association
American Society of Civil Engineers
American Public Works Association

Software

H2ONET
H2OMAPI
InfoWATER
InfoSWMM
InfoWORKS CS
ArcGIS/ArcMap

11-40

**Mark B. Elliott, PE**

Associate Vice President/Project Director

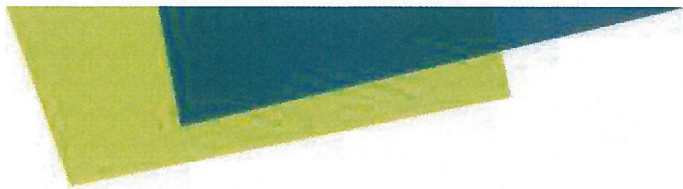
this study that updates the city's water master plan to integrate a new local desalinated water supply. Atkins used H2ONET software to model existing and future scenarios to evaluate optimum delivery conditions and project future pumping and storage needs. The city's GIS was used to accurately allocate existing demands and future demands for undeveloped properties. The master plans are being used as a reference for ongoing maintenance, future planning, and design of city infrastructure.

Wastewater Department As-Needed Services, County of San Diego, CA.

Project director for this multi-year contract. The County's primary focus is to efficiently operate and maintain its sewer sanitation districts. The goals are to enhance the system mapping, evaluate capacity issues, and assure financial stability, while ensuring compliance with California's Waste Discharge Requirements (WDR) for collection systems. This contract included preparing several sewer master plans for each distinct sewer service area or Sanitation District within the County of San Diego. The sewer master plans include a review of existing land use and wastewater design criteria, delineation of sewer basins, evaluation of CCTV inspection video tapes and condition assessment, InfoWorks dynamic sewer modeling, and development of 10-year CIP Plan. The planning effort is being fully integrated with the new GIS development, ongoing video inspection program, and long-range financial plans.

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ATKINS



Robert (Jud) Warren, PE, BCEE

Atkins Project Manager

Jud Warren has 34 years of engineering, management, and consulting experience and oversight for the planning, design, construction, and rehabilitation of water and wastewater projects throughout the western United States. Mr. Warren's professional career encompasses planning and design for new facilities and expansion of existing water treatment plants for surface water conventional, membrane, reverse osmosis, desalination, and groundwater treatment. He has also been in responsible charge of the planning and design of water conveyance projects incorporating large-diameter pipeline, condition assessment, and relining. His experience specific to wastewater systems engineering includes wastewater treatment projects involving headworks, liquid stream, activated sludge, solids processing and handling, odor control, and effluent reclamation and reuse, as well as designs for large-diameter sewer pipelines, condition assessment, rehabilitation design, and construction oversight.

Mr. Warren's relevant project experience includes:

Reservoir Design and Construction, City of San Diego, CA. Project manager for the construction phase services for two 21-million-gallon reservoirs for the Alvarado water treatment plant. The pre-stressed concrete reservoirs are an integral part of the city's water delivery system. Internal baffling was constructed to help achieve regulatory disinfections requirements (CT). Approximately 1,000 feet of 72- and 96-inch cement mortar-lined and coated welded-steel water pipeline were also constructed as part of this project. Evaluated, recommended, and oversaw final disposition of all claims during construction by the contractor.

Twin Oaks Valley Water Treatment Plant, San Diego County Water Authority, San Diego, CA. Principal-in-charge. Provided owner's agent services during design and construction of the 100-mgd, \$170 million Twin Oaks water treatment plant. The project was the Authority's first water treatment facility using the design-build-operate (DBO) method of project delivery. Duties included interpretation of the DBO contract scope between the Authority and the DBO. Evaluation of construction claims was a major part of the services provided.

Capital Improvement Projects Program Evaluation, Santa Clara Valley Water District, Santa Clara, CA. Task leader. Responsible for assessing and evaluating the District's capital improvement program (CIP) as part of a larger evaluation performed by a consortium of consulting firms. Evaluation included the nomination of projects for the CIP, rating and prioritization of the projects, and resulting workload evaluation for District resources.

Camp Pendleton Desalination Feasibility Study, San Diego County Water Authority, San Diego, CA. Project officer. Supervised the investigation and final preparation of a feasibility study for the development of a desalination facility at Marine Corps Base Camp Pendleton, Oceanside.

South Bay International Wastewater Treatment Facility, International Boundary and Water Commission, San Diego, CA. Assistant project manager. Participated in facility planning, design, and construction. The project included facility planning for a 160-acre site including a 100-mgd (200-mgd peak) ultimate wastewater treatment facility for the Commission and a 55-mgd treatment facility for the City of San Diego.

Education

B.S., Civil Engineering,
University of Houston, 1978

Registrations/licenses

Professional Engineer
California 43272, 1987
Arizona 20032, 1986

Certifications

Board-Certified Environmental
Engineer (BCEE), American
Academy of Environmental
Engineers

Honors and awards

Outstanding Civil Engineering
Achievement Award for the
*Alvarado Water Treatment Plant
Ozone Upgrade and Expansion
Project* for the City of San Diego,
Water Department, from the
American Society of Civil
Engineers, 2013.

Honor Award for *East Portal
Force Main Isolation Structure
Design* for the City of San Diego,
Metropolitan Wastewater
Department, from the Consulting
Engineers and Land Surveyors
of California, 1998.

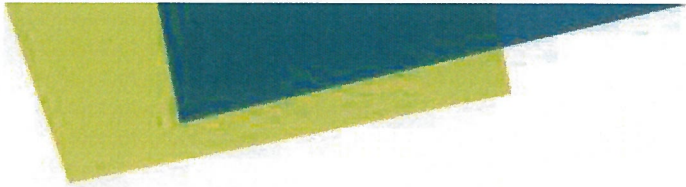
Distinguished Service Award for
*Water and Wastewater Services
to Annexed Area Program
Manager* from the City of Austin,
Texas, 1997.

Grand Prize for Small Projects
for *Initial Repair Project for the
South Metro Interceptor* for the
City of San Diego, Metropolitan
Wastewater Department, from
the American Academy of
Environmental Engineers, 1995.

Professional affiliations

American Council of Engineering
Companies (ACEC and ACEC-
Texas)

Past Member, Membership
Chairman, and Past President of
San Antonio chapter



Robert (Jud) Warren, PE, BCEE
Project Director

Sanitary Sewer Management Plan, City of Folsom, CA. Principal-in-charge. Directed preparation of a sanitary sewer management plan, assisting the City to comply with a consent order issued by the Regional Water Quality Control Board requiring capacity, management, operations, and maintenance (CMOM)-type controls for the City's sanitary sewer collection system.

Coast Trunk Sewer Condition Assessment and Rehabilitation Design, Orange County Sanitation District, Fountain Valley, CA. Project manager and Principal-in-charge. Managed and directed the \$1.5 million assessment of 3 miles of 54- and 84-inch-diameter sanitary sewers located in Highway 101. An evaluation of the existing PVC liner and exposed concrete was also completed, leading to the design of rehabilitation efforts. Final rehabilitation cost was approximately \$10 million.

Large-Diameter Water and Wastewater Pipeline Condition Assessments, City of San Diego, CA. Principal-in-charge. Responsible for a \$5 million, 3-year, as-needed services contract to assess the condition of large-diameter water and wastewater pipelines throughout the city. Based on assessment of the findings, various improvements to the City's water and wastewater facilities were recommended.

American Water Works Association (AWWA), Member
Association of California Water Agencies (ACWA), Associate Member

California Association of Sanitation Agencies (CASA) Associate Member

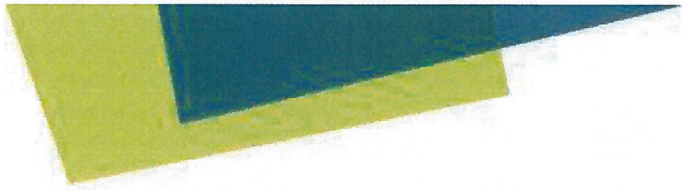
California Water Environment Association, Member

National Society of Professional Engineers, Member

Water Environment Federation (WEF), Member

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ATKINS



Roman K. Obzejta, PE

Preliminary Design for Pump Stations and Tanks; Cost Estimating

Roman Obzejta is a senior design engineer with more than 30 years of experience in the planning, design, bid, and construction support services for new, as well as rehabilitation/replacement of existing water and wastewater infrastructure facilities. He specializes in hydraulics and hydrology, engineering design, and computer applications related to water and wastewater systems. His project experience includes design of pump stations, pipelines, potable and recycled water, sewer, and storm drain facilities including lift stations, junction structures, wells and dispersion systems hydrology, computer modeling, and hydraulic analysis. Mr. Obzejta's responsibilities have included project presentation, scoping, scheduling, budgeting, design calculations and reports, preparation of plans and tender documentation, construction supervision, coordination with regulatory agencies, management of subconsultants, and shop drawing review. He has overseen junior staff, offered technical consultation, performed value engineering reviews, and coordinated project management issues. Mr. Obzejta's project experience includes:

Wastewater Master Plan Update, City of Coronado, CA. Project engineer for this project where Atkins has been contracted to prepare a sanitary sewer master plan update, comprehensive capital improvement program, and sewer rate study. The project includes development of a hydraulic model for use in analyzing existing and projected capacity constraints, video inspections of selected reaches of the sewer collection system for use in assessing the system condition, and development of a sound financial and revenue plan to fund the rehabilitation and replacement projects.

