



AGENDA

**REGULAR MEETING OF THE BOARD OF DIRECTORS
LA PUENTE VALLEY COUNTY WATER DISTRICT
112 N. FIRST STREET, LA PUENTE, CALIFORNIA
MONDAY, JULY 9, 2018 AT 5:30 PM**

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL OF BOARD OF DIRECTORS

President Rojas _____ Vice President Escalera _____ Director Aguirre _____

Director Hastings _____ Director Hernandez _____

4. PUBLIC COMMENT

Anyone wishing to discuss items on the agenda or pertaining to the District may do so now. The Board may allow additional input during the meeting. A five-minute limit on remarks is requested.

5. ADOPTION OF AGENDA

Each item on the Agenda shall be deemed to include an appropriate motion, resolution or ordinance to take action on any item. Materials related to an item on this agenda submitted after distribution of the agenda packet are available for public review at the District office, located at the address listed above.

6. APPROVAL OF CONSENT CALENDAR

There will be no separate discussion of Consent Calendar items as they are considered to be routine by the Board of Directors and will be adopted by one motion. If a member of the Board, staff, or public requests discussion on a particular item, that item will be removed from the Consent Calendar and considered separately.

- A. Approval of Minutes of the Regular Meeting of the Board of Directors Held on June 25, 2018.
- B. Approval of District Expenses for the Month of June 2018.
- C. Approval of City of Industry Waterworks System Expenses for the Month of June 2018.
- D. Receive and File the District's Water Sales Report for June 2018.
- E. Receive and File the City of Industry Waterworks System's Water Sales Report for June 2018.

- F. Receive and File the June 2018 Water Production Report.
- G. Receive and File the Report on Director Expenses for the Second Quarter of 2018.

7. ACTION/DISCUSSION ITEMS

- A. Consideration of Comprehensive Water Rate Study prepared by Raftelis Financial Consultants, Inc.
Recommendation: Receive and File.
- B. Consideration of Capacity Fee Report prepared by Raftelis Financial Consultants, Inc.
Recommendation: Receive and File.
- C. Discussion on Changes to the District's Miscellaneous Fees.
Recommendation: Board Discretion.
- D. Consideration of the District's 2018 Summer Newsletter.
Recommendation: Approve the Newsletter for Distribution to the District's Customers.
- E. Consideration of Single Pass Ion Exchange Resin Replacement Services.
Recommendation: Authorize the General Manager to Enter into an Agreement with Evoqua Water Technologies for Resin Replacement Services.

8. GENERAL MANAGER'S REPORT

9. OTHER ITEMS

- A. Upcoming Events.
- B. Correspondence to the Board of Directors.

10. ATTORNEY'S COMMENTS

11. BOARD MEMBER COMMENTS

- A. Report on Events Attended.
- B. Other Comments.

12. FUTURE AGENDA ITEMS

13. ADJOURNMENT

POSTED: Friday, July 6, 2018

President William R. Rojas, Presiding.

Any qualified person with a disability may request a disability-related accommodation as needed to participate fully in this public meeting. In order to make such a request, please contact Mr. Greg B. Galindo, Board Secretary, at (626) 330-2126 in sufficient time prior to the meeting to make the necessary arrangements.

Note: Agenda materials are available for public inspection at the District office or visit the District's website at www.lapuentewater.com.



**MINUTES OF THE REGULAR MEETING OF
THE BOARD OF DIRECTORS OF THE
LA PUENTE VALLEY COUNTY WATER DISTRICT**

A regular meeting of the Board of Directors of the La Puente Valley County Water District was held on Monday, June 25, 2018, at 5:30 p.m. at the District office, 112 N. First St., La Puente, California.

Meeting Called to Order:

President Rojas called the meeting to order at 5:30 p.m.

Pledge of Allegiance:

President Rojas led the meeting in the Pledge of Allegiance.

Directors Present:

William Rojas, President; John Escalera, Vice President; Charles Aguirre, Director; David Hastings, Director.

Director Absent:

Henry Hernandez.

Others Present:

None

Public Comment:

None

Adoption of Agenda:

President Rojas asked for the approval of the agenda.

Motion by President Rojas, seconded by Director Aguirre, that the agenda be adopted as presented.

Motion approved by the following vote:

Ayes: Rojas, Escalera, Aguirre, and Hastings.

Nays: None.

Absent: Hernandez.

Consent Calendar:

President Rojas asked for the approval of the Consent Calendar.

- A. Approval of the Minutes of the Regular Meeting of the Board of Directors held on May 29, 2018.
- B. Approval of District Expenses for the Month of May 2018.
- C. Approval of City of Industry Waterworks System Expenses for the Month of May 2018.
- D. Receive and File the District's Water Sales Report for May 2018.
- E. Receive and File the City of Industry Waterworks System's Water Sales Report for May 2018.
- F. Receive and File the Water Production Report for May 2018.

- G.** Approve President William Rojas's Attendance to a Training Class of the Los Angeles County Consolidated Oversight Board for the First Supervisorial District on Tuesday, July 10, 2018, in Los Angeles, CA.

Motion by Director Aguirre, seconded by Director Hastings, to approve the consent calendar as presented.

Motion approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

Financial Reports:

- A.** Summary of Cash and Investments as of May 31, 2018.

- Mr. Galindo provided a summary of the balances in each account provided in the Summary of Cash and Investments. Mr. Galindo also pointed out a few large expense items that will be coming in the near future that will impact the District's cash balance.

Motion by President Rojas, seconded by Vice President Escalera, to receive and file the Summary of Cash and Investments as of May 31, 2018, as presented.

Motion was approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

- B.** Statement of the District's Revenues and Expenses as of May 31, 2018.

- Mrs. Herrera provided a summary of the statement of revenues and expenses for the District and explained the budget to date balances for various accounts.
- Mr. Galindo pointed out an adjustment on how the labor expenses are reported on the first page of the summary.

Motion by Vice President Escalera, seconded by President Rojas, to receive and file the Statement of the District's Revenues and Expenses as of May 31, 2018, as presented.

Motion was approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

- C.** Statement of the City of Industry Waterworks System's Revenues and Expenses as of May 31, 2018.

- Mrs. Herrera provided a summary of the statement of revenues and expenses for the City of Industry Waterworks and explained the budget to date balances for various accounts.

Motion by President Rojas, seconded by Director Hastings, to receive and file the Statement of the City of Industry Waterworks System's Revenues and Expenses as of May 31, 2018, as presented.

Motion was approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

Action/Discussion Items:

- A.** Consideration of Declaration of District's Truck No. 20 (2006 Ford F-150 Pickup Truck) as Surplus Property and Authorization of Sale Thereof.

- Mr. Galindo summarized the staff report for this item that was provided in the meeting agenda packet.
- Vice President Escalera inquired about the auction process. Mr. Galindo provided an overview of how the truck will be auctioned off. He added that the truck will not be sent to auction until the new replacement truck has been received and is ready for use

After further discussion, motion by President Rojas, seconded by Director Hastings, to declare District's Truck No. 20 as Surplus Property and authorize District Staff to sell the vehicle via action at Ken Porter Auctions.

Motion approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez

B. Consideration of Purchase of a 2019 Chevrolet Silverado 1500 Double Cab Pickup Truck.

- Mr. Galindo summarized the staff report for this item that was provided in the meeting agenda packet.
- Mr. Galindo provided additional information on the acquisition of bids for the new truck and on the maintenance providers for the District's fleet.

After further discussion, motion by President Rojas, seconded by Director Hastings, to authorize the purchase of a 2019 Chevrolet Silverado 1500 Double Cab Pickup Truck from National Auto Fleet Group for a price of \$28,285.53.

Motion approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

Engineering & Compliance Manager's Report

- Mr. Frausto provided information on several items included in his monthly report.
- Mr. Galindo provided additional information regarding the District's Recycled Water Project. He reported that it does appear that the Prop. 84 Grant was extended to December 31, 2019.
- Mr. Frausto provided additional information regarding the PVOU Shallow Zone South Project. He reported that Northrop has indicated that they will be providing a term sheet for the operation of this project for the District to consider.
- Mr. Galindo provided some additional information on Shallow Zone South Project followed by a discussion amongst the Board Members and Staff regarding the project.
- Mr. Frausto summarized the Annual Report to the Division of Drinking Water that was included as an attachment to his report.

After further discussion, motion by Director Aguirre, seconded by President Rojas, to receive and file the Engineering and Compliance Manager's Report as presented.

Motion was approved by the following vote:

Ayes: Rojas, Escalera, Aguirre and Hastings.

Nays: None.

Absent: Hernandez.

General Manager's Report:

- Mr. Galindo reported that during his recent vacation, staff did a good job of taking care of the day to day business and thanked staff for their efforts.
- Mr. Galindo provided an update on the upcoming Newsletter and the Water Rate Study.
- Mr. Galindo provided an update on the motion video that he has been working on with Ready Artwork.

- Mr. Galindo also provided an update on a few legislative items.

Information Items:

A. Upcoming Events.

- Mr. Galindo provided an update on upcoming events. He verified with the Directors who will be planning on attending the next few events.

B. Correspondence to the Board of Directors.

- Included in the Board Meeting Agenda Packet.

Attorney Comments:

Mr. Trinh had no comments.

Board Member Comments:

A. Report on events attended.

- President Rojas reported that he attended 1 event; AWWA 2018 Annual Conference June 12th – 14th.
- Vice President Escalera reported that he attended 1 event; AWWA 2018 Annual Conference June 12th – 14th.
- Director Hernandez reported that he attended 1 event; AWWA 2018 Annual Conference June 12th – 14th.
- Director Hastings reported that he attended 1 event; AWWA 2018 Annual Conference June 12th – 14th.

B. Other comments.

- No other comments

Future Agenda Items:

No Future Agenda Items.

Adjournment:

With no further business or comment, the meeting was adjourned 6:22 p.m.

William R. Rojas, President

Greg B. Galindo, Secretary

La Puente Water District June 2018 Disbursements

Check #	Payee	Amount	Description
5789	Petty Cash	\$ 35.00	Office Expense
5790	Evoqua	\$ 93,327.47	Carbon Changeout
5791	Hopkins Technical Products	\$ 173.30	Field Supplies
5792	Konecranes	\$ 329.00	Quarterly Inspection & Maintenance
5793	Locus Technology	\$ 252.00	Technical Support
5794	McMaster-Carr Supply Co	\$ 63.81	Field Supplies
5795	Northstar Chemical	\$ 7,688.66	Chemicals Expense
5796	Sierra Instruments	\$ 791.39	Air Stripper Expense
5797	Weck Laboratories Inc	\$ 2,209.50	Water Sampling
5798	Weck Laboratories Inc	\$ 1,818.52	Water Sampling
5799	Northstar Chemical	\$ 2,743.58	Chemicals Expense
5800	So Cal Industries	\$ 141.00	Restroom Service @ Treatment Plant
5801	Time Warner Cable	\$ 567.89	Telephone Service
5802	Waste Management of SG Valley	\$ 194.10	Trash Service
5803	The Weeks Group	\$ 1,250.00	Property Appraisal
5804	Ready Artwork	\$ 2,100.00	Public Outreach
5805	CCSInteractive	\$ 54.40	Monthly Website Hosting
5806	Chevron	\$ 3,259.92	Truck Fuel
5807	County Sanitation Dists of LA County	\$ 93.73	Refuse Fee's
5808	Coverall North America Inc	\$ 255.00	Cleaning Expense
5809	Downs Energy Inc	\$ 503.05	Truck Maintenance
5810	Highroad IT	\$ 402.00	Technical Support
5811	Industry Public Utilites	\$ 28,750.07	Web Payments
5812	Industry Tire Service Inc	\$ 25.00	Truck Maintenance
5813	Lagerlof, Senecal, Gosney & Kruse	\$ 908.00	Attorney Fee's
5814	Merritt's Hardware	\$ 458.96	Field Supplies
5815	SC Edison	\$ 3,894.39	Power Expense
5816	Time Warner Cable	\$ 279.97	Telephone Service
5817	Trisys Inc	\$ 846.45	Technical Support
5818	U.S. Postal Service	\$ 296.00	Postage
5819	Underground Service Alert	\$ 77.60	Line Notifications
5820	Valley Vista Services	\$ 314.72	Trash Service
5821	Weck Laboratories Inc	\$ 203.50	Water Sampling
5822	Whittier Fertilizer Co	\$ 917.28	Property Maintenance
5823	Answering Service Care	\$ 114.01	Answering Service
5824	Associated Soils Engineering Inc	\$ 625.00	Banbridge Pump Station Project
5825	CalPERS	\$ 31,250.00	Unfunded Acrual Liability
5826	Ed Butts Ford	\$ 449.20	Truck Maintenance
5827	Ferguson Waterworks	\$ 491.21	Meter Expense
5828	Highroad IT	\$ 435.00	Software Licensing
5829	Platinum Consulting Group	\$ 492.50	Administrative Support
5830	Resource Building Materials	\$ 24.58	Field Supplies

La Puente Water District June 2018 Disbursements - continued

Check #	Payee	Amount	Description
5831	Time Warner Cable	\$ 301.25	Telephone Service
5832	Whittier Fertilizer Co	\$ 458.64	Property Maintenance
5833	The Weeks Group	\$ 1,250.00	Property Appraisal
5834	Cesar A Ortiz	\$ 130.00	Exam Reimbursement
5835	John P Escalera	\$ 836.78	AWWA 2018 ACE Expenses
5837	William R Rojas	\$ 965.52	AWWA 2018 ACE Expenses
5838	David H Hastings	\$ 1,342.85	AWWA 2018 ACE Expenses
5839	ACWA/JPIA	\$ 31,327.59	Health Benefits
5840	Bank of America-Visa	\$ 2,714.86	Conference & Administrative Expenses
5841	Cell Business Equipment	\$ 36.58	Office Expense
5842	Citi Cards	\$ 972.36	Conference, Admin & Compliance Expenses
5843	Discount Tree Services	\$ 1,600.00	Property Maintenance
5844	Ferguson Waterworks	\$ 730.00	Del Valle Housing Project
5845	InfoSend	\$ 907.93	Billing Expense
5846	Jack Henry & Associates	\$ 35.50	Web E-Check Fee's
5847	Lagerlof, Senecal, Gosney & Kruse	\$ 4,223.34	Attorney Fee's
5848	Lincoln National Life Insurance Company	\$ 643.89	Disability Insurance
5849	MetLife	\$ 298.11	Life Insurance
5850	Premier Access Insurance Co	\$ 2,937.70	Dental Insurance
5851	Raftelis Financial Consultants	\$ 6,000.00	Water Rate Study
5852	Ready Artwork	\$ 2,100.00	Public Outreach
5853	San Gabriel Valley Water Company	\$ 168.14	Water Service @ Treatment Plant
5854	Staples	\$ 178.03	Office Supplies
5855	Verizon Wireless	\$ 805.71	Cellular Service
5856	Weck Laboratories Inc	\$ 590.00	Water Sampling
5857	Western Water Works	\$ 5,847.63	Field Supplies - Inventory
5858	SC Edison	\$ 32,901.97	Power Expense
5859	So Cal Industries	\$ 141.00	Restroom Service @ Treatment Plant
5860	Petty Cash	\$ 13.99	Office Expense
5861	Henry P Hernandez	\$ 1,075.77	AWWA 2018 ACE Expenses
Online	Home Depot	\$ 381.27	Field Supplies
Autodeduct	Bluefin Payment Systems	\$ 775.54	Web Merchant Fee's
Autodeduct	Wells Fargo	\$ 359.74	Bank Fee's
Autodeduct	Wells Fargo	\$ 192.21	Merchant Fee's
Autodeduct	First Data Global Leasing	\$ 43.80	Credit Card Machine Lease
Online	Lincoln Financial Group	\$ 3,574.00	Deferred Comp
Online	CalPERS	\$ 11,940.78	Retirement Program
Online	Employment Development Dept	\$ 3,893.72	California State & Unemployment Taxes
Online	United States Treasury	\$ 23,102.92	Federal, Social Security & Medicare Taxes
Total Payables		\$ 334,905.88	

La Puente Valley County Water District
Payroll Summary
June 2018

	June 2018
Employee Wages, Taxes and Adjustments	
Gross Pay	
Total Gross Pay	98,935.09
Deductions from Gross Pay	
Total Deductions from Gross Pay	<u>-4,722.36</u>
Adjusted Gross Pay	94,212.73
Taxes Withheld	
Federal Withholding	-7,937.00
Medicare Employee	-1,437.27
Social Security Employee	-6,145.69
CA - Withholding	-3,864.12
Medicare Employee Addl Tax	<u>0.00</u>
Total Taxes Withheld	<u>-19,384.08</u>
Net Pay	74,828.65
Employer Taxes and Contributions	
Total Employer Taxes and Contributions	<u><u>7,801.56</u></u>

La Puente Water District June 2018 Disbursements

Total Vendor Payables	<u>\$ 334,905.88</u>
Total Payroll	<u>\$ 74,828.65</u>
Total June 2018 Disbursements	<u>\$ 409,734.53</u>

Invoice No. 4- 2018-06



July 1, 2018

BPOU Project Committee Members

RE: BPOU O & M Expense Reimbursement Summary

The following cost breakdown represents O & M expenses incurred by the LPVCWD for the month of June 2018.

BPOU Acct No.	Description	Invoice No.	Vendor	Amount	Subtotal			
LP.02.01.01.00	Power	2-15-629-6188	SC Edison	\$ 17,744.23	\$ 32,901.97			
		2-03-187-2179	SC Edison	\$ 15,157.74				
LP.02.01.02.00	Labor Costs	Jun-18	LPVCWD	\$ 24,767.18	\$ 24,767.18			
LP.02.01.05.00	Transportation	Jun-18	LPVCWD - 1695 miles @ .545	\$ 923.78	\$ 923.78			
LP .02.01.07.00	Water Testing	W8A0756	Weck Labs	\$ 226.50	\$ 6,711.40			
		W8A1638	Weck Labs	\$ 226.50				
		W8B0292	Weck Labs	\$ 169.00				
		W8B0382	Weck Labs	\$ 740.00				
		W8B1055	Weck Labs	\$ 105.00				
		W8C0716	Weck Labs	\$ 88.00				
		W8D1323	Weck Labs	\$ 138.00				
		W8E0300	Weck Labs	\$ 153.00				
		W8E1048	Weck Labs	\$ 139.00				
		W8E1522	Weck Labs	\$ 226.50				
		W8E1984	Weck Labs	\$ 173.40				
		W8F0125	Weck Labs	\$ 125.00				
		W8F0347	Weck Labs	\$ 169.00				
		W8F0429	Weck Labs	\$ 200.00				
		W8F0686	Weck Labs	\$ 108.00				
		W8F0689	Weck Labs	\$ 56.00				
		W8F0863	Weck Labs	\$ 169.00				
		W8F0864	Weck Labs	\$ 226.50				
		W8F0934	Weck Labs	\$ 9.00				
		W8F0935	Weck Labs	\$ 200.00				
		W8F0975	Weck Labs	\$ 108.00				
		W8F0976	Weck Labs	\$ 331.50				
		W8F1362	Weck Labs	\$ 562.00				
		W8F1363	Weck Labs	\$ 56.00				
		W8F1426	Weck Labs	\$ 307.00				
		W8F1427	Weck Labs	\$ 226.50				
		W8F1874	Weck Labs	\$ 307.00				
		W8F1875	Weck Labs	\$ 307.00				
		W8F1876	Weck Labs	\$ 139.00				
		W8F1879	Weck Labs	\$ 56.00				
		W8F2053	Weck Labs	\$ 56.00				
		W8G0010	Weck Labs	\$ 200.00				
		W8G0011	Weck Labs	\$ 204.00				
		W8G0186	Weck Labs	\$ 204.00				
		LP.02.01.10.00	Operations Monitoring	9462; 06/18		Time Warner Cable	\$ 267.89	\$ 643.91
				2906; 06/18		Time Warner Cable	\$ 300.00	
9809137139	Verizon			\$ 76.02				
<u>LP.02.01.12.00</u>	<u>Materials/Supplies</u>							
LP.02.01.12.06	Sodium Hypochlorite	124105	Northstar Chemical	\$ 2,010.48	\$ 3,953.75			
		125087	Northstar Chemical	\$ 1,943.27				
LP.02.01.12.08	Ortho-Polyphosphate	8176	Sterling Water Technologies	\$ 1,810.10	\$ 1,810.10			
LP.02.01.12.15	Other Expendables	10992490	Hach	\$ 436.05	\$ 667.58			
		4060687	Home Depot	\$ 35.87				
		3071361	Home Depot	\$ 28.85				
		6020341	Home Depot	\$ 99.63				
		5010524	Home Depot	\$ 23.71				
		105852	Merritt's	\$ 35.01				
		105900	Merritt's	\$ 8.46				
LP.02.01.12.17	Sulfuric Acid	125370	Northstar Chemical	\$ 1,982.20	\$ 1,982.20			
LP.02.01.14.00	Repair/Replacement	65378167	McMaster-Carr	\$ 191.05	\$ 1,643.14			
		65378772	McMaster-Carr	\$ 397.13				
		162367	Sierra	\$ 640.78				
		5444020	U.S. Plastic Corp	\$ 414.18				
LP.02.01.15.00	Contractor Labor	02-18-052	RC Foster	\$ 2,085.99	\$ 4,869.23			
		02-18-053	RC Foster	\$ 2,783.24				
LP.02.01.16.00	Direct Eng Stetson/Legal	1960-1801	Stetson	\$ 708.04	\$ 708.04			
LP.02.01.80.00	Other O & M	20050	HighRoad IT	\$ 134.00	\$ 1,459.14			
		19022	MJM Communications	\$ 575.98				
		30703	Platinum Consulting Group	\$ 225.00				
		327734	So Cal Industries	\$ 141.00				
		331809	So Cal Industries	\$ 141.00				
		3218	Staples	\$ 48.06				
		5-13845-75006	Waste Management	\$ 194.10				
				Total Expenditures	\$ 83,041.42			
				District Pumping Cost Deduction	\$ 14,396.71			
				Total O & M	\$ 68,644.71			
				Total Capital Cost Reimbursable	\$ -			
				Total Cost Reimbursable	\$ 68,644.71			

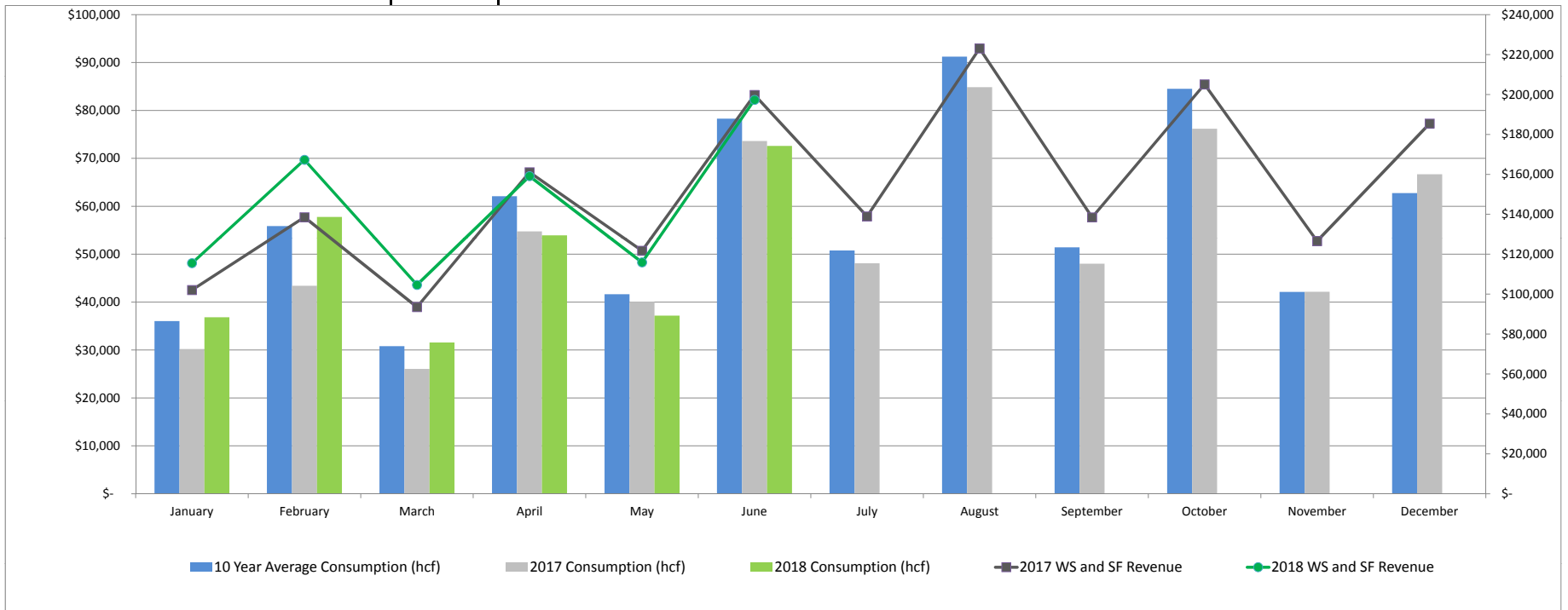
Industry Public Utilities June 2018 Disbursements

Check #	Payee	Amount	Description
3091	CCSInteractive	\$ 13.60	Monthly Website Hosting
3092	Downs Energy Inc	\$ 503.05	Booster Maintenance
3093	Highroad IT	\$ 388.00	Technical Support
3094	La Puente Valley County Water District	\$ 62,512.04	Labor Costs May 2018
3095	Platinum Consulting Group	\$ 170.00	Administrative Support
3096	Resource Building Materials	\$ 33.63	Field Supplies
3097	Time Warner Cable	\$ 279.96	Telephone Service
3098	Trisys Inc	\$ 638.55	Technical Support
3099	Underground Service Alert	\$ 77.60	Line Notifications
3100	Weck Laboratories Inc	\$ 215.00	Water Sampling
3101	Merritt's Hardware	\$ 108.73	Field Supplies
3102	Answering Service Care	\$ 114.00	Answering Service
3103	Ferguson Waterworks	\$ 2,482.61	Meter Replacement
3104	Highroad IT	\$ 435.00	Software Licensing
3105	La Puente Valley County Water District	\$ 46,427.85	2nd Quarter 2018 O&M Fee's
3106	Platinum Consulting Group	\$ 172.50	Administrative Support
3107	S & J Supply Co Inc	\$ 164.80	Field Supplies
3108	Cell Business Equipment	\$ 36.57	Office Expense
3109	Hunter Electric	\$ 718.80	Booster Maintenance
3110	Industry Public Utility Commission	\$ 1,104.67	Industry Hills Power Expense
3111	InfoSend	\$ 719.20	Billing Expense
3112	Jack Henry & Associates	\$ 45.50	Web E-Check Fee's
3113	McMaster-Carr Supply Co	\$ 151.76	Property Maintenance
3114	Peck Road Gravel	\$ 120.00	Asphalt & Concrete Disposal
3115	Resource Building Materials	\$ 195.14	Field Supplies
3116	San Gabriel Valley Water Company	\$ 1,411.97	Purchased Water - Salt Lake
3117	SC Edison	\$ 9,006.94	Power Expense
3118	SoCal Gas	\$ 15.78	Gas Expense
3119	Staples	\$ 178.02	Office Supplies
3120	Sunbelt Rentals	\$ 203.57	Equipment Rental
3121	Time Warner Cable	\$ 51.67	Telephone Service
3122	Verizon Wireless	\$ 76.02	Cellular Service
3123	Weck Laboratories Inc	\$ 430.00	Water Sampling
3124	La Puente Valley County Water District	\$ 567.64	Web CC & Bank Fee's Reimbursement
3125	Sunbelt Rentals	\$ 203.60	Equipment Rental
3126	Verizon Wireless	\$ 729.68	Cellular Service
3127	Petty Cash	\$ 5.84	Office Expense
Online	Home Depot Credit Services	\$ 32.83	Field Supplies
Autodeduct	Wells Fargo Merchant Fee's	\$ 70.62	Merchant Fee's
Autodeduct	First Data Global Leasing	\$ 43.80	Credit Card Machine Lease

Total June 2018 Disbursements \$ 130,856.54

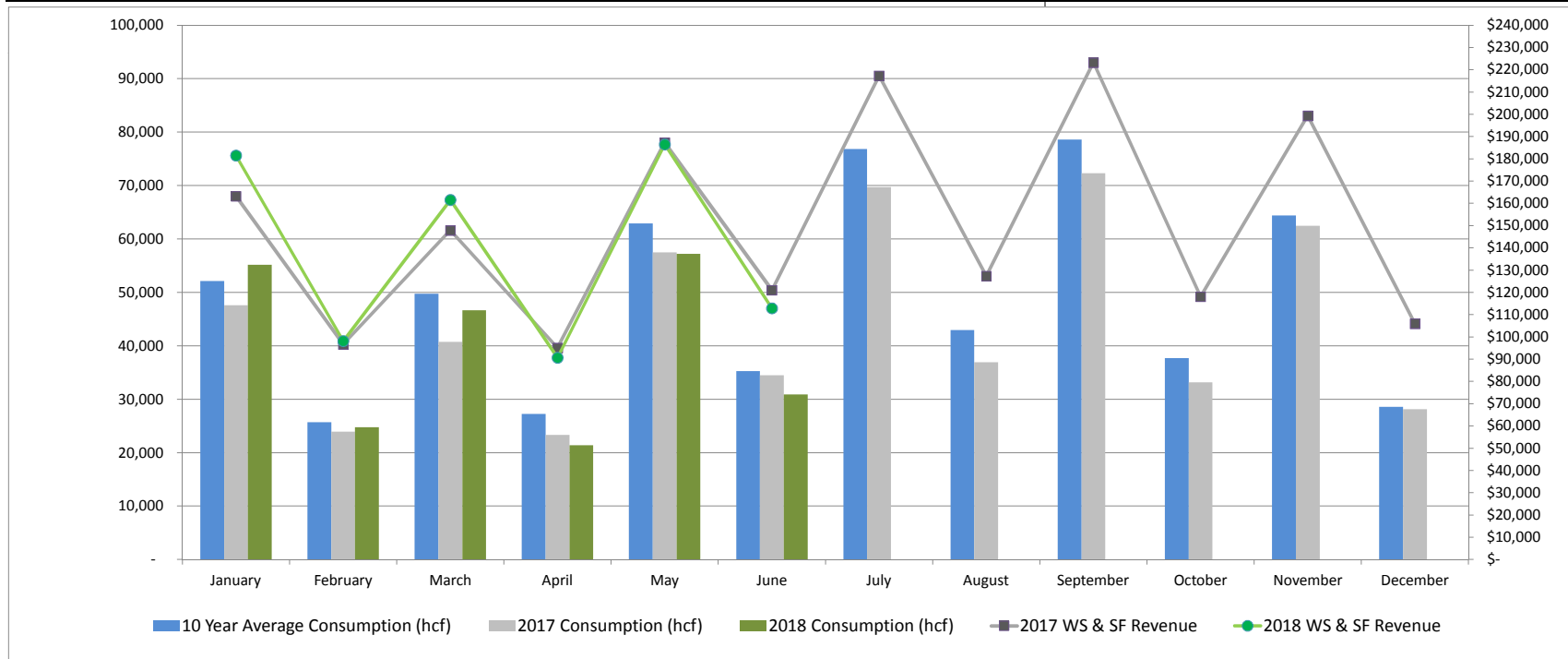
WATER SALES REPORT LPVCWD 2018

LPVCWD	January	February	March	April	May	June	July	August	September	October	November	December	YTD
No. of Customers	1,187	1,218	1,188	1,217	1,187	1,221	-	-	-	-	-	-	7,218
2018 Consumption (hcf)	36,839	57,769	31,582	53,940	37,166	72,607	-	-	-	-	-	-	289,903
2017 Consumption (hcf)	30,207	43,404	26,046	54,765	40,068	73,619	48,095	84,860	48,029	76,182	42,166	66,673	634,114
10 Year Average Consumption (hcf)	\$ 36,050	\$ 55,866	\$ 30,802	\$ 62,113	\$ 41,650	78,283	\$ 50,788	\$ 91,226	\$ 51,439	\$ 84,521	\$ 42,118	\$ 62,759	687,613
2018 Water Sales	\$ 69,913	\$ 112,965	\$ 58,990	\$ 104,919	\$ 70,362	\$ 143,162	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 560,311
2017 Water Sales	\$ 56,237	\$ 83,965	\$ 47,979	\$ 106,562	\$ 76,176	145,325	\$ 93,326	\$ 168,492	\$ 92,909	\$ 150,737	\$ 80,914	\$ 130,894	\$ 1,233,515
2018 Service Fees	\$ 45,632	\$ 54,334	\$ 45,639	\$ 54,197	\$ 45,559	\$ 54,170	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 299,530
2017 Service Fees	\$ 45,815	\$ 54,553	\$ 45,542	\$ 54,533	\$ 45,577	\$ 54,454	\$ 45,633	\$ 54,565	\$ 45,587	\$ 54,372	\$ 45,684	\$ 54,581	\$ 600,896
2018 Hyd Fees	\$ 950	\$ 950	\$ 950	\$ 950	\$ 950	\$ 950	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,700
2018 DC Fees	\$ 380	\$ 7,014	\$ 380	\$ 7,011	\$ 380	\$ 7,185	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,350
2018 System Revenue	\$ 116,875	\$ 175,262	\$ 105,960	\$ 167,077	\$ 117,250	\$ 205,467	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 887,892



WATER SALES REPORT CIWS 2018

CIWS	January	February	March	April	May	June	July	August	September	October	November	December	YTD
No. of Customers	961	847	963	848	965	850	-	-	-	-	-	-	5,434
2018 Consumption (hcf)	55,160	24,734	46,635	21,410	57,209	30,877	-	-	-	-	-	-	236,025
2017 Consumption (hcf)	47,606	23,933	40,733	23,336	57,513	34,474	69,686	36,950	72,321	33,163	62,483	28,124	530,322
10 Year Average Consumption (hcf)	52,133	25,721	49,729	27,220	62,926	35,272	76,828	42,964	78,623	37,699	64,377	28,600	582,093
2018 Water Sales	\$ 124,508	\$ 54,277	\$ 104,414	\$ 46,762	\$ 129,277	\$ 68,907	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 528,145
2017 Water Sales	\$ 106,782	\$ 52,614	\$ 90,766	\$ 51,161	\$ 130,423	\$ 76,908	\$ 160,292	\$ 83,374	\$ 166,132	\$ 74,033	\$ 142,362	\$ 62,048	\$ 1,196,894
2018 Service Fees	\$ 56,999	\$ 43,875	\$ 57,130	\$ 43,906	\$ 57,211	\$ 43,952	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 303,072
2017 Service Fees	\$ 56,427	\$ 44,029	\$ 57,111	\$ 43,894	\$ 56,897	\$ 44,106	\$ 57,029	\$ 43,972	\$ 57,093	\$ 44,011	\$ 56,981	\$ 43,910	\$ 605,458
2018 Hyd Fees	\$ 1,575	\$ 225	\$ 1,575	\$ 225	\$ 1,575	\$ 225	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,400
2018 DC Fees	\$ 11,593	\$ 2,511	\$ 11,593	\$ 2,511	\$ 11,593	\$ 2,640	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,441
2018 System Revenues	\$ 194,675	\$ 100,887	\$ 174,713	\$ 93,403	\$ 199,656	\$ 115,725	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 879,058