Citywide Sewer Asset Management Plan and Rate Study, Encinitas, CA. Senior engineer where Atkins was contracted by the City for the development of comprehensive and citywide sewer asset management plan that will provide guidance for the efficient management of the City's' sewer system assets, which include approximately 125 miles of wastewater collection system gravity mains and pipelines, four sewer pump stations, and more than 2,300 sewer manholes.

Black Mountain Ranch Water Studies, San Diego, CA. Senior engineer that provided water studies for Black Mountain Ranch to incorporate changes in the development plans and phasing. Updates to the previously submitted IIB Water Study include shifting of water main alignments, revised unit counts, and revisited phasing. Atkins ran the hydraulic water model and critical simulations to submit to the City of San Diego.

Hi-Desert Wastewater Collection System Design Services, Hi-Desert Water District, Yucca Valley, CA. Project engineer responsible for final design of three sewer pump station with capacities ranging from 250 gpm to 1,500 gpm. The project is the first of three phases to convert the existing private septic systems to a public sewer system, which will help protect groundwater quality in Yucca Valley. Scope of work also included site design, emergency storage, odor control, and emergency generators.

Water and Wastewater Facilities SCADA Design Services, County of San Diego, CA. Senior engineer assisted the County with the implementation of the master plan and design to upgrade supervisory control and data acquisition (SCADA) at 33 water and wastewater facility sites including pump stations, treatment plants, and monitoring locations. The communication system consists of radios mounted on the radio towers owned by the County Sheriff's Department.

Education

M.S., Sanitary –
Environmental Engineering,
Polytechnical University of
Warsaw, 1978

B.S., Mechanical
Engineering, Polytechnical
University of Warsaw, 1978

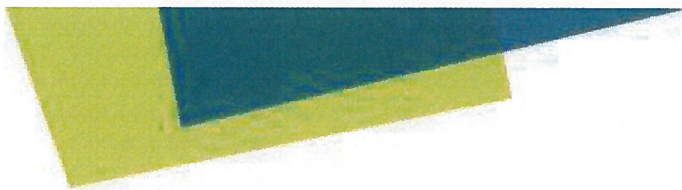
Registrations/licenses

Professional Engineer:
California, 42720, 1987

Professional affiliations

Water Environment
Federation

American Society of Civil
Engineers



Roman K. Obzejta, PE
Senior Engineer

Design includes radio path analysis for each location, site visits, design and preparation of construction drawings, and coordination with the Sherrif's Wireless Service Division (WSD) for tower access and radio system maintenance.

2013-14 Water System Improvements Design Services, Lake Havasu City, AZ.

Project engineer providing design services for Site 6A reservoir and Booster Pump Stations 5A and 1B, as well as tank rehabilitation support and small-diameter pipeline replacement projects. The City's 2007 Water Master Plan identified these projects as a high priority due to the existing stations being more than 40 years old, undersized and inefficient, and requiring a high level of maintenance. These projects will improve the water transmission and distribution systems, enhance pump station efficiency, and add redundancy across water pressure Zones 4 and 5.

11-4/5

ATKINS



Rick St. John, PE

Pipeline Alignment and Recycled Water User Information and Evaluations

Rick St. John has 19 years of engineering experience in water, sewer, storm drain, water/wastewater treatment, transmission and distribution pipelines, reclamation facilities, and onsite recycled water retrofit projects. His experience includes plan check services for multiple cities, agencies, and districts concurrently. Mr. St. John has pipeline design experience with PVC, steel, ductile iron, and HDPE materials including different types of applicable lining and coating materials necessary to protect the pipeline depending on the conveyed fluid and surrounding soil conditions. He has worked closely with corrosion specialists and is familiar with the materials and systems typically used in passive and impressed current cathodic protection systems. His responsibilities include utility research, alignment analysis, system layout and design, preparation of project specifications, and bidding assistance and construction support including contractor's RFI's, change order requests, shop drawing and submittal reviews, progress meetings, and support to agency staff and project managers. He has provided construction inspection services for many design projects.

Mr. St. John's Atkins project experience includes:

Camino del Sur Recycled Water Pipeline Conversion, City of San Diego, CA.

Project manager for the pipeline conversion project, which involved conversion of an existing pipeline to use recycled water. The project involved design of 2,600 linear feet of 16-inch C-905 PVC potable water pipeline and approximately 100 linear feet of 24-inch CML and tape wrapped steel pipeline which was required to provide the missing link between two previously installed recycled water pipelines. Approximately 1,100 linear feet of the potable PVC pipeline is located within Caltrans right-of-way and required an encroachment permit and Caltrans required this portion of pipeline to be encased within a casing pipe. To convert the existing recycled water system to convey recycled water, design included the removal of two existing cross-connection backflow preventers, and a check valve and vault and installation of a missing section of 24-inch steel pipeline to complete the transmission main. The existing steel pipelines on either side were cathodically protected by separate systems and system analysis was performed to ensure capacity to provide the necessary protection for the additional pipeline. This project involved modifications and/or replacement of 11 pedestrian curb ramps, slurry seal street resurfacing, and extensive traffic control to address the SR-56 on and off ramps and multiple intersection crossings.

Capital Improvement Projects, City of San Diego, CA. Project manager for emergency repair of two separate storm drain failure sites which required accelerated design schedules for FEMA funding. Responsible for the design of replacement pipelines, energy dissipation structures, and slope reconstruction. Project involved extensive coordination with City staff and jurisdiction agencies for mitigation of construction activities. Slope revegetation and long-term monitoring were included in the project scope of work. Construction is completed and projects are currently in the long-term monitoring stage of the revegetation process

Recycled Water System Program, City of San Diego, CA. Project engineer for the City of San Diego's Recycled Water System program, which involved complex aspects of connecting end users to the city's recycled water distribution system. Mr. St. John coordinated with multiple end users to assess existing irrigation systems, designed system modifications, identified signage locations, and created schematic

Education

B.S., Civil Engineering, San Diego State University, 1993

Registrations/licenses

Professional Engineer
California 57649, 1997

Honors and awards

Outstanding Graduate, College of Engineering, San Diego State University, 1993

Professional affiliations

American Society of Civil Engineers

Professional development

Chi Epsilon Civil Engineering Honor Society

Tau Beta Pi National Engineering Honor Society



Rick St. John, PE
Senior Engineer

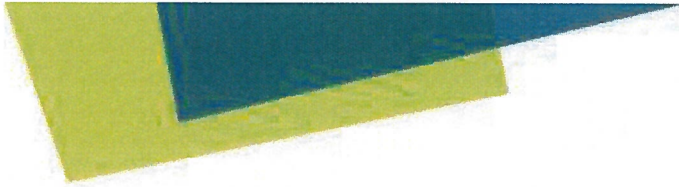
system drawings for State Department of Health Services' approval, as necessary for system conversion to recycled water. Mr. St. John has been involved with the successful recycled water use conversion of schools, industries, golf courses, and homeowner associations.

Genesee Avenue Reclaimed Water Distribution Subsystem, San Diego, CA.

Project engineer for the Genesee Avenue subsystem of the city's reclaimed water distribution system. The project consists of over 35,000 feet of pipe to convey Title 22 effluent from the North City Water Reclamation Plant to the Torrey Pines Golf Course, the University of California San Diego, and other reclaimed water users. Pipeline sizes range from 4-inch PVC to 36-inch CML and tapped wrapped steel pipe. The alignment required extensive coordination with Caltrans for the design of the pipeline segment that used the tunnel crossing under I-805 and the internal bridge cells of the Genesee Avenue/ I-5 overpass. Due to the magnitude, this project involved extensive utility coordination and construction support. His responsibilities included utility research, horizontal and vertical design, and CAD using Microstation V5, attending project meetings, coordinating with other agencies, and construction services.