La Puente Valley County Water District

PRODUCTION REPORT - JUNE 2018

LPVCWD PRODUCTION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 YTD	2017
Well No. 2	4.37	4.85	5.71	0.00	4.74	4.00							23.67	191.09
Well No. 3	5.08	5.59	6.61	0.00	5.54	4.69							27.50	222.47
Well No. 5	291.98	273.48	319.24	300.50	315.32	308.42							1808.93	3092.85
Interconnections to LPVCWD	13.62	2.49	2.22	1.37	2.32	2.09							24.11	50.65
Subtotal	315.05	286.40	333.78	301.87	327.92	319.20	0.00	0.00	0.00	0.00	0.00	0.00	1884.22	3557.06
Interconnections to SWS	211.74	186.47	226.17	169.39	190.00	166.32							1150.08	2028.85
Interconnections to COI	1.16	0.84	7.82	3.69	0.13	0.38							14.02	60.26
Interconnections to Others	0.00	0.00	0.00	0.00	0.00	0.00							0.00	0.00
Subtotal	212.90	187.31	233.99	173.08	190.13	166.70	0.00	0.00	0.00	0.00	0.00	0.00	1164.10	2089.11
Total Production for LPVCWD	102.15	99.09	99.80	128.79	137.79	152.50	0.00	0.00	0.00	0.00	0.00	0.00	720.11	1467.95
CIWS PRODUCTION														
COI Well No. 5 To SGVCW B5	142.85	126.12	127.30	137.73	143.62	137.77							815.39	1723.57
Interconnections to CIWS														
SGVWC Salt Lake Ave	0.68	0.61	0.62	0.62	0.67	0.75							3.95	9.13
SGVWC Lomitas Ave	103.21	85.82	71.95	98.27	113.98	124.71							597.94	1274.06
SGVWC Workman Mill Rd	0.31	0.21	0.09	0.05	0.02	0.00							0.68	1.88
Interconnections from LPVCWD	1.16	0.84	7.82	3.69	0.13	0.38							14.02	60.26
Subtotal	105.36	87.48	80.48	102.63	114.80	125.84	0.00	0.00	0.00	0.00	0.00	0.00	616.59	1345.33
Interconnections to LPVCWD	13.44	2.49	2.22	1.37	2.32	2.09							23.93	49.89
Total Production for CIWS	91.92	84.99	78.26	101.26	112.48	123.75	0.00	0.00	0.00	0.00	0.00	0.00	592.66	1295.44

La Puente Valley County Water District - Water System Demand Comparison

Month	2013	2018	Difference 2017-2013 (%)	Accumulative Difference (%)
January	115.58	101.97	-11.8%	-11.8%
February	112.08	99.09	-11.6%	-11.7%
March	135.08	99.80	-26.1%	-17.1%
April	153.73	128.79	-16.2%	-16.8%
May	174.40	137.79	-21.0%	-17.9%
June	185.13	152.50	-17.6%	-17.8%
July	204.48			
August	201.38			
September	187.60			
October	172.74			
November	139.24			
December	133.13			
Totals	1914.57	719.93		

City of Industry Waterworks - Water System Demand Comparison

Month	2013	2018	Difference 2017-2013 (%)	Accumulative Difference (%)
January	90.55	91.92	1.5%	1.5%
February	81.62	84.99	4.1%	2.8%
March	99.4	78.26	-21.3%	-6.0%
April	115.82	101.26	-12.6%	-8.0%
May	147.93	112.48	-24.0%	-12.4%
June	152.60	123.75	-18.9%	-13.8%
July	141.36			
August	153.97			
September	151.67			
October	137.26			
November	110.83			
December	99.84			
Totals	1482.85	592.66		

Production data shown in acre feet (AF)

Directors Expense Summary for 2nd Quarter 2018

		Charles Aguirre		John P. Escalera		David Hastings		Henry P. Hernandez		William R. Rojas		
Date	Description	Number of days	Compensation	Number of days	Compensation	Number of days	Compensation	Number of days	Compensation	Number of days	Compensation	Total
Per Diem Summary:												
\$ 155.11		per day of Service										
Apr-June 2018	Regular Board Meetings	5	\$ 775.55	5	\$ 775.55	3	\$ 465.33	4	\$ 620.44	4	\$ 620.44	\$ 3,257.31
4/20/2018	CA Coalition			1	\$ 155.11					1	\$ 155.11	\$ 310.22
4/25/2018	Ad hoc - Water Rate Study			1	\$ 155.11					1	\$ 155.11	\$ 310.22
4/26/2018	SCWUA	1	\$ 155.11	1	\$ 155.11					1	\$ 155.11	\$ 465.33
5/3/2018	Ad hoc - Water Rate Study			1	\$ 155.11					1	\$ 155.11	\$ 310.22
5/6-10/18	ACWA 2018 Spring Conference									5	\$ 775.55	\$ 775.55
5/16/2018	SGVWA Quarterly Breakfast			1	\$ 155.11							\$ 155.11
5/24/2018	SCWUA	1	\$ 155.11	1	\$ 155.11					1	\$ 155.11	\$ 465.33
6/11-15/18	AWWA Annual Conference			5	\$ 775.55	5	\$ 775.55	5	\$ 775.55	5	\$ 775.55	\$ 3,102.20
												\$ —
												\$ —
												\$ —
	Total:	7	\$ 1,085.77	16	\$ 2,481.76	8	\$ 1,240.88	9	\$ 1,395.99	19	\$ 2,947.09	\$ 9,151.49
Other Related Costs:												
4/20/2018	CA Coalition											\$ —
4/26/2018	SCWUA		\$ 30.00		\$ 30.00						\$ 30.00	\$ 90.00
5/4/2018	ACWA Spring Conference										\$ 555.00	\$ 555.00
5/4/2018	ACWA Spring Conference-Expenses										\$ 1,097.17	
5/16/2018	SGVWA Quarterly Breakfast				\$ 30.00						\$ 30.00	\$ 60.00
5/24/2018	SCWUA		\$ 30.00		\$ 30.00						\$ 30.00	\$ 90.00
6/11-15-18	AWWA				\$ 495.00		\$ 495.00		\$ 495.00		\$ 495.00	
6/11-15/19	AWWA Annual Conference- Mileage				\$ 283.40		\$ 283.40		\$ 272.50		\$ 277.95	\$ 1,117.25
	AWWA Annual Conference- Other				\$ 553.38		\$ 1,059.45		\$ 1,050.44		\$ 934.74	\$ 3,598.01
												\$ —
												\$ —
												\$ —
	Total:		\$ 60.00		\$ 1,421.78		\$ 1,837.85		\$ 1,817.94		\$ 3,449.86	\$ 8,587.43
Apr-June 2018	Benefits		\$ 4,015.50		\$ 5,311.29		\$ 7,288.83		\$ 2,658.33		\$ 2,069.94	\$ 21,343.89

La Puente Valley County Water District

Water Rate Study

Final Report / July 2018



July 6, 2018

Mr. Greg Galindo
General Manager
La Puente Valley Water District
112 N 1st Street
La Puente, CA 91744

Subject: Water Rate Study Report

Dear Mr. Galindo,

Raftelis is pleased to present this water rate study report. The Study involved a comprehensive review of the District's Financial Plan, as well as an assessment of costs associated with serving water to each class and tier using Cost of Service principles.

The report includes a brief Executive Summary followed by a detailed discussion of Study assumptions used in the Financial Plan and an in-depth rate derivation.

It was a pleasure working with you and we wish to express our thanks for your support during the study. If you have any questions, please call me at (714) 351-2013

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.



Steve Gagnon, PE
Manager

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1 EXECUTIVE SUMMARY

1.1 BACKGROUND

In the Fall of 2017, the La Puente Valley County Water District (District) engaged Raftelis to conduct a Water Rate Study (Study) which included a five-year Financial Plan. This report presents the Financial Plan and the resulting rates for implementation in October of 2018.

This Executive Summary contains a description of the rate study methodology and resulting water rates. Detailed assumptions used in the Financial Plan, Financial Plan results and full rate derivations are provided in Sections 2 through 5. The District wishes to establish fair and equitable rates that:

1. Meet the District's fiscal needs in terms of operational expenses, reserve goals and capital investment to maintain the system;
2. Are fair and equitable, and therefore proportionately allocate the costs of providing service in accordance with California Constitution article XIII D, section 6 (commonly referred to as Proposition 218);
3. Result in stable charges over time for customers; and
4. Promote water conservation.

1.2 METHODOLOGY

The water rates presented in this report 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. The Base-Extra Capacity Method of the AWWA M1 Manual was used to distribute costs to customer classes and tiers. This method separates costs into four main¹ components: (1) base costs (which include supply and delivery), (2) extra capacity costs, (3) customer costs, and (4) direct fire protection costs. Base costs are costs associated with meeting average daily demand needs and include Operations and Maintenance (O&M) costs and capital costs designed to meet average load conditions. Extra capacity costs are costs (both operating and capital costs) associated with meeting peak water demand. Customer costs are costs associated with serving customers, such as meter reading, billing and customer service, etc. Direct fire protection costs are related solely to the fire protection function of a water system, such as fire hydrant repair and maintenance.

¹ There can be other cost components such as conservation and supply; however, the four mentioned are the most common.

1.3 RESULTS AND RECOMMENDATIONS

Table 1-1 shows the revenue adjustments selected by the Board of Directors. The revenue adjustment is the additional amount of revenue collected compared to the prior fiscal year². Note that the District’s fiscal year is a calendar year as shown in Table 1-1.

Table 1-1: Recommended Yearly Revenue Adjustments

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Effective Month	October	October	October	October	October
Revenue Adjustment	15.5%	7.5%	7.5%	7.5%	7.5%

Factors Affecting Revenue Adjustments

The following items affect the District’s revenue requirement (i.e., costs) and thus its rates. The District’s expenses include O&M expenses and capital expenses.

- » **O&M expenses:** The District’s O&M expenses increase each year. Notably, the District expects the Water Resource Development Assessment, which is a rate the District pays to the Main San Gabriel Watermaster for groundwater production is expected to increase approximately 170% over the next five years. The District will purposely use reserves, as shown by the decline in cash reserves in Section 2, to minimize customer rate impacts. Using reserves to fund operating and capital costs lowers the amount of required rate revenue (and customer bills). However, given our financial plan assumptions we project that reserves will fall within Board approved policies at the end of the Study period.
- » **Water System Capital Investment:** The District plans to invest approximately four million dollars in capital infrastructure over the next five years, with nearly three million dollars paid for by rate revenue.

1.4 WATER

Proposed Water Rates

Note that in this report, the terms fee and charge are often used interchangeably. There are two changes to the District’s rates proposed in this Study; we propose to 1) lower the Tier 1 breakpoint from 25 hcf to 20 hcf, and 2) create separate rates for three customer groups which contain the following classes:

- 1) Single Family,
- 2) Multi-family, Commercial and Industrial and
- 3) Public Authority and Irrigation.

The above groups replace the current customer groups which contain

- 1) Single Family and
- 2) Multi-family, Commercial and Irrigation.

² This assumes that the rates were implemented for the full fiscal year. In the case of FY 2018 with rates effective in October, the District will not realize the full percentage revenue adjustment.

District Staff and Raftelis reduced the Tier 1 breakpoint to reflect an updated estimate of indoor water usage. Using District water data Raftelis calculated the minimum bi-monthly water use during the year, which occurs during the winter and approximates indoor water use since outdoor irrigation is assumed to be minimal.

We revised the customer classes based on peaking factors also derived from the District's water use data. Peaking factors – which are calculated as the maximum bi-monthly use divided by average bi-monthly use – reflect how each customer class uses the water system. We found the Public Authority and Irrigation peaking factors to be identical and Multi-family, Commercial and Industrial classes to be within 4% of each other, which warrants combining these classes. Peaking factors vary based on the data set used (time period) and measuring frequency (bi-monthly, monthly, daily, etc.).

The District's rate structure is composed of two components: 1) a fixed bi-monthly Meter Service Charge, and 2) a variable Volumetric Rate. Each of these charges is described below.

Fixed Charge

The City's proposed Meter Service Charge is composed of two components (the first which is named the same as the overall charge):

$$\begin{aligned} & \textit{Total Fixed Meter Service Charge} \\ & = 1) \textit{ Meter Service Charge} + 2) \textit{ Customer Service Component} \end{aligned}$$

The first component is the Meter Service Charge and is based on the meter size serving a property. The Meter Service Charge is calculated to recover the cost to maintain and replace meters as well as a portion of extra-capacity related costs (i.e., costs associated with meeting system capacity beyond that required for average daily demand). This cost is proportional to the size of the meter and goes up with meter size. The second component is the customer service component. This component recovers costs associated with answering customer calls and billing customers. These costs are not related to the size of the meter. The full derivation of the total charge is described in Section 5, and the ***total*** fixed Meter Service Charge is shown in Table 1-2. The District proposes to collect a slightly lower amount of fixed revenue compared to its current fixed revenue collection, which lowers the charges for 5/8 - inch meters. The charges for larger meters sizes increase in proportion to the hydraulic capacity (safe operating flow) through each meter size.

Table 1-2: Current and Proposed Bi-Monthly Meter Service Charge

Line no.	Meter Size	Current Charge	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1	5/8"	\$31.02	\$30.68	\$32.98	\$35.46	\$38.12	\$40.97
2	3/4"	\$37.19	\$39.64	\$42.62	\$45.81	\$49.25	\$52.94
3	1"	\$49.54	\$57.57	\$61.89	\$66.53	\$71.52	\$76.88
4	1.5"	\$100.50	\$102.39	\$110.07	\$118.32	\$127.19	\$136.73
5	2"	\$127.36	\$156.17	\$167.88	\$180.47	\$194.00	\$208.56
6	3"	\$245.94	\$299.58	\$322.05	\$346.20	\$372.16	\$400.08
7	4"	\$358.35	\$460.92	\$495.48	\$532.65	\$572.59	\$615.54
8	6"	\$682.60	\$909.08	\$977.26	\$1,050.55	\$1,129.34	\$1,214.04
9	8"	\$1,006.84	\$1,446.87	\$1,555.38	\$1,672.04	\$1,797.44	\$1,932.25
10	10"	\$1,006.84	\$2,074.29	\$2,229.87	\$2,397.11	\$2,576.89	\$2,770.16

Private Fire Charges

The District's current and proposed private fire charges are shown in Table 1-3. The proposed private charges are proportional to the potential flow through each connection size.

Table 1-3: Current and Proposed Private Fire Charges

Meter Size (inches)	Current Charges	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
5/8"	NA	NA	NA	NA	NA	NA
3/4"	NA	NA	NA	NA	NA	NA
1"	\$19.19	\$7.46	\$8.01	\$8.62	\$9.26	\$9.96
1.5"	\$24.10	\$9.02	\$9.70	\$10.42	\$11.21	\$12.05
2"	\$29.99	\$11.72	\$12.60	\$13.54	\$14.56	\$15.65
3"	\$45.69	\$21.41	\$23.01	\$24.74	\$26.60	\$28.59
4"	\$63.35	\$38.12	\$40.98	\$44.05	\$47.36	\$50.91
6"	\$112.42	\$98.09	\$105.45	\$113.36	\$121.86	\$131.00
8"	\$171.31	\$201.54	\$216.65	\$232.90	\$250.37	\$269.15
10"	\$240.01	\$261.23	\$280.82	\$301.88	\$324.53	\$348.86

Volumetric Rate

Table 1-4 and Table 1-5 show the current and proposed volumetric rates by customer class respectively. The rates are designed to recover the costs associated with serving each class and tier as discussed in Sections 4 and 5.

Table 1-4: Current Volumetric Rates (\$/ hcf)

Current Rates	Total Tier	Total Tier	Pumping Rate
	1 Rate (\$/hcf)	2 Rate (\$/hcf)	
Single Family Residential			
Zone 1	\$1.61	\$2.32	
Zone 2	\$1.81	\$2.52	\$0.20
Zone 3	\$1.98	\$2.69	\$0.17
Zone 4	\$1.86	\$2.57	\$0.25
Zone 5	\$2.12	\$2.83	\$0.14
Multi-family, Commercial & Irrigation Uniform Rate (No Tiers)			
Zone 1	\$1.95		
Zone 2	\$2.15		\$0.20
Zone 4	\$2.20		\$0.25

Table 1-5 shows the proposed volumetric rates by pumping zone for each class and calendar year.

Table 1-5: Volumetric Rates (\$ / hcf)

Single Family Residential											
Zone	CY 2018		CY 2019		CY 2020		CY 2021		CY 2021		
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	
Zone 1	\$1.74	\$2.97	\$1.87	\$3.19	\$2.01	\$3.43	\$2.16	\$3.68	\$2.33	\$3.96	
Zone 2	\$1.94	\$3.16	\$2.08	\$3.40	\$2.24	\$3.65	\$2.41	\$3.93	\$2.59	\$4.22	
Zone 3	\$2.13	\$3.36	\$2.29	\$3.61	\$2.46	\$3.88	\$2.65	\$4.17	\$2.85	\$4.48	
Zone 4	\$1.97	\$3.20	\$2.12	\$3.44	\$2.28	\$3.69	\$2.45	\$3.97	\$2.64	\$4.27	
Zone 5	\$2.13	\$3.36	\$2.29	\$3.61	\$2.46	\$3.88	\$2.65	\$4.17	\$2.84	\$4.48	
Multi-family, Commercial and Industrial											
Zone	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022						
Zone 1	\$2.08	\$2.23	\$2.40	\$2.58	\$2.77						
Zone 2	\$2.27	\$2.44	\$2.63	\$2.82	\$3.03						
Zone 4	\$2.31	\$2.48	\$2.67	\$2.87	\$3.08						
Public Authority and Irrigation											
Zone 1	\$2.29	\$2.46	\$2.65	\$2.84	\$3.06						
Zone 2	\$2.49	\$2.67	\$2.87	\$3.09	\$3.32						
Zone 4	\$2.52	\$2.71	\$2.91	\$3.13	\$3.37						

2 FINANCIAL PLAN ASSUMPTIONS AND RESULTS

This section describes the Financial Plan assumptions and Financial Plan results.

2.1 WATER SYSTEM BACKGROUND

The La Puente Valley County Water District (District) was organized in August 1924 under the provisions of the County Water District Act (Statutes 1913, P 1049). Under the provisions of this statute the people of any area, which may include either incorporated or unincorporated areas within a county, or both, may organize a district for the purpose of serving its inhabitants with water for all purposes, including domestic, agricultural, and industrial uses. The assets and property of the District are publicly owned, that is, belong to the people in the District in the same manner as property of a City is owned by the people in the City. Other water districts in the San Gabriel Valley that were formed under the same statute and share other similarities include San Gabriel County Water District and Valley County Water District.

The District's service area includes a portion of the City of La Puente and the City of Industry. Approximately 62% of the District's service area lies within the City of La Puente and 38% in the City of Industry. The District has approximately 2,500 active connections serving approximately 9,600 people. The District's water system includes approximately 34.2 miles of distribution and transmission mains, 3 active wells, 6 booster pump stations, and 3 reservoirs. Table 2-1 shows a summary of the District's infrastructure.

Table 2-1: Summary of District Infrastructure

La Puente Valley County Water District	
Population in Service Area	9,600
Total Acreage in Service Area	1,600
Number of Active Water Services	2,500
Number of Reservoirs	3
Number of Active Wells	3
Number of Booster Pump Stations	6
Total Gallons of Water Storage	4.9 million
Number of Pressure Zones	5
Total Distance of Water Mains in System (Miles)	34.2
Average Annual Water Deliveries (Acre Feet)	1,690
Average Water System Daily Use (Million Gallons)	1.51

The District's primary source of supply is from three groundwater wells that produce water from the adjudicated Main San Gabriel Basin (MSGB). The MSGB is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and by a series of hills and the Raymond Fault to the west. The District has 1,130.40 acre-feet of prescriptive groundwater production rights that equals (0.57197%) of all adjudicated water rights in the MSGB. The District's annual production rights is dependent on the MSGB Annual Safe Yield. On average, approximately 40% of the water needed to meet the annual demand of District customers requires the District to either lease additional groundwater production rights or purchase imported water for replenishment.

The District also operates the Baldwin Park Operable Unit - The District's well field is located within an area of the MSGB that has experienced extensive groundwater contamination. This area of the MSGB is designated as a Superfund Site, known as the Baldwin Park Operable Unit (BPOU). The District constructed and now manages and operates a groundwater treatment facility to remedy the BPOU groundwater contamination.

In 2002, the District entered into the BPOU Agreement to address the contamination of groundwater in the BPOU from which the United States Environmental Protection Agency (EPA) named certain

entities as potentially responsible parties (PRPs) and local water agencies (Water Entities) of which the District is included. The BPOU Agreement provided funding from the PRPs to fund the reasonable and necessary costs of design, construction, operation, maintenance and management of District's groundwater treatment facilities. The BPOU Agreement requires the District to pump and treat water at a target rate of 2,250 gallons per minute, with any water that is surplus to the District's needs to be delivered wholesale to neighboring investor owned Suburban Water Systems. In May of 2017 a new BPOU Agreement was entered into by the same parties to extend the funding of groundwater cleanup to May 2027.

The District also operates and manages the City of Industry Waterworks System (CIWS) under agreement with the City of Industry. The current agreement's term expires in 2024. The CIWS is a potable water system that serves approximately 1,860 water services, mostly within the unincorporated area of Los Angeles County known as Avocado Heights and a small portion of the City of Industry. The CIWS water rates are not part of this study.

The District is currently working on the design for phase 1 of its recycled water system to provide irrigation water service to 10 locations in the southern portion of its water system. The project is expected to be completed in 2019 and is expected to deliver 50 acre-feet per year of recycled water. Recycled water may decrease the demand for potable water slightly, which has been accounted for in this Study.

The District has entered into an agreement with Northrop Grumman to manage and operate a groundwater treatment facility, which is referred to as the Puente Valley Operable Unit Intermediate Zone, that will be located adjacent to the District's service area. Construction of this facility is scheduled to begin in 2018 with the facility anticipated to be permitted and in service by 2020. This proposed facility will provide treated groundwater to the District and neighboring Suburban Water.

2.2 FINANCIAL PLAN ASSUMPTIONS

Number of accounts

Raftelis created a five-year Financial Plan which models anticipated revenue and expenses. To calculate the projected revenue (without rate adjustments), we multiply the number of accounts by the bi-monthly (fixed) Meter Service Charge and multiply the total water use in each tier and pump zone by the Volumetric Rate. Table 2-2 shows the projected number of water accounts, including private fire connections by meter size and class for the Study Period. The District's fiscal year (FY) is a calendar year (CY) and calendar year 2018 is the "test year." The test year is the year with which we develop rates in rate setting terminology. Raftelis projected the number of meters using District provided CY³ 2016 meter data. The number of accounts are used to forecast the amount of fixed revenue the District will receive from fixed bi-monthly Meter Service Charges.

³ The District's fiscal year is the same as the calendar year.

Table 2-2: Projected Accounts by Meter Size (FY 2019)

Customer Class	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Single Family Residential	1,949	1,971	1,994	1,995	1,996
Multi-family	54	54	54	54	54
Commercial	280	280	280	280	280
Industrial	7	7	7	7	7
Irrigation	86	86	86	86	86
Public Authority	27	27	27	27	27
Total	2,403	2,425	2,448	2,449	2,450

Meter Size	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
5/8"	1,450	1,450	1,450	1,450	1,450
3/4"	653	653	653	653	653
1"	161	183	206	207	208
1.5"	20	20	20	20	20
2"	98	98	98	98	98
3"	7	7	7	7	7
4"	10	10	10	10	10
6"	4	4	4	4	4
8"	-	-	-	-	-
10"	-	-	-	-	-
Total	2,403	2,425	2,448	2,449	2,450

Private Fire Connections

Meter Size	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1"	0	0	0	0	0
1.5"	0	0	0	0	0
2"	0	0	0	0	0
3"	0	0	0	0	0
4"	10	10	10	10	10
6"	6	6	6	6	6
8"	24	24	24	24	24
10"	2	2	2	2	2
12"	2	2	2	2	2
Subtotal	44	44	44	44	44

Water Use Growth Assumptions

The volumetric revenue calculated for each of the fiscal years in the Financial Plan is a function of account growth, water use trends, and existing rates. Table 2-3 shows the assumed water demand growth for residential and non-residential classes. Like most water purveyors, the District's water use declined during the recent drought due to conservation outreach programs. The District will likely see an increase in water use as conservation pressures ease. The Municipal Water District of Orange County saw a 6% increase in water use from FY 2016 to FY 2017⁴. Though the District is not within MWDOC's service area it has assumed a reasonable and similar rebound in water use for CY

⁴ Presentation from General Manager of MWDOC to Mesa Water District.

2018, a smaller increase in CY 2019 and a small decrease for non-residential classes in CY 2020 due to the anticipated recycled water system completion (which will serve recycled water to ten high water use customers).

Table 2-3: Account Growth and Water Use Assumptions

Water Demand Growth	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Residential Single Family	107%	103%	100%	100%	100%
All Other Classes	107%	103%	94%	100%	100%

Water Use

Table 2-4 shows estimated water use by customer class for the Study Period. The water use was projected from CY 2016 water use data by escalating this data using the water use growth trends shown in Table 2-3. The water use is shown in hundred cubic feet (hcf). One hundred cubic feet equals 748 gallons. Table 2-5 shows the percent of accounts and water use by customer class.

Table 2-4: Water Use Projections in Hundred Cubic Feet by Customer Class

Residential Single Family	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Tier 1	227,626	234,455	234,455	234,455	234,455
Tier 2	65,822	67,797	67,797	67,797	67,797
Subtotal	293,448	302,251	302,251	302,251	302,251
Multi-family	85,656	88,226	88,226	88,226	88,226
Commercial	96,144	99,028	92,790	92,790	92,790
Industrial	40,934	42,162	39,506	39,506	39,506
Irrigation	98,458	101,412	95,023	95,023	95,023
Public Authority	38,710	39,871	37,359	37,359	37,359
Subtotal Non-SFR	359,902	370,699	352,904	352,904	352,904
Subtotal	653,350	672,951	655,155	655,155	655,155

Table 2-5: Percent of Accounts and Water Use by Class

Customer Class	No. of Accounts	Percent of Accounts	Water Use	Percent of Water Use
Single Family	1,949	81%	293,448	45%
Multi-family	54	2%	85,656	13%
Commercial	280	12%	96,144	15%
Industrial	7	0%	40,934	6%
Irrigation	86	4%	98,458	15%
Public Authority	27	1%	38,710	6%
Subtotal	2,403	100%	653,350	100%

Inflationary Cost Assumptions

To ensure that future Operation and Maintenance (O&M) costs are reasonably projected, we make informed assumptions about inflationary factors, water costs and water use. Table 2-6 shows the inflationary categories used to escalate the District’s O&M expense budget – which is part of the Financial Plan. The inflationary factors shown in Table 2-6 reflect long-term averages for general and capital (construction) inflation and energy prices. The District provided the salary and benefit inflationary factors and reflect employee salaries and benefit obligations.

Table 2-6 also shows assumed wholesale water purchase cost inflation. The District pays a Water Resource Development Assessment to the Main San Gabriel Watermaster for groundwater produced. The District also leases annual groundwater production rights to avoid Watermaster’s Replacement Water Assessment. The lower portion of the table shows the assumed increases in the groundwater lease rate for replacement water.

Table 2-6: Inflationary Assumptions

Escalation Factors	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
General	2.0%	2.0%	2.0%	2.0%	2.0%
Salary	2.0%	2.0%	2.0%	2.0%	2.0%
Benefits	2.0%	2.0%	2.0%	2.0%	2.0%
Electricity	2.0%	2.0%	2.0%	2.0%	2.0%
Capital	3.0%	3.0%	3.0%	3.0%	3.0%
Production Assessment Increase Rates					
Administrative Assessment (\$/AF)	0.0%	20.0%	0.0%	0.0%	0.0%
Water Resource Development Assessment (RDA) \$/AF	75%	50%	33%	25%	9%
Groundwater Production Rights Lease Rate					
Lease 1	10.3%	3.8%	4.0%	4.0%	4.0%
Lease 2	3.8%	4.0%	4.0%	4.0%	4.0%
Lease 3	2.6%	4.0%	4.0%	5.1%	4.0%

Groundwater Production and Lease Costs

The assumptions shown in Table 2-6 were incorporated into the groundwater production assessment and groundwater lease costs shown calculated in

Table 2-7. Line 6 and Lines 23 through 26 in

Table 2-7 describe how each line was calculated in parentheses.

Table 2-7: Groundwater Production and Lease Costs

Production Assessments		CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Line No.	(A)	(B)	(C)	(D)	(E)	(F)
1	Production (AF)	1,579	1,661	1,617	1,617	1,617
2	Administrative Assessment \$/AF	\$15.00	\$18.00	\$18.00	\$18.00	\$18.00
3	In-Lieu Assessment \$/AF	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
4	Water Resource Development Assessment (RDA) \$/AF	\$70.00	\$105.00	\$140.00	\$175.00	\$190.00
5	Total Assessment Rate \$/AF	\$95.00	\$133.00	\$168.00	\$203.00	\$218.00
6	Total Cost of Assessments (Line 5 x Line 1)	\$149,989	\$220,935	\$271,696	\$328,299	\$352,557
Leased Groundwater Costs						
7	Watermaster Safe Yield (AF)	150,000	150,000	150,000	150,000	170,000
8	District Production Right (AF)	858	858	858	858	972
9	Carryover Rights	224	82	-	-	-
10	Lease 1 (AF)	335	335	335	335	380
11	Lease 2 (AF)	44	44	44	44	50
12	Lease 3 (AF)	200	250	250	250	300
13	Total Rights for Year	1,661	1,569	1,487	1,487	1,702
14	Production (AF) (From Above)	1,579	1,661	1,617	1,617	1,617
15	Over Production/Under Production (in parentheses)	(82)	92	130	130	(85)
16	Cyclic Storage Used (AF)	-	92	130	130	-
17	Groundwater Production Rights Lease Rate					
18	Lease 1 Rate (\$/AF)	\$699.79	\$726.18	\$755.23	\$785.44	\$816.85
19	Lease 2 Rate (\$/AF)	\$726.18	\$755.23	\$785.44	\$816.85	\$849.53
20	Lease 3 Rate (\$/AF)	\$726.18	\$755.23	\$785.44	\$825.83	\$858.86
21	Prepurchased Cyclic Storage Rate (\$/AF)	\$251.90	\$251.90	\$251.90	\$251.90	\$251.90
22	Leased Rights - Cost					
23	Lease 1 Cost (Line 10 x Line 4)	\$234,699	\$243,550	\$253,292	\$263,424	\$310,489
24	Lease 2 Cost (Line 11 x Line 5)	\$31,872	\$33,147	\$34,473	\$35,852	\$42,257
25	Lease 3 Cost (Line 12 x Line 6)	\$145,236	\$188,807	\$196,359	\$206,458	\$257,658
26	Cyclic Storage Cost (Line 15 x Line 10)	\$0	\$23,155	\$32,748	\$32,748	\$0
26	Total Cost of Leased Groundwater	\$411,807	\$488,659	\$516,872	\$538,481	\$610,404

O&M Expenses

The City’s O&M budget, including groundwater costs in line 1, is shown by calendar year⁵ in Table 2-8. The Financial Plan Study Period is from CY 2018 to 2022. The O&M budget incorporates the inflationary factors discussed earlier in this section.

⁵ The District’s fiscal year is on a calendar year basis.

Table 2-8: Projected O&M Expenses

Line No.	Total Operation and Maintenance Costs	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1	Cost of Goods Sold (includes Groundwater Costs)	\$807,000	\$982,800	\$1,054,700	\$1,134,100	\$1,222,500
2	Labor and Benefits	\$1,959,600	\$2,033,100	\$2,287,100	\$2,375,600	\$2,464,700
3	General Plant	\$42,300	\$42,400	\$42,500	\$42,600	\$42,700
4	Transmission and Distribution	\$90,500	\$89,600	\$90,200	\$90,800	\$91,400
5	Field Support and Vehicles	\$98,800	\$87,200	\$88,800	\$90,400	\$92,100
6	Regulatory Compliance	\$51,500	\$45,100	\$45,900	\$46,700	\$47,600
7	District Office Expenses	\$61,800	\$63,100	\$64,400	\$65,700	\$67,100
8	Billing, Insurance and Professional Services	\$250,300	\$247,100	\$248,900	\$250,700	\$252,500
9	Training, Public Outreach and Other Administrative	\$140,400	\$106,100	\$136,800	\$102,500	\$133,200
10	Total	\$3,502,200	\$3,696,500	\$4,059,300	\$4,199,100	\$4,413,800

Capital Improvement Plan (CIP)

Table 2-9 shows the District's CIP summary. The District is funding capital investment primarily through rate revenue (also known as PAY-GO funding), which is shown in Line 12. Grants, capacity fees and debt financing (shown in Lines 8, 9 and 11 respectively) will also be used to fund the District's CIP.

Table 2-9: Detailed Capital Improvement Plan

Line No.	Project	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1	Alternative Supply (Growth Related)	\$250,000	\$1,493,500	\$0	\$0	\$0
2	R&R (Capacity, Fire Suppression)	\$50,000	\$0	\$0	\$0	\$0
3	R&R (Gen. Fire Suppression)	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255
4	R&R (Source of Supply, Capacity)	\$0	\$0	\$159,135	\$109,273	\$0
5	R&R (Capacity)	\$140,000	\$339,900	\$270,530	\$426,164	\$461,459
6	R&R (Customer)	\$70,000	\$257,500	\$53,045	\$54,636	\$56,275
7	Capital Outlay (Vehicles and Equipment)	\$100,000	\$108,150	\$106,090	\$92,882	\$73,158
8	Anticipated Grant Funding	\$0	-\$363,590	\$0	\$0	\$0
9	Developer Fees (Capacity Fees)	-\$5,000	-\$5,150	-\$5,305	-\$5,464	-\$5,628
10	Total CIP Expenditure	\$615,000	\$1,840,610	\$594,104	\$688,418	\$596,520
11	Debt Funded	\$0	\$1,448,000	\$0	\$0	\$0
12	Rate Funded CIP	\$615,000	\$392,610	\$594,104	\$688,418	\$596,520

Existing and Proposed Debt Service

The District does not currently have existing debt. However, it plans to issue approximately 1.6million dollars in debt during CY 2019 to fund capital projects. The approximate debt proceeds are shown in line 11 of Table 2-9.

Financial Plan

For the five-year Financial Plan Study Period from CY 2018 to CY 2022, we projected operating revenue using the assumed number of accounts and water use. We projected operating expenses using the inflationary factors and the District's CY 2018 budget and modeled debt service coverage ratios and resulting yearly cash balances. The Financial Plan helps determine overall revenue adjustments required to ensure water enterprise financial stability. Revenue adjustments represent the average increase in rates as a whole; rate changes for individual classes will depend on the Cost

of Service analysis which allocates costs to each customer class. Therefore, the revenue adjustment may not be the same as the average bill impact for CY 2018 proposed rates for each customer class. The revenue adjustments are described below and the Cost of Service analysis and bill impacts are described in Sections 4 and 6 respectively.

Revenue Adjustments

The proposed revenue adjustments help ensure adequate revenue to fund operating expenses, capital expenditures, and compliance with bond covenants. Financial Plan modelling assumes the revenue (i.e. rate) adjustment will occur in October 2018. The proposed revenue adjustments would enable the District to cover operating costs, execute the CIP shown in Table 2-9 and exceed the assumed debt service coverage requirement of 125% over the five-year Study Period.

Table 2-10 shows the proposed revenue adjustments. The rates presented in Section 5 are based on these revenue adjustments.

Table 2-10: Proposed Rate Adjustments

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Effective Month	October	October	October	October	October
Revenue Adjustment	15.5%	7.5%	7.5%	7.5%	7.5%

Cash Flow Analysis

Table 2-11 shows District cash flows over the study period assuming the revenue adjustments shown in Table 2-10. Line 3 shows the additional revenue resulting from the revenue adjustments. Line 11 shows total District revenue including non-operating revenue. Line 19 shows the yearly ending cash flow after subtracting expenses, debt service and capital expenses from revenue. Note that the District has a small yearly operating deficit in line 19 – meaning revenue does not cover costs. The District is minimizing customer impacts by using reserves in the near term. Line 22 shows that the District meets the assumed debt service coverage requirement of 125% during the Study Period. Debt service coverage is calculated with revenue before capital expenses (Line 11 minus Line 16).