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ATKINS



Justin A. Joseph, PE

Hydraulic Analysis

Joseph is a project engineer with 5 years of experience supporting planning and design of water and wastewater facilities including water and sewer master plans, water, wastewater and recycled water pump station and pipeline design, capacity fee studies, and construction support services. Justin has performed hydraulic calculations for water, sewer, and recycled water projects. His hydraulic modeling proficiency includes InfoWater, InfoSewer, InfoSWMM, H2Omap Water, H2Omap Sewer, ArcGIS, WaterCAD and StormCAD. Mr. Joseph' project experience includes:

2015 Updates to the Water and Wastewater Master Plans, Rainbow Municipal Water District, CA. Atkins was selected by Rainbow to update the District's water and wastewater master plans, including a feasibility study for a District owned Wastewater Treatment/Reclamation Plant, comprehensive water supply evaluation, complete water and wastewater capital improvement programs and water and sewer capacity fee methodology recommendations. Mr. Joseph was the project engineer responsible for preparation of the hydraulic models, their use in the development of the CIP, development of both master plan update reports and assistance with the WRP feasibility study.

2014 Rainbow Water System Model Update, Rainbow Municipal Water District, CA. Staff engineer currently assisting the District with the update of their existing water and wastewater hydraulic models. To perform this task he has reviewed the District's water and sewer sales and flow records in order to update each model's loading. In addition to updating the demands and loads in the existing models Mr. Joseph has performed several model runs to confirm and/or determine known or unknown deficiencies within each system.

Otay 1st & 2nd Pipeline Abandonment East of Highlands, City of San Diego, San Diego, CA. Project engineer responsible for assisting in the design of a replacement pipeline ranging from 8 to 16 inches in size. Design included the abandonment of more than a mile of 30 to 36 inch transmission pipe and the design for replacement of more than two miles of water distribution pipe. Pipeline alignment navigated several dense residential areas and also required environmental review and approval for crossing of Chollas Creek.

Energy Program Support, Encina Wastewater Authority, Carlsbad, CA. Staff engineer that developed a comprehensive financial and operational model of Wastewater Treatment Plant biogas, natural gas and electrical energy production and use. Model was used to help with decision making for fat, oil and grease (FOG) projects that the EWA implemented by analyzing the impact of such projects on plant operations and determining the payback periods and impacts to operations of several possible scenarios.

Trilogy Well Equipping Project, Elsinore Valley Municipal Water District, Corona, CA. Staff engineer for the design to equip an existing 0.4 MGD well, tie it into the existing distribution system near the site, and provide a pressure reducing station into a nearby reservoir, in Corona, CA. Project included coordination and comments from two agencies who shared rights to the well effluent as well as contact and coordination with several private individuals holding rights to land that the well pipeline traveled through to connect to the distribution system.

Wastewater Master Plan Update, City of Coronado, CA. Atkins was contracted to

Education

B.S., Civil Engineering, Cal Poly San Luis Obispo, 2010

Registrations/licenses

Professional Engineer
California, 84036, 2015

Professional development

InfoWorks ICM Sewer Edition
Integrated Catchment Modeling,
Inc., Innovyze, 2015

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Justin A. Joseph, PE
Engineer

prepare a sanitary sewer master plan update, comprehensive capital improvement program, and sewer rate study. The project included development of a hydraulic model for use in analyzing existing and projected capacity constraints, video inspections of selected reaches of the sewer collection system for use in assessing the system condition, and development of a sound financial and revenue plan to fund the rehabilitation and replacement projects. Mr. Joseph was the project engineer for this update. He was responsible for creating, running and analyzing the results of the sewer system model as well as assisting with CCTV assessment, rate study and generation of CIP projects.

2015 Water Master Plan Update, Otay Water District, Spring Valley, CA. The District has asked Atkins to prepare an update to the 2008 Water Resources Master Plan. Engineering services include: meeting with District staff, review of technical documentation, plan check and inspection services, and completion of any reports or documentation. Mr. Joseph served as the project engineer for this update. He was responsible for assisting with updates of land use and development projections, population and demand forecasts, and assisted with the water and recycled water modeling.

Citywide Sewer Asset Management Plan and Rate Study, City of Encinitas, CA. Atkins was contracted by the City for the development of comprehensive and citywide sewer asset management plan that will provide guidance for the efficient management of the City's' sewer system assets, which include approximately 125 miles of wastewater collection system gravity mains and pipelines, four sewer pump stations, and more than 2,300 sewer manholes.

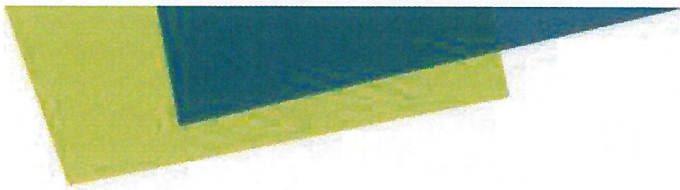
Cadence 2014 Water Master Plan Update, Henderson, NV. Atkins was contracted to provide a comprehensive update to the Water Master Plan for a 2000 acre master planned community in Henderson, NV. The City of Henderson will be the reviewing/approving agency. Mr. Joseph provided water modeling support including the updating of the existing model files with facilities constructed since the previous update, updated loading of the model and analysis against the system design criteria to update the pipeline projects required to serve the community.

Santa Monica Sustainable Water Master Plan, City of Santa Monica, CA. Project engineer and hydraulic modeler for the modeling and analysis of the existing distribution system in the built out City of Santa Monica. Modeling analysis was used to simulate current and future system deficiencies including addition of planned facilities to make recommendations for the long term CIP. Modeling was completed using InfoWater.

2014 San Bernardino Water Facilities Master Plan, San Bernardino Municipal Water District, San Bernardino, CA. Project engineer responsible for supporting the preparation of the master plan that addressed all of the water transmission and distribution facilities throughout the service area of the San Bernardino MWD. The project documented and evaluated the attributes of all existing facilities and reviewed facility needs to serve existing and future conditions.

11-49

ATKINS



Paul S. Garcia

CEQA-Related Environmental Guidance

Paul Garcia has 11 years of experience including an extensive background managing a wide range of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental compliance projects. Mr. Garcia is directly responsible for all aspects of project management including client communication, subconsultant management, project team coordination, document development and quality control, agency coordination, meeting facilitation, hearing presentations, and budget and schedule tracking. His technical experience includes working through and mitigating site specific issues related to environmental resource topics with an emphasis on water and wastewater infrastructure projects. Mr. Garcia has successfully lead environmental compliance and permitting efforts with a variety of state and federal resource agencies including the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Water Resources (DWR), California Department of Fish and Game (CDFG), and the State Water Resources Control Board (SWRCB).

Emergency Access Environmental Support Services, City of San Diego, CA.

Provided environmental support services for canyon access for sanitary sewer maintenance.

Prior to joining Atkins, Mr. Garcia's experience included:

Davis-Woodland Water Supply Project Environmental Impact Report, Water Right Acquisition Support and Permitting, Davis and Woodland, Yolo County, CA. Provided overall program coordination and project management for the development and completion of the California Environmental Quality Act (CEQA) and permitting process for the Davis Woodland Water Supply Project. The project includes the construction of a joint use surface water intake and positive barrier fish screen along the Sacramento River and the construction of conveyance infrastructure and a water treatment plant to supply the City of Davis, Woodland, and the University of California Davis with municipal and industrial water.

Department of Water Resources North Bay Aqueduct Alternate Intake Project Environmental Impact Report, Sacramento, Yolo, Solano and Napa Counties, CA. Deputy project manager. Assisted with screening alternative sites for the intake and pipeline based on environmental and engineering factors. Assisted in the management of the preparation of a comprehensive environmental impact report (EIR) on the proposed facilities and operations of the project. The proposed project would be designed to improve water quality and to provide reliable deliveries of State Water Project supplies to its North Bay contractors, the Solano County Water Agency and the Napa County Flood Control and Water Conservation District.