Table 2-11: Five-Year Water Operating Cash Flow

Line No.		CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1	Service Charge Revenue (Incl Private Fire)	\$653,500	\$644,595	\$651,431	\$651,728	\$652,026
2	Volumetric Revenue	\$1,193,500	\$1,302,609	\$1,267,408	\$1,267,408	\$1,267,408
3	Additional Revenue from Revenue Adjustments	\$71,571	\$343,986	\$508,311	\$690,454	\$886,311
4	Other Revenue					
5	Management Fees	\$261,700	\$257,500	\$474,100	\$480,000	\$486,000
6	Taxes and Assessments	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000
7	Other Miscellaneous Revenue	\$164,830	\$163,739	\$172,270	\$181,108	\$180,551
8	PVOU Billing	\$42,900	\$130,582	\$382,222	\$427,165	\$433,914
9	BPOU Billing	\$278,800	\$265,220	\$278,220	\$279,920	\$289,530
10	City of Industry Billing	\$715,800	\$636,272	\$646,685	\$676,996	\$703,614
11	Total Revenue	\$3,597,601	\$3,959,502	\$4,595,647	\$4,869,779	\$5,114,353
12	O&M Expenses					
13	COGS (Purchased Water)	\$807,000	\$982,800	\$1,054,700	\$1,134,100	\$1,222,500
14	Labor and Benefits	\$1,959,600	\$2,033,100	\$2,287,100	\$2,375,600	\$2,464,700
15	Other Expenses (General Plant, T&D, Vehicles, Insurance)	\$735,600	\$680,600	\$717,500	\$689,400	\$726,600
16	Total Expenses	\$3,502,200	\$3,696,500	\$4,059,300	\$4,199,100	\$4,413,800
17	Proposed Debt Service	\$0	\$88,298	\$117,731	\$117,731	\$117,731
18	Rate Funded CIP	\$615,000	\$392,610	\$594,104	\$688,418	\$596,520
19	Cash Flow	\$ (519,599)	\$ (217,906)	\$ (175,488)	\$ (135,469)	\$ (13,697)
20	Cash Starting Balance	\$3,703,271	\$3,183,672	\$2,965,766	\$2,790,278	\$2,654,808
21	Ending Balance	\$3,183,672	\$2,965,766	\$2,790,278	\$2,654,808	\$2,641,111
22	Debt Coverage Ratio	#N/A	2.98	4.56	5.70	5.95

Graphical Financial Plan

Figure 2-1 through 2-3 display the Financial Plan information shown in Table 2-10 in a graphical format. Figure 2-1 shows the District’s expenses in stacked bars and the current and proposed revenue in the red and green lines respectively. The stacked bars show the City’s expenses broken down into the categories shown in the legend. The green portion of the stacked bar below the x-axis shows the small operating yearly deficit. The District is minimizing customer bill impacts by drawing down reserves.

Figure 2-1: Financial Plan

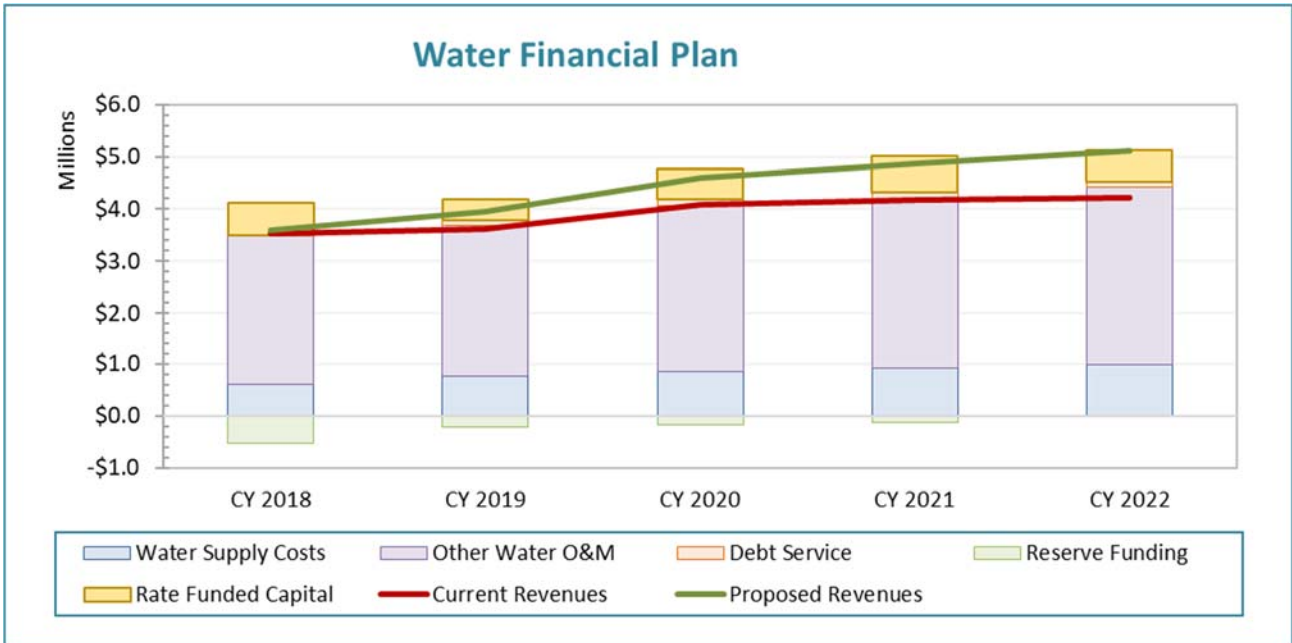


Figure 2-2 shows total annual CIP over the Study Period, and designates the portion to be funded by PAY-GO (which is a term used to designate rate funded CIP) and debt. The District anticipates issuing debt in CY 2019 to fund approximately 1.5 million dollars in capital projects.

Figure 2-2: Capital Improvement Projects and Funding Sources

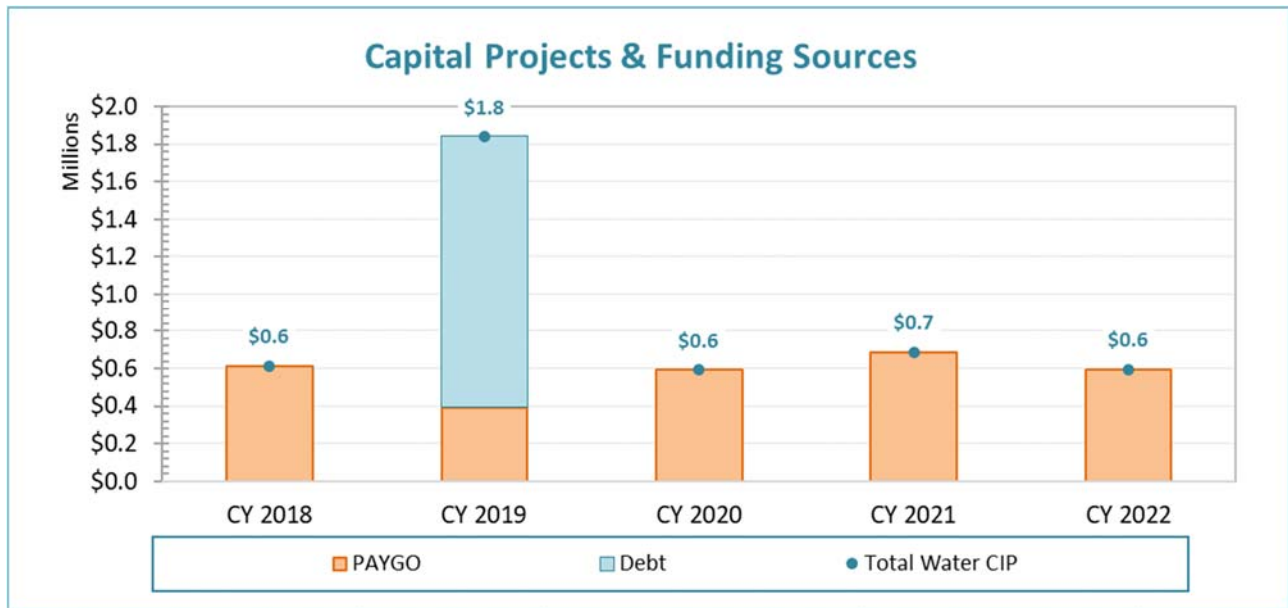
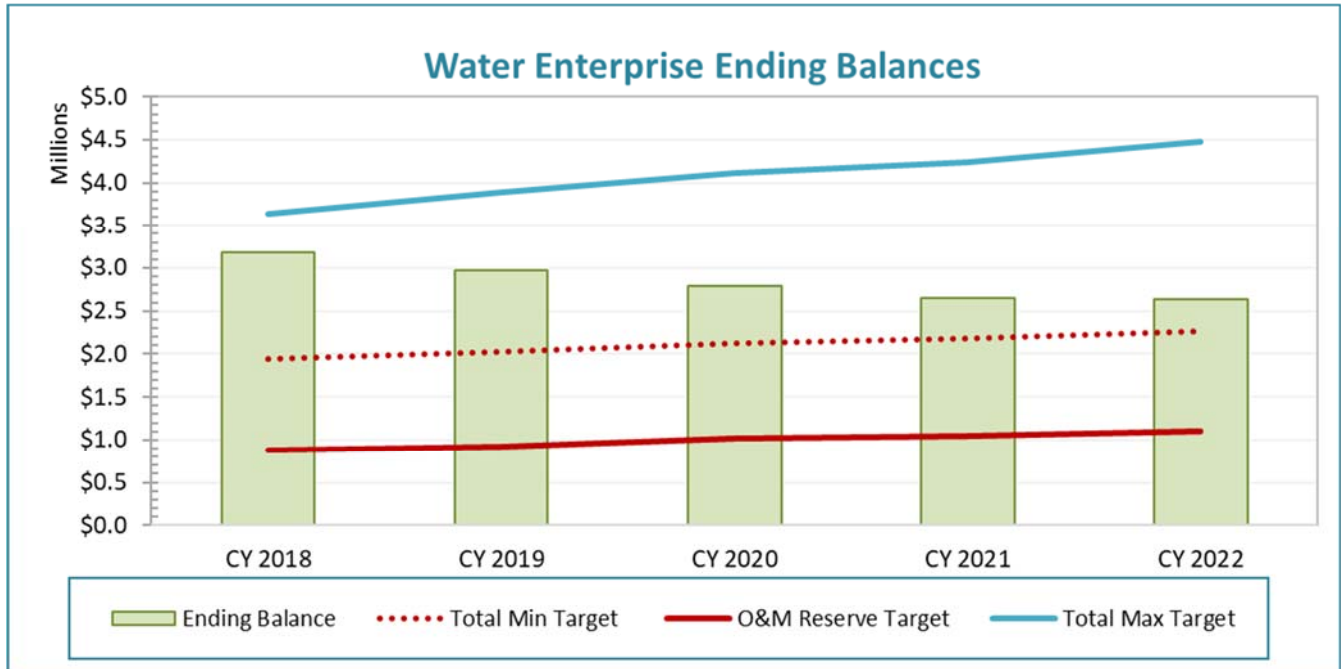


Figure 2-3 shows the ending total reserve balances. The District has a total of five reserves which include:

- 1) Operating Reserve
- 2) Capital Reserve
- 3) Vehicle and Equipment Reserve
- 4) Rate Stabilization Reserve
- 5) Emergency Reserve.

The total minimum reserves goal for all reserves is represented by the dotted red line in Figure 2-3.

Figure 2-3: Ending Reserve Balances



3 LEGAL FRAMEWORK AND RATE SETTING METHODOLOGY

3.1 LEGAL FRAMEWORK

This section of the report describes the legal framework surrounding rate setting and Cost of Service-based rates that provide a fair and equitable cost allocation to customer classes.

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

Proposition 218 was enacted in 1996. It amended the California Constitution by adding article XIII C and XIII D. Article XIII D, section 6 established procedural requirements for the imposition of property-related fees and charges and substantive provisions governing the amount that may be imposed and the use of such fees charged by local agencies. The substantive requirements for such fees and charges are as follows:

1. A property-related charge (such as water service fees and charges) 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.

Raftelis 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 cost of providing water service and are proportionate to the cost of providing water service.

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 proposed tiered rates for Single Family Residential customers were designed in compliance with California Constitution article XIII D, section 6 by allocating a proportionately greater share of the cost of providing service to those whose water use creates greater demands and burdens on a water system and water resources, and therefore generates additional costs for the purveyor. The tiered rates also have the incidental effect of encouraging conservation by sending a price signal to customers to use less water.

“Inclining” block rate structures (which are synonymous with 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.

3.2 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, there are four major steps discussed below.

1) *Calculate Revenue Requirement*

The rate-making process starts by determining the test year revenue requirement - which for this study is CY 2018⁶. The revenue requirement is the amount a utility needs to 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:** This process takes each cost item in the District’s budget and organizes the items collectively based on what function is served. Examples of cost functions are supply, treatment, transmission, distribution, storage, meter servicing and customer billing and collection.
2. **Allocating functionalized costs to cost components:** This process allocates the functionalized costs to cost components. Cost components include base, maximum day, maximum hour⁷, meter service, customer service and conservation costs.
3. **Distributing the cost components:** This analysis distributes the cost components, using unit costs, to customer classes in proportion to their demands on the water system. This is described in the AWWA M1 Manual.

⁶ The District fiscal year is the same as the calendar year.

⁷ 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).⁸ Peaking costs are costs that are incurred during peak times of consumption. There are additional costs associated with designing, constructing, operating and maintaining facilities to meet peak demands. These peak demand costs need to be allocated to those customers and customer classes whose water usage results in the District incurring the associated costs. 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. Raftelis documented the rate study results in this report to help educate the public about the proposed changes, the rationale and justifications behind the changes and their anticipated financial impacts in lay terms.

⁸ System capacity is the system's ability to supply water to all delivery points at the time of demand. Coincident 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.

4 COST OF SERVICE (COS) ANALYSIS

A COS analysis distributes a utility's revenue requirement (yearly revenue needed) to each customer class. To do so we allocate the District's revenue requirement to the **cost causation components**. The cost causation components include:

1. Base (average) costs⁹
2. Peaking costs (maximum day and maximum hour)
3. Meter service
4. Billing and customer service
5. Fire protection
6. Conservation
7. General and administrative costs

Additional cost components can include pumping zone costs and supply costs. 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 hour usage on the maximum usage day. Both maximum day and maximum hour peaking demand is used to calculate peaking unit rates to distribute costs to customer classes. Peaking costs are allocated in proportion to how the different customer classes use water during peak day and hour demands. Different facilities such as distribution and storage facilities are designed to meet the peaking demands of customers. Therefore, extra capacity¹⁰ 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 COS analyses.

4.1 ALLOCATION OF EXPENSES TO COST COMPONENTS

In a Cost of Service analysis, we allocate a utility's functionalized expenses to the cost causation components. To do so we must identify system-wide peaking factors which are shown in Column B, Table 4-1. The system-wide peaking factors are used to derive the cost component allocation bases (i.e., percentages) shown in Columns C through E of Table 4-1. Functionalized¹¹ expenses are then allocated to the cost components using the allocation bases shown in Column A. To understand the interpretation of the percentages shown in Columns C through E we must first establish the base use as the average daily demand during the year – which is assigned an allocation basis of 1. If the base allocation basis is used to allocate an expense, it means that the costs associated with that expense are to meet average daily demand related costs.

Expenses that are allocated to the cost causation components using the maximum day bases (Line 2) attribute 45% (1.00/2.21) of the demand (and therefore costs) to base (average daily demand) use and the remaining 55% to maximum day (peaking) use. Expenses allocated using the maximum

⁹ The base component can be further divided into supply and base/delivery cost components as discussed in Section 5.5.

¹⁰ The terms extra capacity, peaking and capacity costs are used interchangeably.

¹¹ Functions of a water utility are: supply, treatment, transmission and distribution, storage, meter service, customer service, general and administration and fire protection.

hour bases assume 30% (1.00/3.31) of costs are due to base demands, 37% due to max day ((2.21-1.00)/3.31) and 33% ((3.31-2.21)/3.31) are due to max hour costs. Collectively the maximum day and hour cost components are known as peaking costs. These allocation bases are used to assign functionalized O&M expenses, shown in column A of Table 4-2, to the cost causation components shown across the top of Table 4-2.

Table 4-1: System-Wide Peaking Factors and Allocation to Cost Components

Line No.	Allocation Basis (A)	Peaking Factor (B)	Base (C)	Max Day (D)	Max Hour (E)	Total (F)
1	Base	1.00	100%			100%
2	Max Day	2.21	45%	55%		100%
3	Max Hour	3.31	30%	37%	33%	100%

Table 4-2 shows the allocation of functionalized O&M expenses (in column A) to the cost causation components. The resulting allocation to each cost component is shown in Line 10. The amounts shown in line 10 are the summation of the percentages in each column multiplied by the amounts in Column B for each line (also known as the sum product).

The allocation bases, in Column C, are chosen based on the type of cost for each line item and the proportion of those costs associated with each cost causation component (max day, max hour, general, conservation, etc.). For example, treatment costs (Line 2) is allocated using the max day basis since treatment costs are associated with serving average day and peak day demands in proportion to max day allocations identified in Table 4-1. Certain cost bases are identical to the cost causation components – such as supply and conservation – and therefore are easily allocated to the cost component with the same name. Line 11 shows the percentage allocation of all expenses to the cost causation components.

We note that the total O&M expenses in Line 10, Column R equals the total CY 2018 O&M in Line 16 of Table 2-11. This resulting allocation is used to allocate the District’s operating revenue requirement (discussed in Section 4.2) to the cost components.

Table 4-2: Allocation of O&M Expenses to Cost Causation Components

Line No.	Functions (A)	CY 2018 Budget (B)	Allocation Basis (C)	Pump Zones															
				Supply (D)	Base (E)	Max Day (F)	Max Hour (G)	Meter Service (H)	Customer Billing (I)	Conservation (J)	Direct Fire Protection (K)	Gen & Admin (L)	1 (M)	2 (N)	3 (O)	4 (P)	5 (Q)	Sub -Total (R)	
1	Supply	\$683,854	Base	99.5%	0.0%	0.0%						0.5%							100.0%
2	Treatment	\$306,378	Max Day		45.2%	54.8%													100.0%
2	Transmission & Distribution	\$658,471	Max Day		45.2%	54.8%													100.0%
3	Storage	\$98,303	Max Hour		30.2%	36.6%	33.2%												100.0%
3	Meter Service	\$86,084	Meter					100.0%											100.0%
4	Customer Billing	\$388,860	Customer						99.5%			0.5%							100.0%
4	Direct Fire Protection	\$83,457	Direct Fire									100.0%							100.0%
5	Gen & Admin	\$1,003,667	General									5.0%	95.0%						100.0%
5	Conservation	\$18,423	Conservation							100.0%									100.0%
6	Pump Zone Costs																		
6	Zone 1	\$126,323											100.0%						100.0%
7	Zone 2	\$42,110												100.0%					100.0%
7	Zone 3	\$1,890													100.0%				100.0%
8	Zone 4	\$3,859														100.0%			100.0%
8	Zone 5	\$567																100.0%	100.0%
9																			
10	Total	\$3,502,246		\$680,435	\$466,282	\$564,201	\$32,669	\$86,084	\$386,916	\$18,423	\$139,004	\$953,484	\$126,323	\$42,110	\$1,890	\$3,859	\$567		\$3,502,246
11	O&M Expense Allocation			19%	13%	16%	1%	2%	11%	1%	4%	27%	4%	1%	0%	0%	0%	0%	100%

We also allocate the District’s capital assets to the cost causation components as shown in Table 4-3. The resulting total asset allocation is derived in the same manner as the O&M allocation in Table 4-2. Raftelis functionalized the District’s assets (shown in Lines 1 through 8 of Table 4-3), and then allocated them to the cost causation components in the same manner as O&M expenses. Part of the District’s revenue requirement includes rate funded capital – which we will discuss in Section 4.2. This capital portion of the revenue requirement is allocated to the cost causation components using the asset allocation shown in Line 10 of Table 4-3.

Table 4-3: Allocation of Assets to Cost Causation Components

Line No.	Functions (A)	CY 2018 Budget (B)	Allocation Basis (C)	Supply (D)	Base (E)	Max Day (F)	Max Hour (G)	Meter Service (H)	Customer Billing (I)	Conservation (J)	Direct Fire Protection (K)	Gen & Admin (L)	Sub -Total (R)
1	Supply	\$2,879,503	Base	100.0%									100.0%
2	Treatment	\$61,429	Max Day		45.2%	54.8%							100.0%
3	Pumping	\$390,341	Max Day		45.2%	54.8%							100.0%
4	Distribution	\$5,697,441	Max Hour		30.2%	36.6%	33.2%						100.0%
5	Storage	\$2,742,688	Max Day										100.0%
6	Customer Accounts	\$313,245	Customer						100.0%				100.0%
7	Fire	\$374,519	General								100.0%		100.0%
8	Admin	\$576,303	Conservation							100.0%			100.0%
9	Total	\$13,035,469		\$2,879,503	\$3,166,738	\$3,831,753	\$1,893,409	\$0	\$313,245	\$576,303	\$374,519	\$0	\$13,035,469
10	Allocation			22%	24%	29%	15%	0%	2%	4%	3%	0%	100.0%

Table 4-4 shows the allocation of District wide labor costs to the cost components. The resulting allocation in Line 11 is used in Section 4.2 to allocate the revenue offsets from the Operable Unit and City of Industry Billing revenue to the cost components.

Table 4-4: Allocation of Labor Costs to Cost Causation Components

Line No.	Functions	Expense	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter Service	Customer Billing	Conservation	Direct Fire Protection	Gen & Admin	Total
1	Supply	34,281	Base	99.5%							0.5%		100%
2	Treatment	171,405	Max Day	0.0%	45.2%	54.8%	0.0%						100%
3	Transmission & Distribution	297,102	Max Day		45.2%	54.8%	0.0%						100%
4	Storage	22,854	Max Hour		30.2%	36.6%	33.2%						100%
5	Meter Service	17,141	Meter					100.0%					100%
6	Customer Billing	228,540	Customer						99.5%		0.5%		100%
7	Direct Fire Protection	28,568	Direct Fire								100.0%		100%
8	Gen & Admin	331,383	General								5.0%	95.0%	100%
9	Conservation	11,427	Conservation							100.0%			100%
10	Labor Allocation	1,142,700		\$34,110	\$218,899	\$264,867	\$7,595	\$17,141	\$227,397	\$11,427	\$46,451	\$314,814	\$1,142,700
11	Labor Allocation w/o Supply			0%	20%	24%	1%	2%	21%	1%	4%	28%	100%

4.2 REVENUE REQUIREMENT DETERMINATION

Table 4-5 shows the revenue requirement determination. The total revenue required from rates is shown in Line 28, Column D. The total in Line 28, Column B, is the O&M revenue requirement that is allocated to the cost components using the percentages derived in Line 11 of Table 4-2. The capital revenue requirement in Line 28, Column C, is allocated to the cost components using the percentages derived in Line 10 of Table 4-3.

Raftelis calculated the revenue requirement using budgeted CY 2018 expenses, which includes groundwater production, O&M expenses, capital expenses and existing debt service as shown in Lines 1 through 6. To arrive at the rate revenue requirement in Line 28, Column D, we subtract revenue offsets from other (non-rate) revenues and adjust for annual cash balances and for the impending rate adjustment that will take place ten months into the fiscal year (which is the calendar year). We must therefore annualize the rate increase so that our rates collect the right amount of revenue (Line 25). The adjustments, shown as negative values, are subtracted (therefore added as a result of subtracting a negative number) to arrive at the total revenue required from District rates in Line 28, Column D. This is the total amount that the District's fixed meter charges and volumetric rates are designed to collect if applied over a full fiscal year.

Note that Line 7, Column B, is the same as the value for CY 2018 in Line 16 in Table 2-11. The revenue offsets are taken from the other CY 2018 revenues in Lines 5 through 10 in Table 2-11. These non-rate revenues lower the revenue required from rates. The adjustment for cash balance in Line 24 is the net cash balance taken from Line 19 of Table 2-11. The adjustment for mid-year increase in Line 25 adjusts the revenue adjustment we modeled in the cash flow table (Line 3 of Table 2-11). Since this revenue adjustment is implemented ten months into the fiscal year, it annualizes the revenue adjustment in Line 25, Column B of Table 4-5, so that the rates are calculated based on a full year's revenue needs.

Table 4-5: Revenue Requirement Determination

Line No.	CY 2018	Operating	Capital	Total
	(A)	(B)	(C)	(D)
1	Revenue Requirement			
2	Groundwater Production (COGS)	\$807,000		\$807,000
3	Labor and Benefits	\$1,959,600		\$1,959,600
4	All Other Expenses	\$735,600		\$735,600
5	Rate Funded Capital Expenditures		\$615,000	\$615,000
6	Total - Revenue Requirement	\$3,502,200	\$615,000	\$4,117,200
7				
8	Revenue Offsets			
9	4120 Surplus Sales	\$38,000		\$38,000
10	Customer Charges	\$34,000		\$34,000
11	4900 Mgmt Fees	\$261,700		\$261,700
12	4920 · Taxes & Assessments	\$215,000		\$215,000
13	4921 · Other O & M Fees	\$13,000		\$13,000
14	4930 · Rental Revenue	\$36,100		\$36,100
15	4980 · Interest Revenue		\$25,730	\$25,730
16	4990 Misc Income	\$18,000		\$18,000
17	9001 · PVOU Billing	\$42,900		\$42,900
18	9010 · BPOU Billing	\$278,800		\$278,800
19	9050 · IND Billing	\$715,800		\$715,800
20	Total - Revenue Offsets	\$1,653,300	\$25,730	\$1,679,030
21				
22	Adjustments			
23	Adjustment for Cash Balance		\$519,599	\$519,599
24	Adjustment for Mid-Year Increase	-\$214,714		-\$214,714
25	Total - Adjustments	-\$214,714	\$519,599	\$304,885
26				
27	Revenue Required from Rates	\$2,063,613	\$69,672	\$2,133,285

4.3 ALLOCATION OF COSTS TO COST COMPONENTS

We now allocate the total revenue requirement in Table 4-5, to the cost causation components. However first we must allocate the revenue offsets, shown in Lines 10 through 20 in Table 4-5 to the cost components as shown in Table 4-6. As shown in the top portion of Table 4-6, most of the revenue offsets are allocated to general and admin with the exception of the Operable Unit revenue and City of Industry revenue shown in Lines 9 through 11. Labor allocation revenue offsets in Lines 9 through 11 are allocated to each cost component using the percentages shown in Line 11 of Table 4-4.

Table 4-6: Allocation of Revenue Offsets to Cost Components

Line No.	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter Service	Customer Billing	Con-servation	Direct Fire Protection	Gen & Admin	Large Fire Meters	Pump Zones					Sub -Total	
												(A)	(B)	(C)	(D)	(E)		(F)
1	4120 Surplus Sales	O&M w/o Supply	94%									0%	4.5%	1.5%	0.1%	0.1%	0.0%	100%
2	Customer Charges (Misc Fees)	O&M w/o Supply					94%					0%	4.5%	1.5%	0.1%	0.1%	0.0%	100%
3	4900 Mgmt Fees	Gen & Admin									100%							100%
4	4920 - Taxes & Assessments	O&M w/o Supply									92%	1.4%	4.5%	1.5%	0.1%	0.1%	0.0%	100%
5	4921 - Other O & M Fees	O&M w/o Supply									94%		4.5%	1.5%	0.1%	0.1%	0.0%	100%
6	4930 - Rental Revenue	O&M w/o Supply									94%		4.5%	1.5%	0.1%	0.1%	0.0%	100%
7	4980 - Interest Revenue	Gen & Admin									100%		0.0%	0.0%	0.0%	0.0%	0.0%	100%
8	4990 Misc Income	O&M w/o Supply									94%		4.5%	1.5%	0.1%	0.1%	0.0%	100%
9	9001 - PVOU Billing	Labor Alloc - OU/IND Billing		20%	24%	1%	2%	21%	1%	4%			28%					100%
10	9010 - BPOU Billing	Labor Alloc - OU/IND Billing		20%	24%	1%	2%	21%	1%	4%			28%					100%
11	9050 - IND Billing	Labor Alloc - OU/IND Billing		20%	24%	1%	2%	21%	1%	4%			28%					100%
12																		
13	4120 Surplus Sales		\$35,647	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,701	\$567	\$25	\$52	\$8	\$38,000
14	Customer Charges (Misc Fees)		\$0	\$0	\$0	\$0	\$0	\$31,894	\$0	\$0	\$0	\$0	\$1,522	\$507	\$23	\$46	\$7	\$34,000
15	4900 Mgmt Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$261,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$261,700
16	4920 - Taxes & Assessments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198,676	\$3,010	\$9,625	\$3,208	\$144	\$294	\$43	\$215,000	
17	4921 - Other O & M Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,195	\$0	\$582	\$194	\$9	\$18	\$3	\$13,000	
18	4930 - Rental Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,864	\$0	\$1,616	\$539	\$24	\$49	\$7	\$36,100	
19	4980 - Interest Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,730	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,730
20	4990 Misc Income		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,885	\$0	\$806	\$269	\$12	\$25	\$4	\$18,000	
21	9001 - PVOU Billing		\$0	\$8,471	\$10,250	\$294	\$663	\$8,800	\$442	\$1,798	\$12,183	\$0	\$0	\$0	\$0	\$0	\$0	\$42,900
22	9010 - BPOU Billing		\$0	\$55,051	\$66,612	\$1,910	\$4,311	\$57,188	\$2,874	\$11,682	\$79,173	\$0	\$0	\$0	\$0	\$0	\$0	\$278,800
23	9050 - IND Billing		\$0	\$141,340	\$171,021	\$4,904	\$11,067	\$146,827	\$7,378	\$29,993	\$203,271	\$0	\$0	\$0	\$0	\$0	\$0	\$715,800
24	Total		\$35,647	\$204,861	\$247,882	\$7,108	\$16,041	\$244,710	\$10,694	\$43,472	\$843,676	\$3,010	\$15,852	\$5,284	\$237	\$484	\$71	\$1,679,030

Line 1 in

Table 4-7 allocates the operating revenue requirement to the cost components by distributing the total amount in column R to the cost components using the percentages shown in Line 11 of Table 4-2. Similarly, the capital revenue requirement in Line 2 is allocated to the cost components using the percentages shown in line 10 of Table 4-3. Line 3 subtracts the revenue offsets that were allocated to the cost components in Table 4-6. Note that Line 3 in Table 4-7 is equal to the negative value of Line 24 in Table 4-6 because these are offsetting revenues.

Line 4 of Table 4-7 shows the cost allocation before reallocating general and administrative costs in Line 6. Line 6 reallocates general costs (Column J) to the other cost components in proportion to each’s share of total costs. This reflects the fact that general and administrative costs support the other functions in proportion to their share of costs.

Line 12 shows the unit cost for most cost components, and is derived by dividing Line 7 by Line 9. The max day and max hour unit costs are used to derive total fire protection costs. The units of service in Line 9 are derived in Appendix A.

Table 4-7: Expense Allocation to Cost Components

Line No	Expense	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter Service	Customer Billing	Conservation	Direct Fire Protection	Gen & Admin	Large Fire Meters	Pump Zones					Sub Total
													(A)	(B)	(C)	(D)	(E)	
1	Operating Expenses	O&M	\$722,141	\$494,862	\$598,783	\$34,671	\$91,361	\$410,631	\$19,552	\$147,525	\$1,011,927	\$0	\$134,066	\$44,691	\$2,006	\$4,096	\$602	\$3,716,914
2	Capital Expenses	Capital	\$21,074	\$23,176	\$28,043	\$13,857	\$0	\$2,293	\$4,218	\$2,741	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95,401
3	Revenue Offset	Revenue Offsets	-\$35,647	-\$204,861	-\$247,882	-\$7,108	-\$16,041	-\$244,710	-\$10,694	-\$43,472	-\$843,676	-\$3,010	-\$15,852	-\$5,284	-\$237	-\$484	-\$71	-\$1,679,030
4	Total Cost of Service		\$707,568	\$313,177	\$378,944	\$41,420	\$75,320	\$168,214	\$13,076	\$106,793	\$168,251	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$2,133,285
5	Percent Excluding Gen & Admin		39.2%	17.4%	21.0%	2.3%	4.2%	9.3%	0.7%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
6	Allocation of General Admin		\$65,973	\$29,200	\$35,332	\$3,862	\$7,023	\$15,684	\$1,219	\$9,957	-\$168,251	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	Total Adjusted Cost of Service		\$773,541	\$342,377	\$414,276	\$45,282	\$82,342	\$183,898	\$14,295	\$116,751	\$0	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$2,133,285
8																		
9	Units of Service		653,350	653,350	2,343	7,835	4,278	2,403	653,350	4,278	4,278	0	653,350	201,040	9,084	15,620	2,770	
10	Units		hcf	hcf	hcf/day	hcf/day	equivalent meters	bills	hcf	NA	NA	NA	hcf	hcf	hcf	hcf	hcf	
11																		
12	Unit Cost of Service		\$1.18	\$0.52	\$176.82	\$5.78	\$19.25	\$76.53	\$0.02				\$0.18	\$0.20	\$0.39	\$0.23	\$0.39	

Fire Protection Costs

Line 12 of Table 4-7 shows the max day and max hour unit costs in dollars per hundred cubic feet per day (\$/hcf /day). Converting these costs into dollars per thousand gallons (\$/1,000 gal/day) yields the unit cost of service shown in Line 1 of Table 4-8. The total costs to maintain fire capacity in the water system is derived assuming a four-hour fire needing 4,000 gallons per minute – and therefore requiring a max day and max hour capacity in 1,000 gallons per day as shown in Line 4 of Table 4-8. Line 5, which is the total cost to maintain the capacity to fight a 4-hour fire, is Line 4 multiplied by Line 1. We allocate the total fire protection costs to public and private fire costs in proportion to the potential flow to fire hydrants and private fire connections. The potential flow for public and private fire connections is shown in Table 4-9.

Table 4-8: Derivation of Total, Public and Private Fire Protection Costs

Line No.	Fire Protection Cost Allocation	Max Day	Max Hour	Total
1	Unit Cost of Service	\$236.39	\$7.73	
2	Unit	\$ / 1,000 gal /day	\$ / 1,000 gal /day	
3	Fire Protection Service			
4	Units of Service (1,000 gallons)	960	4,800	
5	Allocated Cost of Service	\$226,939	\$37,086	\$264,024
6	Public Fire Protection	\$188,906	\$30,870	\$219,776
7	Private Fire Service	\$38,033	\$6,215	\$44,248

In Table 4-9, we calculate the potential fire demand (known as equivalent demand) of public and private fire accounts in Lines 3 and 15 of Table 4-9 respectively. Lines 1 through 2 calculate the potential flow through public fire hydrants using the Hazen William equation for pipe flow.¹² Lines 5 through 13 calculate the potential flow through private fire connections also using the Hazen Williams equation. The resulting potential fire demand, and therefore cost allocation for public fire and private fire costs, is shown in Lines 17 and 18 of Table 4-9. The total demand units in column D are calculated by multiplying the potential demand (column B) by the number of connections/hydrants in service (column C). This shows that public fire protection is 83% of the total fire costs we calculated in Line 5 of Table 4-8. The corresponding public and private fire costs are shown in Lines 6 and 7 of Table 4-8 respectively.

¹² The potential flow is the diameter of the outlet/connection raised to the 2.63 power – the Hazen Williams equation for pipe flow. For a 2" outlet the demand factor would be $2^{2.63} = 6.2$.

Table 4-9: Derivation of Potential Flow to Private and Public Fire Connections

Line No	Fire Line Size - Public Hydrants (A)	Fire Demand Potential (B)	Number of Fire Hydrants (C)	Equivalent Demand (D)
1	6" x 4"x 2.5" Type	160.76	245	39,387
2	4" x 2.5" Type	49.45	105	5,192
3	Total		350	44,579
4	Fire Line Size - Private Fire	Fire Demand Potential	Number of Lines	Equivalent Demand
5	1"	1.00	0	0
6	1.5"	2.90	0	0
7	2"	6.19	0	0
8	3"	17.98	0	0
9	4"	38.32	10	383
10	6"	111.31	6	668
11	8"	237.21	24	5,693
12	10"	426.58	2	853
13	12"	689.04	2	1,378
14	Total		44	8,975
15				
16	Percent Allocated to Public Fire Protection			83%
17	Percent Allocated to Private Fire Protection			17%

We can now complete the cost of service cost allocation to the cost components by making final adjustments shown in Table 4-10.

In Line 2, we reallocate the private fire protection costs we derived above to the private fire cost component in Column Q. Similarly, in Line 3 we reallocate public fire protection costs, derived in Line 6 of Table 4-8, to the meter service component so that public fire protection costs will be collected through the Meter Service Charge. We also allocate direct fire protection costs (such as hydrant maintenance) shown in Column H to the meter service component. Note that a small portion of direct fire protection costs remain in the direct fire protection cost component – this is the cost to maintain backflow prevention devices. This cost will be collected through private fire protection charges and will be derived in Section 5.

The last adjustment is shown in Line 4 of

Table 4-7. We reallocate a portion of max day and max hour costs to the meter component is so that the District can collect these costs through a fixed charge because meter and customer costs (Columns E and F) are collected through the fixed bi-monthly Meter Service Charge. The costs are reallocated so that the District can meet revenue stability goals and achieve approximately 32% of revenue collection through a fixed charge. This is further discussed in Section 5.3. The final Cost of Service allocation to the cost components is shown in Line 5 of Table 4-10.

Once we have allocated the City’s expenses to the cost causation components, we derive rates for each customer class to collect the total amount shown in Column R of Table 4-10. This is discussed in detail in Section 5.