City of Fresno Metropolitan Water Resources Management Plan Update Environmental Impact Report, Fresno, CA. In coordination with City staff, served as the environmental project manager for the preparation of documents to satisfy California Environmental Quality Act (CEQA) for the development and implementation of the City of Fresno Metropolitan Water Resources Master Plan Update. The Program environmental impact report (EIR) included sufficient detail to address CEQA requirements for the overall Metro Plan and near-term site-specific projects.

Education

B.S., Environmental Policy Analysis and Planning, University of California at Davis, 2003

Professional affiliations

Association of Environmental Professionals, Member since 2009

American Planning Association (2006-2009)



Paul S. Garcia
Project Manager

Environmental Impact Report for Memorandum of Understanding Water Service to Shingle Springs Rancheria, El Dorado County, CA. Deputy project manager in support of the preparation of a focused environmental impact report (EIR) for a Memorandum of Understanding between the El Dorado Irrigation District (EID) and the Shingle Springs Rancheria for the provision of water service to the Rancheria. The project is in response to a court challenge of a California Environmental Quality Act (CEQA) exemption filed by EID. The El Dorado County Superior Court directed the district to prepare an EIR to analyze the environmental impacts associated with the provision of water service to the Shingle Springs Rancheria pursuant to the terms of the MOU.

California Public Utilities Commission/Golden State Water Company Sutter Pointe Development Project, Sutter County, CA. Project manager in support of the preparation of a focused tiered environmental impact report (EIR) for the California Public Utilities Commission to address the environmental impacts associated with the construction and operation of new water supply infrastructure by Gold State Water Company to support development of the Sutter Pointe Specific Plan Area in South Sutter County.

El Dorado Irrigation District, Folsom Lake Intake and Pump Station Replacement Project, El Dorado County, CA. Project manager and primary author of the environmental constraints analysis and environmental permitting strategy for the replacement of the existing Folsom Lake Intake and Pump Station for the El Dorado Irrigation District (EID). EID in collaboration with the United States Bureau of Reclamation is proposing to construct an intake and pump station adjacent to EID's existing raw water pumping facilities located on the northern shoreline of Folsom Lake. The project would allow EID to meet its existing and future water service demands and to selectively withdraw water from different elevations in the Lake based on water temperature, thereby preserving the cold water pool in the Lake for controlled releases by Reclamation.

Large Diameter Transmission Mains Project Initial Study/Mitigated Negative Declaration, Fresno, CA. In coordination with City of Fresno staff, led the preparation of an initial study (IS)/mitigated negative declaration (MND) to address environmental impacts associated with construction of two water transmission pipelines in downtown Fresno and in north Fresno, approximately 4 miles in length each.

Prop 84 Water Line Extension, Yuba City, CA. Project manager and primary author of a fast track Initial Study to assess the impacts associated with the construction of a 4.7 mile extension of the City's water system to existing mutual water companies west of the current City limits. City water service will be provided to existing residential subdivisions that have current water deficiency issues with the State of California.

Live Oak Pump Station and Force Main Project, City of Galt, CA. Project manager and primary author of the IS/MND to assess the environmental impacts associated with the construction of a new wastewater pump station and force main. The project would improve overall system reliability for the City of Galt consistent with planned growth outlined in the 2009 General Plan Update.

Doug Gillingham, P.E., BCEE

Contact Information

Gillingham Water
492 Santa Dominga
Solana Beach, CA 92075
o: 858-925-7370
m: 858-442-0711

Employment History

Gillingham Water Planning and
Engineering, Inc.
2012 to present
Principal

AECOM / Boyle Engineering
2010 to 2012, 1989 to 2002
Water Resources Practice
Leader / Principal Engineer
/ Senior Engineer

PBS&J
2002 to 2010
Principal Water Resources
Engineer

Los Angeles Department of
Water and Power
1982 to 1989
Assistant / Associate Civil
Engineer

Education

B.S., Civil Engineering,
University of Colorado at
Boulder

Registrations/Licenses

Professional Engineer
California (#C39567)

Certifications

Board Certified Environmental
Engineer (BCEE), American
Academy of Environmental
Engineers

Community Boards

President-Elect, San Elijo Lagoon
Conservancy
Past board member, Torrey Pines
Foundation
Past board member and Vice-
President, Solana Beach
Soccer Club

OVERVIEW

Doug Gillingham brings more than 30 years of experience helping clients plan and implement successful water projects and management plans. His experience includes the planning and surface water supply and storage, groundwater supply and storage, reclaimed water, conservation, and advanced water treatment projects. He is skilled at conducting and managing resource planning and facility planning projects in support of client needs for reliable, economical, and environmentally sustainable water supply solutions.

For the Rainbow 2015 Master Plan, Mr. Gillingham will lead the analysis of water supply strategies, and will support the project team with demand forecasting, treated water storage review, and other technical and strategic portions of the project. Mr. Gillingham's project experience includes:

REPRESENTATIVE PROJECT EXPERIENCE

Otay Water District 2008 and 2015 Water Master Plans, Spring Valley, CA. Task Lead for demand analysis and supply reliability planning. Developed an interactive demand forecasting tool to allow the District to test the sensitivity of the forecast to various conservation and growth scenarios, and to explore the implications of the forecast to the District's long-range supply plans.

2013 Water Master Plan, Rincon del Diablo Municipal Water District, Escondido, CA. Task Lead for water supply planning and supply reliability planning.

2010 Water Master Plan, City of Carlsbad, CA. Mr. Gillingham was task lead for system operations analysis and water supply planning for work on the Carlsbad Water Master Plan.

2008 Comprehensive Master Plan, Vallecitos Water District, San Marcos, CA. Task lead for the water supply planning. Mr. Gillingham's work presented the district with key information on project costs, supply reliability, and other criteria to support the District's decision process.

Twin Oaks Service Area Expansion Project, San Diego County Water Authority, San Diego, CA. Project consultant to a team evaluating the preferred means of expanding the Twin Oaks Valley Water Treatment Plant service area. Mr. Gillingham's work evaluated aqueduct system operations and hydraulic design issues, project benefits and costs, and environmental documentation strategies to help define project parameters for an expansion of the Valley Center Pump Station.

Groundwater Desalination Project Feasibility Study, City of San Diego, CA. Project Manager. Identified alternative source water quality scenarios, evaluated treatment train options appropriate for each scenario, and assessed project feasibility and costs. Investigated regulatory, institutional, and environmental constraints, and provided guidance on the next steps for project implementation.

General Plan, Water Supply Elements, County of San Diego, CA. Technical and policy advisor to a project team preparing a Program EIR for the County of San Diego's General Plan update. Helped guide the water supply elements of the document to provide clear presentation and legal defensibility.

Water Supply Assessments. Mr. Gillingham has managed or directed more than two dozen water supply assessment and documentation projects for California water agencies. These reports are required by California law as a condition of approval for certain large housing, commercial, and industrial development

Doug Gillingham, P.E., BCEE

projects. On many of these projects, Mr. Gillingham has assisted agencies and project owners with development of water conservation and recycled water offsets to mitigate for the new water demand of the project.

2005 Water Reuse Study, City of San Diego, CA. Task Lead for alternative comparison and evaluation methodologies, cost and economic analysis.

Los Angeles River Potable Supply Investigation, Los Angeles, CA. Project Manager for an investigation of the feasibility of utilizing a portion of the flow of the lower Los Angeles River as a reliable source of potable supply for the City of Long Beach. Mr. Gillingham led a team that identified project permitting and treatment constraints and costs, and that prepared a pilot testing plan for use by the City in advancing the concept to the CDPH regulatory review stage.



OFFICES

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Coachella Valley
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Sierra Foothills
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ONLINE

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Dawn Washburn

From:
Sent: Saturday, November 21, 2015 8:19 AM
To: Dawn Washburn
Subject: Exceptional performance, well orchestrated

Follow Up Flag: Follow up
Flag Status: Flagged

Staff at RMWD

I was impressed more appropriately I was surprised by the organization coagulated and orchestrated by the Staff of RMWD to repeal this efforts by Fallbrook Public Utility District (FPUD) to takeover RMWD. Your efforts were evident by the facts presented and your abilities to challenge the false statement being presented on their behalf. Along with your efforts to have members present to express their views and to show their overwhelming opposition against (FPUD) was another impressive factor. As usual proper preparation and organization pays dividends when encountering challenges of this nature.