Table 4-10: Final Cost of Service Allocation to Cost Component

Line No.	Expense	Pump Zones															Sub Total (R)	
		Supply (A)	Base (B)	Max Day (C)	Max Hour (D)	Meter Service (E)	Customer Billing (F)	Con-servation (G)	Direct Fire Protection/ Backflow Maintenance (H)	Gen & Admin (I)	Revenue Offset Large Fire Meters (J)	1 (K)	2 (M)	3 (N)	4 (O)	5 (P)		Private Fire Protection (Q)
1	Cost of Service	\$773,541	\$342,377	\$414,276	\$45,282	\$82,342	\$183,898	\$14,295	\$116,751	\$0	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$0	\$2,133,285
2	Private Fire Protection			-\$38,033	-\$6,215	\$0											\$44,248	
3	Allocation of Public Fire to Meter Service			-\$188,906	-\$30,870	\$334,776			-\$115,000									
4	Allocation of Peaking to Meter			-\$41,214	-\$1,803	\$43,018												
5	Total Adjusted Cost of Se	\$773,541	\$342,377	\$146,123	\$6,393	\$460,136	\$183,898	\$14,295	\$1,751	\$0	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$44,248	\$2,133,285

5 RATE DERIVATION

5.1 EXISTING RATE STRUCTURE AND RATES

The District’s existing rate structure consists of a fixed bi-monthly meter charge by meter size and a two-tiered volumetric rate for Single Family customers and a uniform rate for all other customer classes. The rates shown in Table 5-1 for Tier 1 and Tier 2 include a pumping rate which covers costs to pump water to the higher elevation zones. The pumping rate for each zone is shown in the right most column.

The lower portion of the table shows the current bi-monthly Meter Service Charge and the current Private Fire Charges.

Table 5-1: Existing Rate Structure and Rates (Bi-monthly)

Current Rates	Total Tier 1 Rate (\$/hcf)	Total Tier 2 Rate (\$/hcf)	Pumping Rate
Single Family Residential			
Zone 1	\$1.61	\$2.32	
Zone 2	\$1.81	\$2.52	\$0.20
Zone 3	\$1.98	\$2.69	\$0.37
Zone 4	\$1.86	\$2.57	\$0.25
Zone 5	\$2.12	\$2.83	\$0.51
Multi-family, Commercial, Uniform Rate (No Tiers)			
Zone 1	\$1.95		
Zone 2	\$2.15		\$0.20
Zone 4	\$2.20		\$0.25
Meter Service			
Meter Size (inches)	Charge	Private Fire	
5/8"	\$31.02	NA	
3/4"	\$37.19	NA	
1"	\$49.54	\$19.19	
1.5"	\$100.50	\$24.10	
2"	\$127.36	\$29.99	
3"	\$245.94	\$45.69	
4"	\$358.35	\$63.35	
6"	\$682.60	\$112.42	
8"	\$1,006.84	\$171.31	
10"	NA	\$240.01	
12"	NA	\$338.15	

5.2 PROPOSED RATE STRUCTURE

In Table 4-10 we allocated the District’s revenue requirement to each cost causation component. Table 5-2 shows how the District will collect each cost component – through a fixed meter charge or a volumetric charge. It also restates the amount allocated to each cost components from the Cost of Service section. Total fixed revenue collection is 32% of total revenue – which is close to the average in Southern California of approximately 25 to 30%. Note that the total revenue collected matches the total in column R of Table 4-10.

Table 5-2: Cost of Service and Fixed/Volumetric Revenue Collection

Line No.	Cost Component	Amount	Fixed/ Volumetric
1	Supply	\$773,541	Vol
2	Base	\$342,377	Vol
3	Peaking (Max Day an	\$152,517	Vol
4	Meter Service	\$460,136	Fixed
5	Customer Billing	\$183,898	Fixed
6	Conservation	\$14,295	Vol
7	Backflow Maintenanc	\$1,751	Fixed
8	Revenue Offset for L	-\$3,010	Fixed
9	Pump Zones	\$163,531	Vol
10	Private Fire Protectic	\$44,248	Fixed
11	Total	\$2,133,285	100%
12	Total Fixed	\$687,024	32%
13	Total Volumetric	\$1,446,261	68%

5.3 PROPOSED BI-MONTHLY METER SERVICE CHARGE

To derive the bi-monthly Meter Service Charge so that it collects the amount shown in Table 5-2, we must first calculate the number of equivalent meter units, which is shown in Table 5-3, Column D. Equivalent meter units account for the potential flow through larger meters and equate this flow to the flow through the smallest meter – in this case the 5/8-inch meter. We calculate the number of equivalent units by multiplying the number of meters (Column C) by the American Water Works Association (AWWA) capacity ratios in Column B to yield equivalent meters in column D.

Table 5-3: Derivation of Equivalent Meter Units

Line No.	Meter Size (A)	Meter Ratio (B)	Number of Meters (C)	Equivalent Meters (D)	Meter Service (E)	Customer Bill (F)	Proposed Bi-Monthly Fixed Charge (G)
1	5/8"	1.00	1,450	1,450	\$17.93	\$12.75	\$30.68
2	3/4"	1.50	653	980	\$26.89	\$12.75	\$39.64
3	1"	2.50	161	403	\$44.82	\$12.75	\$57.57
4	1.5"	5.00	20	100	\$89.63	\$12.75	\$102.39
5	2"	8.00	98	784	\$143.41	\$12.75	\$156.17
6	3"	16.00	7	112	\$286.82	\$12.75	\$299.58
7	4"	25.00	10	250	\$448.16	\$12.75	\$460.92
8	6"	50.00	4	200	\$896.32	\$12.75	\$909.08
9	8"	80.00	0	0	\$1,434.11	\$12.75	\$1,446.87
10	10"	115.00	0	0	\$2,061.54	\$12.75	\$2,074.29
11	Total		2,403	4,278			
12	Total Revenue Collected						\$644,034

Bi-monthly Meter Service Charge Components

There are two cost components that comprise the bi-monthly Meter Service Charge: 1) meter service and 2) customer service; they are described below (water agencies tend to call this charge the same name as the first component even though it contains two components). The bi-monthly Meter Service Charge recognizes the fact that the District incurs fixed costs related to maintaining meters and billing customers. It also collects a portion of capacity costs through the meter service charge. Table 5-4 shows the derivation of both components for the smallest meter size: 5/8 inch. Note that the amounts in Lines 2 and 6 of Table 5-4 equal Lines 4 and 5 in Table 5-2.

Table 5-4: Bi-monthly Meter and Customer Charge Derivation

Line No.	Bi-Monthly Meter Service Charge (A)	(B)
1	Meter Service Charge Component	
2	Meter Service Costs	\$460,136
3	Equivalent Meter Units	4,278
4	Bi-monthly Meter Service Charge	\$17.93
5	Customer Service Charge Component	
6	Customer Service Costs	\$183,898
7	Number of Meters	2,403
8	Bi-Monthly Customer Service Charge	\$12.75

Meter Service Charge Component

The meter service component recovers two types of costs: 1) costs associated with maintaining and servicing meters (meter service component) and 2) capacity (also known as peaking) costs. Both costs increase as the meter size increases and are proportional to the AWWA hydraulic capacity ratios shown in column B of Table 5-3. The capacity ratios, which are a function of a meter's safe maximum flow rate, are used to increase the meter service component for larger capacity meters – as shown in column E of Table 5-3. This assumes that the potential capacity (peaking) demand is proportional to the potential flow through each meter size as established by the AWWA hydraulic capacity ratios. The ratios shown in column B of Table 5-3 are the ratio of potential flow through each meter size compared to the flow through a 5/8-inch meter. The 5/8-inch meter is used as the base since it is the most numerous meter size within the District. Larger meters have the potential to demand more peak capacity. For example, Column B of Table 5-3 shows that the hydraulic capacity of a 2-inch meter is 8.0 times that of a 5/8-inch meter and therefore the meter service component is 8.0 times that of the 5/8-inch meter. The meter service component for a 5/8-inch meter was derived in Table 5-4. As shown in Column E of Table 5-3, the meter service (and capacity) component for larger meters is scaled up using the AWWA capacity ratios shown in column B.

Peaking costs (shown as max day and max hour costs) are shown in Line 4 of Table 4-10. We allocated a portion of capacity (peaking) related costs to the meter service component, as shown in Table 4-10, so that it can be collected through the fixed bi-monthly Meter Service Charge and allow the District to reach its fixed revenue goals. Allocating extra capacity costs by meter size (instead of allocating these costs using peaking factors as discussed in Section 5.5) is a common way to provide greater revenue stability, especially in-light of decreasing revenues during a drought or period of declining sales. Stated in another way – it is quite common to reallocate peaking costs (max day and max hour) to be collected through the meter charge – this is the basis for the reallocation in Line 4 of Table 4-10.

The total expense recovered through the Meter Service Charge is shown on Line 2 of Table 5-4 (Line 2 is the same as Line 4 in Table 5-2. Public fire protection costs are also recovered through the Meter Service Charge. Public and private fire protection costs are derived in Section 5.4

Customer Component

The customer component derivation, shown in the bottom portion of Table 5-4, recovers costs associated with meter reading, customer billing and collection, as well as answering customer calls. These costs are the same for all meter sizes as it costs the same to bill a small meter as it does a larger meter.

Total Bi-monthly Meter Service Charge for All meters

Table 5-3 shows the derivation of the bi-monthly Meter Service Charge by meter size in Column G, which is the addition of the meter service charge (and capacity component) in Column E and the customer component, which is the same for each meter size (Column F). Note that the total estimated revenue, shown in Line 12, Column G, is equal to the sum of Lines 4 and 5 in Table 5-2.

Table 5-5 shows the bi-monthly fixed Meter Service Charge for the next five years. They are derived by applying the revenue adjustments shown in Table 2-10 to the meter charges shown in Table 5-3. The Financial Plan, discussed in Section 2, assumes the rates shown are implemented in October of each year.

Table 5-5: Five Year Fixed Meter Service Charges

Line no.	Meter Size	Current Charge	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1	5/8"	\$31.02	\$30.68	\$32.98	\$35.46	\$38.12	\$40.97
2	3/4"	\$37.19	\$39.64	\$42.62	\$45.81	\$49.25	\$52.94
3	1"	\$49.54	\$57.57	\$61.89	\$66.53	\$71.52	\$76.88
4	1.5"	\$100.50	\$102.39	\$110.07	\$118.32	\$127.19	\$136.73
5	2"	\$127.36	\$156.17	\$167.88	\$180.47	\$194.00	\$208.56
6	3"	\$245.94	\$299.58	\$322.05	\$346.20	\$372.16	\$400.08
7	4"	\$358.35	\$460.92	\$495.48	\$532.65	\$572.59	\$615.54
8	6"	\$682.60	\$909.08	\$977.26	\$1,050.55	\$1,129.34	\$1,214.04
9	8"	\$1,006.84	\$1,446.87	\$1,555.38	\$1,672.04	\$1,797.44	\$1,932.25
10	10"	\$1,006.84	\$2,074.29	\$2,229.87	\$2,397.11	\$2,576.89	\$2,770.16

5.4 PROPOSED PRIVATE FIRE CHARGES

Table 5-6 shows the derivation of private fire charges. The total amount associated with private fire protection is shown on Line 10 of Table 5-2. Line 3 calculates the yearly private fire charge for the smallest connection size by dividing line 1 by line 2. Line 4 divides line 3 by six to create a bi-monthly charge.

Line 8 calculates the backflow maintenance charge in the same manner. The total backflow maintenance costs were established in Line 7 of Table 5-2. Line 8 calculates the yearly backflow maintenance charge (which is associated with all private fire connections) by dividing Line 6 by Line 7. Line 9 divides Line 8 by 6 billing periods per year to calculate a bi-monthly charge. This charge is applied to all accounts regardless of connection size.

Table 5-6: Calculation of Private Fire Charges

Line No		Private Fire Protection	(A)	(B)
1	Private Fire Protection Costs			\$44,248
2	Equivalent Connections			\$8,975
3	Yearly Charge			\$4.93
4	Bi-Monthly Charge			\$0.82
5				
6	Backflow Maintenance Costs			\$1,751
7	Number of Accounts			44
8	Yearly Charge			\$39.80
9	Bi-Monthly Charge			\$6.63

Table 5-7 shows the derivation of the bi-monthly Private Fire Charge in Column I. Column I is the summation of Columns E, F and H. The private fire charge for one-inch connections, shown in column F, was derived in Table 5-6. It is then scaled up using the potential demand ratios shown in column C.

The backflow charge was also derived in Table 5-6. To ease the impact of implementing private fire charges that are in accordance with the methodology set forth by AWWA, the District decided to apply a small amount of non-rate revenue, shown as the revenue offset in column H, to large private fire connections. Not doing so would have resulted in a large impact to these private fire connections. The District has discretion in the manner in which it applies non-rate revenue – which in this case is tax revenue. The total amount of revenue offset, shown in Line 8 of Table 5-2, is applied in proportion to the potential demand from each connection as shown in Column G. The proposed private fire charges are based on the potential flow through each private fire connection and are calculated in accordance with principles set forth in the AWWA M1 Manual.¹³ We note that the proposed private fire charges are lower than the current charges with the exception of the 8-inch through 10-inch meters. The total private fire revenue equals the sum of Lines 7,8 and 10 in Table 5-2 which is equal to the revenue shown in Line 11, Column I of Table 5-7.

Table 5-7: Calculation of Private Fire Charges

Line No.	Meter Size (A)	Number of Meters (B)	Potential Demand (C)	Equivalent Demand (D)	Backflow Maintenance (E)	Bi-Monthly Private Fire Charge (F)	Potential Demand Ratio (G)	Revenue Offset (H)	Total Bi-Monthly Rate (I)
1	1"	0	1.00	-	\$6.63	\$0.82			\$7.46
2	1.5"	0	2.90	-	\$6.63	\$2.39			\$9.02
3	2"	0	6.19	-	\$6.63	\$5.09			\$11.72
4	3"	0	17.98	-	\$6.63	\$14.77			\$21.41
5	4"	10	38.32	383	\$6.63	\$31.49			\$38.12
6	6"	6	111.31	668	\$6.63	\$91.46			\$98.09
7	8"	24	237.21	5,693	\$6.63	\$194.91			\$201.54
8	10"	2	426.58	853	\$6.63	\$350.51	38%	-\$95.91	\$261.23
9	12"	2	689.04	1,378	\$6.63	\$566.17	62%	-\$154.92	\$417.88
10		44		8,975				-\$3,010	
11	Total Revenue Collected ->								\$42,989

Table 5-8 shows the proposed private fire charges for the five-year Study Period.

¹³ Section VII of the fifth edition

Table 5-8: Proposed Five Year Private Fire Charges

Meter Size (inches)	Current Charges	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
5/8"	NA	NA	NA	NA	NA	NA
3/4"	NA	NA	NA	NA	NA	NA
1"	\$19.19	\$7.46	\$8.01	\$8.62	\$9.26	\$9.96
1.5"	\$24.10	\$9.02	\$9.70	\$10.42	\$11.21	\$12.05
2"	\$29.99	\$11.72	\$12.60	\$13.54	\$14.56	\$15.65
3"	\$45.69	\$21.41	\$23.01	\$24.74	\$26.60	\$28.59
4"	\$63.35	\$38.12	\$40.98	\$44.05	\$47.36	\$50.91
6"	\$112.42	\$98.09	\$105.45	\$113.36	\$121.86	\$131.00
8"	\$171.31	\$201.54	\$216.65	\$232.90	\$250.37	\$269.15
10"	\$240.01	\$261.23	\$280.82	\$301.88	\$324.53	\$348.86

5.5 VOLUMETRIC RATES

Total Volumetric Revenue

Table 5-2, Line 13 shows the total amount of revenue the Volumetric Rates are designed to collect. We will derive each component of the Volumetric Rate for each class to collect this amount. First, we must define the new proposed Single Family tier breakpoints.

Customer Classes

The District proposes a total of three customer classes:

- 1) Single Family
- 2) Multi-family, Commercial and Industrial customers
- 3) Public Authority and Irrigation customers

These classes are based on analyzing the peaking factors of each class using CY 2016 data. The classes are based on grouping customers together based on how they used the water system as evidenced by each classes' peaking factors. Peaking factors were calculated for each class and were highly similar among Multi-family, Commercial and Industrial customers (less than a 4% difference). Therefore, it is reasonable to combine these customers into one class. The peaking factors for Public Authority and Irrigation were identical.

Tier Definitions

Table 5-9 shows the proposed tier breakpoints. A common method to establish tier breakpoints is to set the first-tier breakpoint equal to the average winter consumption – this is the method we used to set the Tier 1 breakpoint. This assumes that most of winter water use is mostly indoor water use – thus this is a proxy for an indoor water budget. Tier 2 is use beyond the Tier 1 breakpoint. The revised lower Tier 1 breakpoint reflects recent conservation mandates and public outreach efforts during the drought which ended in CY 2016. The last two columns show the water use in each tier and the percent of bills that fall within each tier.

Table 5-9: Proposed Single Family Residential Tiers

Tier	Current Tier Breakpoint (hcf)	Proposed Tier Breakpoint (hcf)	Use (hcf)	Percent of Single Family Use	Percent of Single Family Bills
1	25	20	200,881	68%	52%
2	>25	>20	92,558	32%	48%
				100%	100%

Volumetric Rate Derivation

The total volumetric rate is the summation of unit rates for each cost component:

- 1) Supply,
- 2) Delivery,
- 3) Peaking (Max day and hour),
- 4) Conservation and
- 5) Pumping (Pump Zones).

We will derive each unit rate and sum each rate to get the total Volumetric Rate for each tier and customer class. First let us define each cost component (unit rate component).

Cost Component Definitions

Water Supply costs are costs associated with obtaining and treating water to make it ready for delivery from each District source:

- 1) Groundwater and
- 2) Groundwater leases.

Delivery costs are the operating and capital costs associated with delivering water to all customers through the distribution system (not including distribution storage) 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, which results in an equal delivery unit cost for all classes and tiers.

Peaking costs, or extra-capacity costs, are costs incurred to meet customer peak demands in excess of base use (or in excess of average daily demand). Peaking costs are shown in Line 3 of Table 5-2, which is the sum of maximum day and maximum hour costs shown in Columns C and D in Table 4-10. For the portion of peaking costs collected through the Volumetric Rate (shown in Line 3 of Table 5-2), peaking costs are distributed to each tier and class using peaking factors derived from customer use data, which are discussed later in this section. For the portion of peaking costs collected through the Monthly Service Charge, AWWA hydraulic capacity factors are used to distribute peaking costs to the various meter sizes – as derived and discussed in Section 5.3.