Now! One might wonder why I waited so long to commend RMWD for their exceptional performance. Well! By now most of the employees of RMWD have salted this hostile takeover of RMWD away as just another challenge, Thing-Of-The-Past or HISTORY. AH! I just happen to be one of those individuals who is continuously examining the road ahead or reviewing the possibilities of the future. Without nosing around too much, I find there are some **deceitful** individuals with finance abilities within the FPUD arena, individuals who are not willing to except the setbacks recently delivered to interfering with their abilities to takeover RMWD.

Who am I and what do I know? Answer: VERY LITTLE. However, my background entices me to investigate the future and continuously plan for the unexpected.

I surmise or suspect this is not the last you have heard from Fallbrook Public Utility District. When the timing is right and RMWD least expect it, FPUD will be back with vengeance. AH! But this time they will be better prepared and present a frontal attack and take no prisoners. I need not present the necessary steps, it is evident that RMWD has the abilities to conduct their own inquires. However, as long as FPUD has been around their infrastructure should be in a very unfavorable state. I'm now finding myself venturing off into RMWD arena of expertise, which is a prime indicator it's time to terminate my comments.

Again thanks for your exceptional performance in shielding off Fallbrook Public Utility District.

Regards

Dan W. Showalter

Fallbrook, Ca. 92028

Dawn Washburn

From: dwashburn@rainbowmwd.com
Sent: Saturday, November 21, 2015 6:55 PM
To: Dawn Washburn
Subject: Form submission from Rainbow Municipal Water District

Name: Chris

Phone number:

Email address:

Comments: I just wanted to give a thanks to one of your meter techs, Chris Waite. It was a few months ago actually but he helped me with a leak out front when he was passing by, later that night when I was gone he came by and changed out a regulator. He was very nice and I wanted to thank him again for his help and effort!!

12131-2



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Construction & Maintenance Report

DESCRIPTION

Activities for Construction & Maintenance Division

Occurrences for October: 14

Main Line	4
Air/Vac	0
Blow-Off	1
Wharfhead	0
Valve	4
Fire Hydrant	1
Meter Lateral	3
Damage Done by Individuals	1

Total for 2015-2016 fiscal YTD: 73

Main Line	13
Air/Vac	12
Blow-Off	2
Wharfhead	6
Valve	9
Fire Hydrant	6
Meter Lateral	23
Damage Done by Individuals	2

A. The locations of failures are as follows:

Main Line Repairs

Job #	Date Reported	GPM	Status	Location	Cause
4235	8/7/15	150	Leak isolated	Redondo Drive	Wear out 6" CMLC
4238	9/22/15	15	Scheduled	Sterling View	Wear out 10" CMLC
4239	9/29/15	300	Completed	Margale Lane	Wear out 8" CMLC
4240	9/30/15	5	Completed	North River Road	Joint 10" CMLC
4241	10/6/15	100	Completed	Thoroughbred Lane	Wear out 14" CMLC
4242	10/8/15	250	Completed	Yucca Road	Workmanship 12" CMLC
4243	10/14/15	.5	Completed	Del Cielo Este	Joint 6" CMLC

1201-1

Main Line Repairs, Cont'd.

Job #	Date Reported	GPM	Status	Location	Cause
4245	10/26/15	6	Completed	5 th Street	Wear out 8" CMLC

Air Vac Repairs

Job #	Date Reported	GPM	Status	Location	Cause
26373	9/24/15	N/A	In progress	Hollyhill Road	Update to standards 1" Steel
26374	9/24/15	N/A	In progress	Hollyhill Road	Update to standards 1" Steel

Blow Off Repairs

Job #	Date Reported	GPM	Status	Location	Cause
27118	10/22/15	1	In progress	Aqueduct Road	Update to standards 2" Steel

Wharfhead Repairs

Job #	Date Reported	GPM	Status	Location	Cause
28133	9/23/15	8	Leak isolated	Pala Temecula	Broken stem 2" Brass
28134	9/24/15	N/A	In progress	Via La Orilla	Update to standards 2" Brass
28135	9/24/15	N/A	In progress	Villa La Orilla	Update to standards 2" Brass
28136	9/28/15	N/A	Completed	Old Highway 395	Update to standards 2" Brass

Meter Lateral Repairs

Job #	Date Reported	GPM	Status	Location	Cause
3202	9/23/15	1	Completed	Peony Drive	Wear out 1" Copper
3203	9/18/15	N/A	Completed	Rancho Heights	Maintenance 1" Copper
3204	10/13/15	N/A	Completed	Via Maria Elena	Maintenance 1" Copper
3205	10/13/15	.5	Completed	Olive Hill Road	Poly 1" Poly
3206	10/24/15	.5	Completed	Shady Hill Lane	Poly 1" Poly

Meter Lateral Replacements

Job #	Date Reported	GPM	Status	Location	Cause
NONE					

1201-2

Valve Repairs

Job #	Date Reported	GPM	Status	Location	Cause
5078	10/6/15	N/A	Completed	Thoroughbred Lane	Maintenance 14" Plug
5079	10/26/15	N/A	In progress	Magee Pump Station	Off-track 8" Plug

Valve Replacements

Job #	Date Reported	GPM	Status	Location	Cause
16122	10/22/15	N/A	In progress	Winter Haven	Broken stem 6" Gate
16123	10/29/15	N/A	In progress	El Paseo	Leaks through 6" Gate

Fire Hydrant Repairs

Job #	Date Reported	GPM	Status	Location	Cause
8597	10/22/15	N/A	Completed	So. Mission Road	Wear out 6" CMLC

Damage Done by Individual

Job #	Date Reported	GPM	Status	Location	Cause
8586	5/14/15	2,070	On hold	Reche Road	Hit by car 6" CMLC
4244	10/20/15	250	Completed	Cottontail Lane	Hit by contractor 8" Tar Wrap

1261-3

B. After-Hours Standby Calls

Total Standby calls for October: **46**

Checked for Leaks	5
Meter Leak Repairs	4
Turned Water Off (Locked Meter)	0
Turned Water On (Unlock Meter)	6
Complaints of No Water	6
High Pressure	6
Low Pressure	3
Alarms at RMWD	3
Wastewater Calls	0
Water Quality Calls	0
Backflow Calls	3
Customer Leak Calls	4
Emergency Locates	1
Miscellaneous Calls	5

Total Standby calls for fiscal year-to-date: **204**

Checked for Leaks	32
Meter Leak Repairs	20
Turned Water Off (Locked Meter)	6
Turned Water On (Unlock Meter)	25
Complaints of No Water	18
High Pressure	32
Low Pressure	5
Alarms at RMWD	7
Wastewater Calls	0
Water Quality Calls	4
Backflow Calls	7
Customer Leak Calls	21
Emergency Locates	1
Miscellaneous Calls	26



 John Maccarrone 12/15/15
 Construction and Maintenance Superintendent



 Juan Atilano 12/15/15
 Operations Manager

1201-4



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Valve Maintenance Report

DESCRIPTION

Activities for Valve Maintenance Division

A. Total valves operated in October: **429**

Total valves operated fiscal YTD: **1,500**

DISTRIBUTION VALVES

Gate	10" & smaller	71
Plug	10" & smaller	43
Butterfly	10" & smaller	0
Total Small:		114
Gate	12" & larger	16
Plug	12" & larger	20
Butterfly	12" & larger	4
Total Large:		40
Total Dist. Valves:		154

Gate	10" & smaller	253
Plug	10" & smaller	126
Butterfly	10" & smaller	0
Total Small:		379
Gate	12" & larger	54
Plug	12" & larger	41
Butterfly	12" & larger	9
Total Large:		104
Total FY Dist. Valves:		483

OTHER VALVES

Air Vacs – 1", 2", 4"	95
Blow Offs – 2"	50
Fire Hydrants – 6"	108
Wharfheads – 2"	22
Total Other Valves:	275

Air Vacs – 1", 2", 4"	378
Blow Offs – 2"	199
Hydrants & Hydrant Valves –	342
Wharfheads – 2"	98
Total FY Other Valves:	1,017

BROKEN VALVES

B. Total broken valves in October: **0**

Total broken valves for fiscal YTD: **35**

2" and Under	Repaired	0
	Replaced	0
	Discovered	0
4" and Over	Repaired	0
	Replaced	0
	Discovered	0

2" and Under	Repaired	0
	Replaced	7
	Discovered	2
4" and Over	Repaired	2
	Replaced	1
	Discovered	23

1702-1

UNABLE TO LOCATE

C. Total UTL valves in October: **0**

Total UTL valves for fiscal YTD: **2**

Checked	0
Found / Operated	0
Removed from Map Book	0

Checked	0
Found / Operated	0
Removed from Map Book	2

D. Other maintenance:

October:

2015-2016 fiscal YTD:

Air Vacs		1"	0
Replaced		2"	0
		4"	0
Air Vacs	Serv. Stops Installed		0
	Repaired		0
	Painted		3
Hydrants	Repaired		0
	Replaced		1
	Painted		0
Wharfheads	Repaired		1
	Painted		1
Pressure Station Valves	Adjusted		0
	Rebuilt		4
	Replaced		0
	Painted		0

Air Vacs		1"	6
Replaced		2"	2
		4"	0
Air Vacs	Serv. Stops Replaced		0
	Repaired		0
	Painted		13
Hydrants	Repaired		0
	Replaced		3
	Painted		5
Wharfheads	Repaired		1
	Painted		1
Pressure Station Valves	Adjusted		3
	Rebuilt		9
	Replaced		0
	Painted		0

E. Miscellaneous

October:

2015-2016 fiscal YTD:

Shutdowns	3
New Valves	7
Abandoned Valves	0
Underground Service Alert Locates	104

Shutdowns	10
New Valves	19
Abandoned Valves	0
Underground Service Alert Locates	321

John Maccarrone 12/15/15

Construction and Maintenance Superintendent

Juan Atilano 12/15/15

Operations Manager

1202-2

MAINTENANCE PLAN 2015-2016

2015								
Month	Planned Operation	Operated	Not Operable	PRV	Shut Downs	System Repair	Other Work, Yard	Map Book
Average	303.1	357.2	-----	-----	-----	-----	-----	-----
January	304	304	30	5	4	0	Yes	Yes
February	304	381	45	0	3	0	Yes	Yes
March	304	343	20	1	3	4	Yes	No
April	304	340	23	1	3	0	Yes	No
May	304	393	11	2	3	8	Yes	No
June	304	382	4	3	2	4	Yes	No
July	304	417	25	1	2	3	Yes	No
August	304	317	46	2	3	10	Yes	No
September	303	338	30	3	2	4	Yes	No
October	303	429	15	1	3	4	Yes	No
November	303							
December	303							
Totals 2015	3,644	3,644	249	19	28	37	-----	-----

2016								
Month	Planned Operation	Operated	Not Operable	PRV	Shut Downs	System Repair	Other Work, Yard	Map Book
January	303							
February	303							
March	303							
April	303							
May	303							
June	303							
July	303							
August	303							
September	303							
October	303							
November	303							
December	303							
Totals 2016	3,636	0	0	0	0	0	-----	-----

Total Valves in System: **7,280**

Valves Operated to Date: **3,644**

Valves Inoperable: **249**

1202-3



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Garage / Shop Report

DESCRIPTION

Activities for Garage/Shop Division – October, 2015

A. Maintenance/Service: 55

2015-2016 Fiscal YTD: 155

Vehicles	36
Small Equipment	2
Large Equipment	17

Vehicles	108
Small Equipment	10
Large Equipment	37

B. Emergencies: 1

2015-2016 Fiscal YTD: 18

Vehicles	0
Equipment	1

Vehicles	8
Equipment	10



 John Maccarrone 12/15/15
 Construction and Maintenance Superintendent



 Juan Atilano 12/15/15
 Operations Manager



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Water Operations Report

DESCRIPTION

Activities for Water Operations Division

A. October:

2015-2016 Fiscal YTD:

Tanks/Reservoirs	Maint. / Weeds	4
	Inspected	13
	Painted (Contractor)	0
	Repairs (Contractor)	0
	Repairs (RMWD)	2
	Residuals	420
Reservoir Covers	Repaired	0
	Inspected	3
	Washed/Cleaned	0
Pump Stations	Maint. / Weeds	245
	Painted	0
	Repaired	6
Chlorine Stations	Maint. / Weeds	140
	Painted	0
	Repaired	2
Back-up Generators	Tested	20
	Maintenance	0
Connection Reads		40
Morro PRVs		105
Flow Changes	SDCWA	81
Patrol Calls		19

Tanks/Reservoirs	Maint. / Weeds	12
	Inspected	42
	Painted (Contractor)	7
	Repairs (Contractor)	2
	Repairs (RMWD)	4
	Residuals	1,505
Reservoir Covers	Repaired	0
	Inspected	12
	Washed/Cleaned	3
Pump Stations	Maint. / Weeds	886
	Painted	0
	Repaired	10
Chlorine Stations	Maint. / Weeds	504
	Painted	0
	Repaired	6
Back-up Generators	Tested	72
	Maintenance	0
Connection Reads		144
Morro PRVs		378
Flow Changes	SDCWA	343
Patrol Calls		77



Marc Walker

12/15/15

Water Operations Superintendent



Juan Atilano

12/15/15

Operations Manager



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Electrical / Telemetry Report – October, 2015

DESCRIPTION

Activities for Electrical & Telemetry

A. Electrical:

2015-2016 Fiscal YTD:

Maintenance	Reservoirs & Tanks	0
	Pump Stations	2
	Lift Stations	0
	CL2 Stations	0
	District Offices	2
Repairs	Reservoirs & Tanks	0
	Pump Stations	2
	Lift Stations	0
	CL2 Stations	1
	District Offices	1

Maintenance	Reservoirs & Tanks	1
	Pump Stations	7
	Lift Stations	6
	CL2 Stations	0
	District Offices	10
Repairs	Reservoirs & Tanks	0
	Pump Stations	10
	Lift Stations	2
	CL2 Stations	3
	District Offices	2

B. Telemetry:

2015-2016 Fiscal YTD:

Maintenance	SDCWA Connection	0
	Tanks	0
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	5
Repairs	SDCWA Connection	0
	Tanks	0
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	0

Maintenance	SDCWA Connection	1
	Tanks	1
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	18
Repairs	SDCWA Connection	0
	Tanks	3
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	2
	District Offices	0

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C. Special Projects:

DATE	LOCATION	DESCRIPTION
10/1 – 10/7; 10/21 – 10/30/15	District Yard, Morro Tank & Pala Mesa	Work on panels for SCADA
10/12 – 10/16/15	District Offices	Induction system cut-over
10/12 – 10/16/15	“ “	Rough-in electrical for new office in Warehouse area



Marc Walker 12/15/15
 Water Operations Superintendent



Juan Atilano 12/15/15
 Operations Manager

1202-2

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Wastewater Report

DESCRIPTION

Activities for Wastewater Division

A. October, 2015:

Lift Stations	Maintenance	60
	Pump/Dry Well Repairs	8
	Wet Well Repairs	1
	Elect. Controls	6
	Generator Maint.	0
	Load Test	1
	Samples	1
Cleaning & Maintenance	Line Cleaning	5,069 ft.
	CCTV Inspection	0
	Easement Cleaning	6
	Customer Calls	5
Wet Wells	General Cleaning	17
High Frequency	Cleaning Areas	1,410 ft.
Collection	Sewer Line Repairs	0
Manholes	Raised	14
	Inspections	35
	Repairs	13
	Clean Roots	0

2015-2016 fiscal YTD:

Lift Stations	Maintenance	216
	Dry Well Repairs	40
	Wet Well Repairs	4
	Elect. Controls	25
	Generator Maint.	3
	Load Test	3
	Samples	6
Cleaning & Maintenance	Line Cleaning	20,352 ft.
	CCTV Inspection	2,907 ft.
	Easement Cleaning	13
	Customer Calls	10
Wet Wells	General Cleaning	64
High Frequency	Cleaning Areas	9,599 ft.
Collection	Sewer Line Repairs	0
Manholes	Raised	33
	Inspections	184
	Repairs	19
	Clean Roots	4


B. After-Hours Stand-by Calls:

Total Standby calls for October: **10**

Private Sewer Spills	0
RMWD Spills	0
Telemetry Alarms	1
Lift Station Alarms	0
High or Low Level Alarms	5
SmartCover Manhole Alarms	2
Customer Calls	2
Miscellaneous	0

Total Standby calls 2015-2016 fiscal YTD: **57**

Private Sewer Spills	0
RMWD Spills	0
Telemetry Alarms	14
Lift Station Alarms	2
High or Low Level Alarms	25
SmartCover Manhole Alarms	8
Customer Calls	8
Miscellaneous	0


Ramon Zuniga
Wastewater Superintendent

12/15/15


Juan Atlano
Operations Manager

12/15/15

1261



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Water Quality Report

DESCRIPTION

Activities for Water Quality Division – October, 2015

A. Samples:

2015-2016 Fiscal YTD:

Inlet/Outlet - Beck	MPN / HPC General Physicals Fluoride	Beck is offline
Open Reservoir - Beck	MPN / HPC General Physicals Fluoride Nitrification Testing	Beck is offline
Dosing	Copper Sulfate Sodium Hypochlorite	0 0
Tanks / Covered Reservoirs	Nitrification Testing Fluoride Specials	28 0 0
Morro Reservoir Zone	Ammonia / Nitrification	0
Routines		22
THM / HAA5		0
Specials		4


Inlet/Outlet - Beck	MPN / HPC General Physicals Fluoride	Beck is offline
Open Reservoir - Beck	MPN / HPC General Physicals Fluoride Nitrification Testing	Beck is offline
Dosing	Copper Sulfate Sodium Hypochlorite	0 0
Tanks / Covered Reservoirs	Nitrification Testing Fluoride Specials	171 0 3
Morro Reservoir Zone	Ammonia / Nitrification	0
Routines		88
THM / HAA5		4
Specials		12

B. Water Quality:

2015-2016 Fiscal YTD:

Dead End Flushing		0
Calls	Customer RMWD	1 0

Dead End Flushing		0
Calls	Customer RMWD	9 0


Joseph Pereira

Water Quality Technician

12/15/15


Juan Atilano

Operations Manager

12/15/15



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Cross Connection Control Program – October, 2015

DESCRIPTION

Activities for Cross Connection Control:

A. Currently, there are **4,879** backflow devices recorded in the system.

B. In October, the following was performed:


2015-2016 fiscal YTD:

Installation 1 st Notices sent	0
Installation 2 nd Notices sent	0
Installation 3 rd Notices sent	0
Customer complaints	0
Services locked due to noncompliance	0
New devices installed, inspected	2
Annual test notices sent	0
Annual devices tested	534
Device failures & repairs	28
Replaced devices	0
Correction inspections	0
Property inspections	0

Installation 1 st Notices sent	1
Installation 2 nd Notices sent	0
Installation 3 rd Notices sent	0
Customer complaints	0
Services locked due to noncompliance	0
New devices installed, inspected	5
Annual test notices sent	1,112
Annual devices tested	1,813
Device failures & repairs	93
Replaced devices	2
Correction inspections	0
Property inspections	0

C. Construction Meters - Backflow Tests: 0

D. Hangers for Blocked Access: 0



 Joseph Perreira
 Water Quality Technician

12/15/15



 Juan Atilano
 Operations Manager

12/15/15

12F2



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Engineering Report for November 2015

DESCRIPTION

CAPITAL PROJECTS:

Afton Farms Water Line Ext. (201449): Notice to proceed issued on December 1, 2015.

Gird to Monserate Hill (201045): Psomas is working on the preliminary design report. Pipe wall thickness and CCTV to inspect the interior of the pipe is scheduled in December 2015.

Horse Creek Lift Station (200555): Developer is working on obtaining the permit from Army Corps of Engineers.

Highway 76 East Segment (201260): Working to complete the Ramona waterline and sewer.

Lift Station 1 (201040): Staff is working with Caltrans regarding the site for the lift station.

Water Reclamation Plant & Recycled Water Distribution System (201672): Received two proposals. Interviews with the two firms are scheduled for December 2, 2015.

Wastewater Outfall Replacement (201266): Project on hold until further evaluation from the Master Plan and the WRP study.

OTHER PROJECTS:

Moosa Creek Mitigation Bank (201459): Staff working with Consultant on easement widening.

San Luis Rey Ground Water Sources (201446): Report being finalized.

Valley Center Regional Infrastructure Coordination: Agreement executed and analysis in progress.

Water and Wastewater Master Plans (201337W/201571WW): In progress.

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DEVELOPER PROJECTS:

Campus Park West (200542): Annexation approved by MET, SDCWA and LAFCO.

Dai Dang Meditation Center (90098): The waterline tie-in is scheduled for December 2015.

Golf Green Estates (90100): (near Lift Station 1): 94 SFR planned across from Bonsall Elementary School. Staff reviewing plan check number three.

Horse Ranch Creek Ridge (D.R. Horton - formally Campus Park, Passerelle) (90096): 850 WMs / 850 EDUs – Off of Highway 76 and Horse Ranch Creek Road. Plan check for units 1-4, wastewater, and water complete. Caltrans approved construction of forcemain and waterline in Highway 76. Project is under review with the Army Corps of Engineers and Pala Indians.

Malabar Ranch (90061): 31 WMs / 29 EDUs – There are 17 out of 31 homes built. Contractor shall complete waterline relocation and punch list items.

Nessy Burger (00000): Nessy Burger's is proposing to install a permanent building. Plan check one completed.

Olive Hill Estates (90066): 37 WMs / 59.2 EDUs – Contractor installing sewer and water improvements within the development. Model homes are open.

Pala Mesa Highlands (90056): 124 Lots on Old Highway 395. Plan check three completed.

OTHER:

ITEMS	NO#	ITEMS	NO#
Water Availability Letters	1	Water Meters Purchased	9
Sewer Availability Letters	1	Sewer EDUs Purchased	0
Water Commitment Letters	0	Scheduled/Emergency Shutdowns	6
Sewer Commitment Letters	0	Jobs Closed	0



Sherry Kirkpatrick 12/15/15
Engineering Manager



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Field Customer Service Report – October, 2015

DESCRIPTION

Activities for Customer Services Section:

A. Customer service calls responded to: **213**

Read for Transfer	64
Locked Service	25
Unlocked Service	19
Checked for High Pressure	11
Checked for Low Pressure	6
Reports of No Water	7
Delivered 48-Hour Notices	68
Waste - Drought	13

2015-2016 fiscal YTD: **941**

Read for Transfer	264
Locked Service	98
Unlocked Service	74
Checked for High Pressure	54
Checked for Low Pressure	21
Report of No Water	14
Delivered 48-Hour Notices	365
Waste - Drought	51


 Kenny Diaz 12/15/15
 Meter Services – Crew Leader


 Margaret Thomas 12/15/15
 Finance Manager

1241



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Meters Report – October, 2015

DESCRIPTION

Activities for Meter Services Section:

A. Meter Replacement:

2015-2016 fiscal YTD:

Stuck / Damage		Itron Repairs		New Itron Installations		Stuck / Damage		Itron Repairs		New Itron Installations	
5/8"	0	5/8"	0	5/8"	0	5/8"	0	5/8"	0	5/8"	0
3/4"	1	3/4"	0	3/4"	0	3/4"	34	3/4"	18	3/4"	0
1"	12	1"	0	1"	0	1"	52	1"	33	1"	0
1 1/2"	1	1 1/2"	0	1 1/2"	0	1 1/2"	5	1 1/2"	4	1 1/2"	0
2"	1	2"	0	2"	0	2"	13	2"	6	2"	0
3"	0	3"	0	3"	0	3"	1	3"	0	3"	0
4"	0	4"	0	4"	0	4"	0	4"	0	4"	0
6"	0	6"	0	6"	0	6"	0	6"	0	6"	0
TOTAL:	15		0		0		105		61		0


B. Meter service calls responded to: 480

2015-2016 fiscal YTD: 1,610

Meter Leaks Reported	29
Checked Meter Reads	420
Replaced Meter Heads	5
Troubleshoot Meters	26

Meter Leaks Reported	118
Checked Meter Reads	1,254
Replaced Meter Heads	34
Troubleshoot Meters	204


 Kenny Diaz 12/15/15
 Meter Services – Crew Leader


 Margaret Thomas 12/15/15
 Finance Manager

12H2



BOARD INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Safety Report – October 2015

DESCRIPTION

Safety and Regulatory Update

- A. Safety Training
 - Violence in the Workplace – 14 Employees
 - Safety Committee Meeting
- B. Tailgate Safety Meetings
 - Set up Safe Traffic Control
- C. Target Safety Online Training
 - Water Industry Computer Security Awareness
 - Water Industry Backflow Prevention Methods
 - Water Industry Disinfection Basics
 - Water Industry Water Main Installation

Jeff Stacy
Safety Administrator

12/15/15

Juan Atilano
Operations Manager

12/15/15

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INFORMATION

BOARD OF DIRECTORS

December 15, 2015

SUBJECT

Changes in Personnel and Reporting

DESCRIPTION

Delia Rubio Administration Assistant II has been promoted to Engineering Technician II effective October 19, 2015.

Vanessa Martinez joined the District's team effective November 23, 2015 as Finance Manager to become familiar with the day-to-day procedures from current Finance Manager Margaret (Midge) Thomas before she retires.

Jennifer Wise joined the District's team effective November 30, 2015 as Human Resources Technician I.

POLICY

N/A

FISCAL IMPACTS

N/A

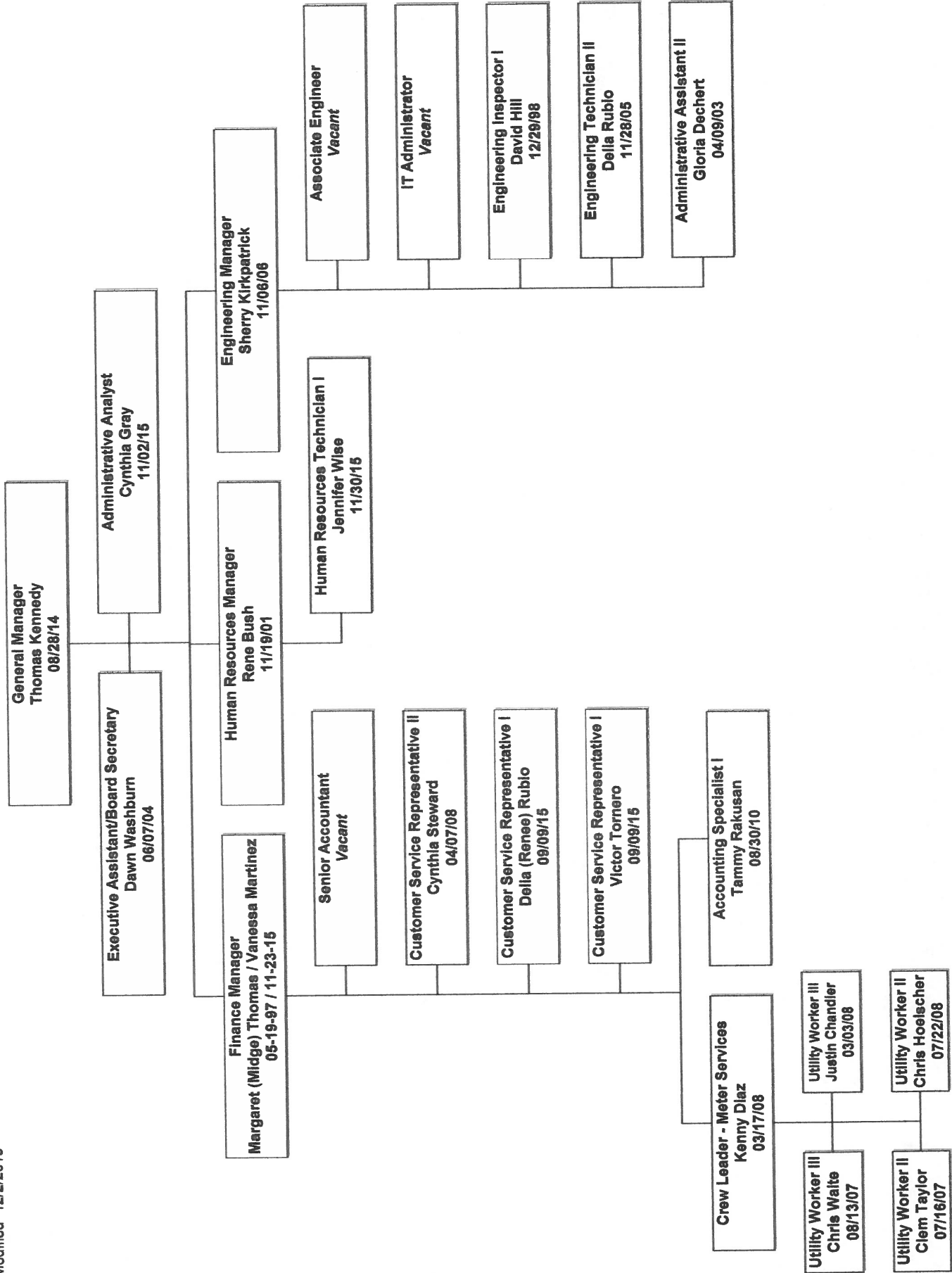
René Bush
Human Resources Manager

12/15/15

RAINBOW MUNICIPAL WATER DISTRICT
 ORGANIZATIONAL CHART
 PAGE 1 OF 2

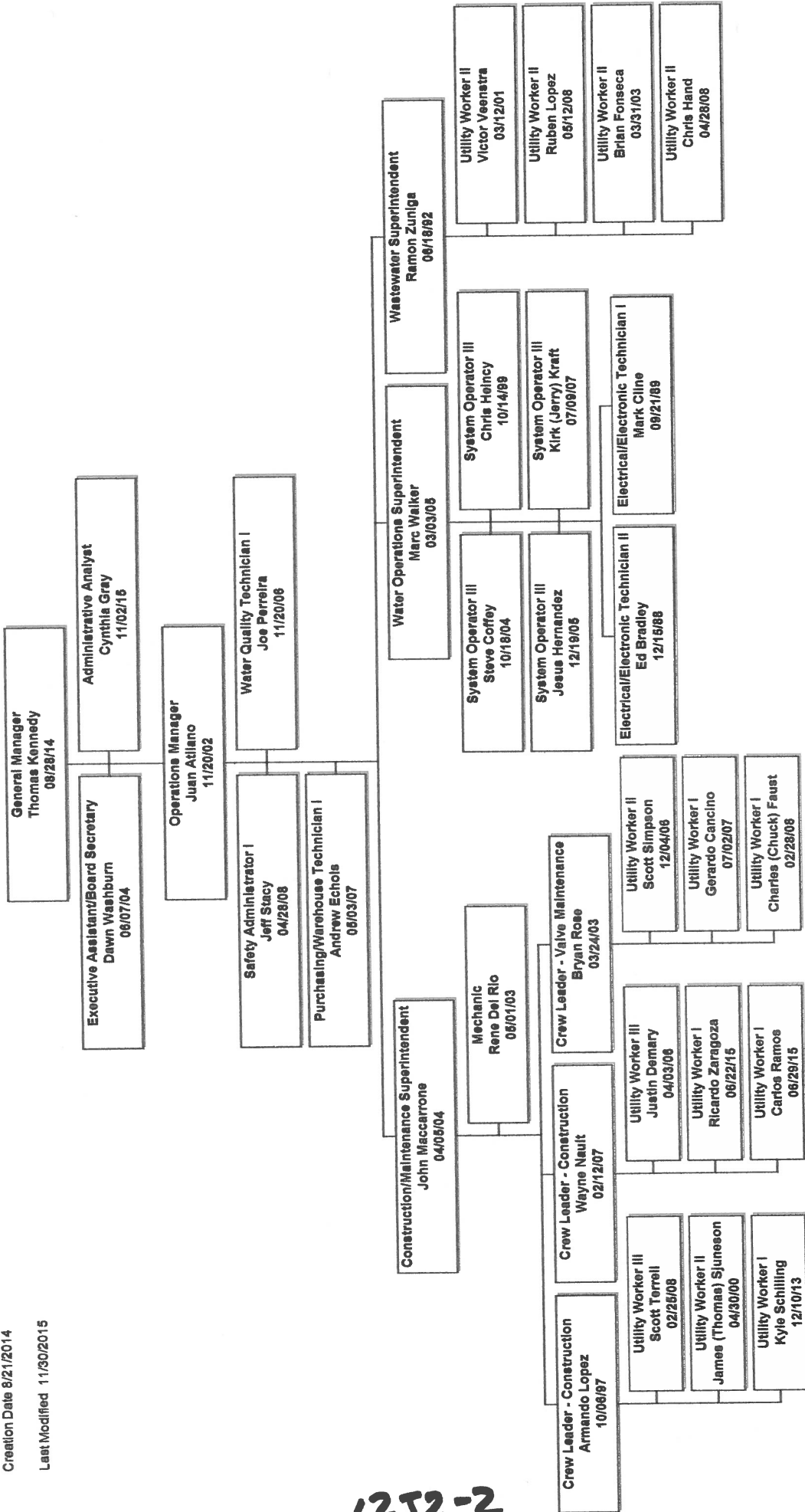
Creation Date 8/21/2014

Last Modified 12/2/2015



1252-1

Creation Date 8/21/2014
 Last Modified 11/30/2015



1252-2