Conservation costs are costs which cover water conservation and efficiency programs and efforts. These costs were allocated equally to all user classes.

Derivation of the Unit Cost by Cost Component

Supply Unit Costs

Table 5-10 shows the supply cost derivation *by source*. The unit costs are shown in Line 7 and are derived by dividing Line 6 by Line 3. Future water costs for CY 2020 were used to establish the tier supply rates to better reflect the fact that groundwater production costs are expected to increase significantly in the next few years as the rate for the Resource Development Assessment is expected to increase.

The total water supply revenue requirement in Line 6 is equal to the water supply cost component shown in Line 1 of Table 5-2.

Table 5-10: Supply Cost Derivation

Line No.		Groundwater - San Gabriel Basin Watermaster	Leased Groundwater (Replacement Water Assessment)	Total
1	Acre Feet (AF))	858	579	1,437
2	Percent of Supply	60%	40%	100%
3	Water Use by Source (hcf)	390,018	263,333	653,350
4	Water Cost	\$316,497	\$533,782	\$850,279
5	Proportion of Water Cost	37%	63%	100%
6	Water Supply Reveune Requirement	\$287,933	\$485,608	\$773,541
7	Unit Cost (\$/ hcf)	\$0.74	\$1.84	\$1.18

Once we know the supply cost by source we derive the supply cost for each tier by taking the weighted average rate for each source – weighted by the water use from each source. For example, the Tier 1 rate is as follows: $(175,169 \times \$0.74 + 25,712 \times \$1.84) / 200,881 = \$0.88$ – shown in Line 1 of Table 5-11. The same calculation is performed for Tier 2. Note that the average supply rate for all classes is shown in Line 3.

Table 5-11: Derivation of the Supply Cost by Tier

Line No.	SFR Supply Allocation	Use (hcf)	Groundwater - San Gabriel Basin Watermaster	Leased Groundwater (Replacement Water Assessment)	Unit Cost
			\$0.74	\$1.84	
1	Tier 1	200,881	175,169	25,712	\$0.88
2	Tier 2	92,558	0	92,558	\$1.84
3	Total	293,440	175,169	118,271	\$1.18

Delivery Cost

We derive the delivery rate in Table 5-12 by dividing the delivery costs identified in Table 5-2, by the total District water use. The delivery rate is the unit cost to deliver water under *average daily demand (ADD)* conditions. This delivery cost is the same for all classes and for all tiers.

Table 5-12: Derivation of the Delivery Unit Cost

Delivery Rate Derivation	
Delivery Costs	\$342,377
Total Use	653,350
Delivery Rate	\$0.52

Peaking Rate

Table 5-13 shows the peaking rate derivation by class and tier. The total peaking costs for each class and tier were derived by calculating peaking unit rates and multiplying this rate by the max day and max hour use for each tier and class, both of which are shown in Appendix A. The peaking factors, shown in Column E were derived using District water use data and are the ratio of peak water use (during the maximum bi-monthly summer billing cycle) divided by the average bi-monthly water use. The peaking rate, shown in Column D, is calculated by dividing the peaking costs (Column B) by water use (Column C) for each class and tier. 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 B of Table 5-13 matches the total peaking costs shown in Table 5-2. The weighted average peaking rate for all classes is shown in Line 9.

Table 5-13: Derivation of Peaking Rate

Line No.	Customer Class (A)	Peaking Costs (B)	Use (hcf) (C)	Peaking Rates (\$/hcf) (D)	Max Day Peaking Factor (E)
1	Single Family				
2	Tier 1	\$27,172	200,881	\$0.14	1.34
3	Tier 2	\$36,520	92,558	\$0.39	2.01
4	Multi-family	\$14,198	85,654	\$0.17	1.42
5	Commercial	\$15,940	96,160	\$0.17	1.42
6	Industrial	\$6,785	40,933	\$0.17	1.42
7	Public Authority	\$14,647	38,709	\$0.38	1.97
8	Irrigation	\$37,255	98,455	\$0.38	1.97
9	Total	\$152,517	653,350	\$0.23	

Conservation Rate

Table 5-14 shows the conservation rate derivation for all customers. The conservation rate is derived by dividing the conservation costs shown in Line 1 (equal to Line 6 of Table 5-2) by the District's annual use in Line 2 of Table 5-14.

Table 5-14: Derivation of Conservation Unit Costs

Line No.	Conservation Rate	
1	Conservation Cost	\$14,295
2	Total Use (hcf)	653,350
3	Conservation Rate	\$0.02

Final Rate Derivation

We have calculated the rates for each cost component: supply, delivery, peaking and conservation. Pumping rates are derived in the next section.

Adding the total revenue in Line 9, Column G to the revenue from pump zones 2,3,4 and 5, shown in Lines 2,3,4 and 5, Column C of Table 5-16, yields the total volumetric revenue requirement in Line 13 of Table 5-2 (\$1.447 million)

Table 5-15 shows the total Volumetric Rate derivation for all customer classes. This is the summation of all rate components derived in earlier tables in this section. The total Volumetric Rate shown in Column G is designed to collect the volumetric costs (before pump zone costs for zones 2,3,4 and 5 are added) shown in Table 5-2. Note that we have included the pumping costs associated with Zone 1 in Column F because all customers benefit from pumping in this zone. Adding the total revenue in Line 9, Column G to the revenue from pump zones 2,3,4 and 5, shown in Lines 2,3,4 and 5, Column C of Table 5-16, yields the total volumetric revenue requirement in Line 13 of Table 5-2 (\$1.447 million)

Table 5-15: Derivation of Rates by Tier and Class

Line No.	Customer Class	Supply	Base Delivery	Peaking	Con-servation	Zone 1 Pumping Rate	Total Rate (\$/hcf)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	Single Family						
2	Tier 1	\$0.88	\$0.52	\$0.14	\$0.02	\$0.18	\$1.74
3	Tier 2	\$1.84	\$0.52	\$0.39	\$0.02	\$0.18	\$2.97
4	Multi-family	\$1.18	\$0.52	\$0.17	\$0.02	\$0.18	\$2.08
5	Commercial	\$1.18	\$0.52	\$0.17	\$0.02	\$0.18	\$2.08
6	Industrial	\$1.18	\$0.52	\$0.17	\$0.02	\$0.18	\$2.08
7	Public Authority	\$1.18	\$0.52	\$0.38	\$0.02	\$0.18	\$2.29
8	Irrigation	\$1.18	\$0.52	\$0.38	\$0.02	\$0.18	\$2.29
9	Total Revenue	\$773,541	\$342,377	\$152,517	\$14,295	\$118,214	\$1,400,944

Pumping Rates

Table 5-16 shows the derivation of the pumping rates by pumping zone. The rate for Zone 1 is included in the rates derived earlier since all customers benefit from pumping in this zone. We first calculate the rate for each zone, shown in Column D - which is Column C divided by Column B. Zones

3 and 5 are connected to Zone 2 and therefore the total rate for Zones 3 and 5 must include the rate for Zone 2 – this is reflected in column F. If a customer resides in any zone other than Zone 1, then pumping zone rates are added to the rates derived in Table 5-15.

Table 5-16: Derivation of Pumping Rates by Zone

Line No.	Zone (A)	Total Flow Through Zone* (hcf) (B)	Cost Associated with Pumping in Zone (\$) (C)	Pumping Rate for Each Zone (\$ / hcf) (D)	Total Pumping Rate (\$ / hcf) (F)
1	1	653,350	\$118,214	\$0.18	Included in Rates
2	2	201,040	\$39,407	\$0.20	\$0.20
3	3	9,084	\$1,769	\$0.19	\$0.39
4	4	15,620	\$3,611	\$0.23	\$0.23
5	5	2,770	\$531	\$0.19	\$0.39
6			\$163,531		

* The flow shown includes the flow from zones that are above it - for example Zone 2 include flow from Zone 3 and 5

Table 5-17 shows the proposed five- year pumping rates by zone.

Table 5-17: Fiver Year Pumping Rate Charges by Zone

Line No	Zone	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1						
2	2	\$0.20	\$0.21	\$0.23	\$0.24	\$0.26
3	3	\$0.39	\$0.42	\$0.45	\$0.49	\$0.52
4	4	\$0.23	\$0.25	\$0.27	\$0.29	\$0.31
5	5	\$0.39	\$0.42	\$0.45	\$0.48	\$0.52

5-Year Rates

Table 5-18 shows the proposed five-year Volumetric Rates for each customer class by customer class and zone. The rates shown include the pumping rates for each zone. The rates in CY 2019 through CY 2022 are derived by escalating the rates derived in Adding the total revenue in Line 9, Column G to the revenue from pump zones 2,3,4 and 5, shown in Lines 2,3,4 and 5, Column C of Table 5-16, yields the total volumetric revenue requirement in Line 13 of Table 5-2 (\$1.447 million)

Table 5-15 and Table 5-16 by the proposed revenue adjustments shown in Table 2-10. Customer bill impacts are discussed in Section 6.

Table 5-18: Five-Year Volumetric Rates

Single Family Residential

Zone	CY 2018		CY 2019		CY 2020		CY 2021		CY 2021	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
Zone 1	\$1.74	\$2.97	\$1.87	\$3.19	\$2.01	\$3.43	\$2.16	\$3.68	\$2.33	\$3.96
Zone 2	\$1.94	\$3.16	\$2.08	\$3.40	\$2.24	\$3.65	\$2.41	\$3.93	\$2.59	\$4.22
Zone 3	\$2.13	\$3.36	\$2.29	\$3.61	\$2.46	\$3.88	\$2.65	\$4.17	\$2.85	\$4.48
Zone 4	\$1.97	\$3.20	\$2.12	\$3.44	\$2.28	\$3.69	\$2.45	\$3.97	\$2.64	\$4.27
Zone 5	\$2.13	\$3.36	\$2.29	\$3.61	\$2.46	\$3.88	\$2.65	\$4.17	\$2.84	\$4.48

Multi-family, Commercial and Industrial

Zone	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Zone 1	\$2.08	\$2.23	\$2.40	\$2.58	\$2.77
Zone 2	\$2.27	\$2.44	\$2.63	\$2.82	\$3.03
Zone 4	\$2.31	\$2.48	\$2.67	\$2.87	\$3.08

Public Authority and Irrigation

Zone 1	\$2.29	\$2.46	\$2.65	\$2.84	\$3.06
Zone 2	\$2.49	\$2.67	\$2.87	\$3.09	\$3.32
Zone 4	\$2.52	\$2.71	\$2.91	\$3.13	\$3.37

6 BILL IMPACTS

Note that all bill impacts shown below are for Zone 1 customers. Also note that exact customer bill impacts will vary by each customers' meter size and volumetric water use.

Single Family Bill Impacts

Table 6-1 shows the monthly Single Family customer bill impacts for various use points and assuming a 5/8-inch meter – which is the most common meter size for Single Family customers. Column F shows the percent of bills (customers) that fall within a certain water use level during a bi-monthly billing period. For example, 52% of the annual bills are for 20 hcf or less. Note that the overall revenue adjustment for the District in CY 2018 is 15.5%, which means that on average one could expect a 15.5% increase for customers. However, due to the slightly lower fixed charge and tiered rate structure, customers who use 30 hcf or less per month will see a lower bill impact than the overall revenue adjustment. Table 6-1 shows the approximate mode (most commonly billed use amount), median (50% of customers below and 50% of customers above this amount) and average water use.

Table 6-1: Monthly Single Family Bill Impacts (5/8" Meter)

Single Family 5/8 inch meter	Use (hcf) (A)	Current Bill (B)	Proposed Bill (C)	Dollar Difference (D)	Percent Difference (E)	Percent of Customers (F)
	5	\$39.07	\$39.39	\$0.32	0.8%	6.9%
	10	\$47.12	\$48.10	\$0.98	2.1%	20.4%
Approximate Mode	15	\$55.17	\$56.81	\$1.64	3.0%	36.2%
Approximate Median	20	\$63.22	\$65.52	\$2.30	3.6%	52.2%
Approximate Average (24)	25	\$71.27	\$80.35	\$9.08	12.7%	65.7%
	30	\$82.87	\$95.17	\$12.30	14.8%	75.8%
	35	\$94.47	\$110.00	\$15.53	16.4%	82.9%
	40	\$106.07	\$124.83	\$18.76	17.7%	88.2%

Multi-family Bill Impacts

Table 6-2 shows monthly Multi-family customer bill impacts for various use points, assuming a 3/4-inch meter – which is the most common meter size for this class. The approximate average use for Multi-family customers is 245 hcf.

Table 6-2: Multi-family Bill Impacts (5/8" Meter)

Multi-family 3/4 inch meter	Use (hcf) (A)	Current Bill (B)	Proposed Bill (C)	Dollar Difference (D)	Percent Difference (E)	Percent of Customers (F)
	50	\$134.69	\$143.47	\$8.78	6.5%	5.9%
	100	\$134.69	\$143.47	\$8.78	6.5%	28.7%
	150	\$232.19	\$247.30	\$15.11	6.5%	62.3%
	200	\$329.69	\$351.13	\$21.44	6.5%	82.4%
	250	\$427.19	\$454.96	\$27.77	6.5%	86.4%
	300	\$524.69	\$558.79	\$34.10	6.5%	88.3%
	350	\$622.19	\$662.62	\$40.43	6.5%	90.4%
	400	\$719.69	\$766.44	\$46.75	6.5%	90.4%

Commercial

Table 6-3 shows the Commercial customer bill impacts for various use points and assuming a 5/8-inch meter – the most common meter size for this class. The average use is 54 hcf.

Table 6-3: Commercial Bill Impacts (5/8" Meter)

Commercial 5/8 inch meter	Use (hcf) (A)	Current Bill (B)	Proposed Bill (C)	Dollar Difference (D)	Percent Difference (E)	Percent of Customers (F)
	10	\$50.52	\$51.45	\$0.93	1.8%	48%
	20	\$70.02	\$72.21	\$2.19	3.1%	64%
	30	\$89.52	\$92.98	\$3.46	3.9%	73%
	40	\$109.02	\$113.74	\$4.72	4.3%	77%
	50	\$128.52	\$134.51	\$5.99	4.7%	80%
	60	\$148.02	\$155.28	\$7.26	4.9%	83%
	70	\$167.52	\$176.04	\$8.52	5.1%	85%
	80	\$187.02	\$196.81	\$9.79	5.2%	87%
	90	\$206.52	\$217.57	\$11.05	5.4%	88%
	100	\$226.02	\$238.34	\$12.32	5.5%	89%

Industrial

Table 6-4 shows the Industrial monthly customer bill impacts assuming a 2-inch meter – the most common meter size for this class. The average government water use is 909 hcf.

Table 6-4: Industrial Bill Impacts (2" Meter)

Industrial 2 inch meter	Use (hcf) (A)	Current Bill (B)	Proposed Bill (C)	Dollar Difference (D)	Percent Difference (E)
	500	\$1,102.36	\$1,194.45	\$92.09	8.4%
	750	\$1,589.86	\$1,713.60	\$123.74	7.8%
	1,000	\$2,077.36	\$2,232.74	\$155.38	7.5%
	1,250	\$2,564.86	\$2,751.88	\$187.02	7.3%
	1,500	\$3,052.36	\$3,271.03	\$218.67	7.2%

Public Authority and Irrigation

Table 6-4 shows the Public Authority customer bill impacts assuming a 2-inch meter – the most common meter size for both classes. The approximate average water use for the Public Authority and Irrigation classes is 218 and 178 hcf respectively.

Table 6-5: Public Authority and Irrigation Bill Impacts (2" Meter)

Public Authority and Irrigati 2 inch meter	Use (hcf) (A)	Current Bill (B)	Proposed Bill (C)	Dollar Difference (D)	Percent Difference (E)
	100	\$322.36	\$385.09	\$62.73	19.5%
	200	517.36	\$614.01	\$96.65	18.7%
	300	712.36	\$842.93	\$130.57	18.3%
	400	907.36	\$1,071.85	\$164.49	18.1%

7 APPENDIX A: UNITS OF SERVICE AND UNIT COSTS OF SERVICE DERIVATION

Units of Service Derivation

Line No.	Customer Class (A)	Tier Breakpoint (B)	Annual Use (hcf) (C)	Average Daily Use (hcf) (D)	Bi-monthly Peaking Factor (E)	Capacity Factor (F)	Total Capacity (hcf/day) (G)	Extra Capacity (hcf/day) (H)	Capacity Factor (I)	Total Capacity (hcf/day) (J)	Extra Capacity (hcf/day) (K)	Number of Equivalent Meters (M)	Number of Accounts (N)	Percent of Total Usage (O)	Private Fire Accounts (P)
1															
2	Single Family Residential														
3	Tier 1	20	200,881	550	1.06	1.34	735	185	2	1,101	366	-	-	0%	
4	Tier 2	>20	92,558	254	1.59	2.01	510	256	3	764	254	-	-	0%	
5	Tier 3														
6	Multi-family		-	-	NA	NA	NA	NA	NA	NA	NA	-	-	0%	
7	Commercial		85,654	235	1.12	1.42	332	98	2	498	165	232	54	13%	
8	Industrial		96,160	263	1.12	1.42	373	110	2	559	186	874	280	15%	
9	Public Authority		40,933	112	1.12	1.42	159	47	2	238	79	51	7	6%	
10	Irrigation		38,709	106	1.56	1.97	209	103	3	313	104	259	27	6%	
11	Total Fire Protection		98,455	270	1.56	1.97	531	261	3	796	264	533	86	15%	
12	Private Fire Accounts		-	-	-	-	-	1,283	-	-	6,417	-	-	0%	46
13	Total Units of Service		653,350			1.59	2,849	2,343	0	4,268	7,835	4,278	2,403	100%	46
14	Units		hcf					hcf/day			hcf/day	Equivalent Meters	Bills		# of Accounts

Unit Rates by Cost Component

Line No.	Percent of Direct Costs for Hydrants (Remainder is for Backflow)	Cost of Service Allocation	Pump Zones															Private Fire Protection	Sub Total	
			Supply	Base	Max Day	Max Hour	Meter Service	Customer Billing	Con-servation	Direct Fire Protection/ Backflow Maintenance	Gen & Admin	Revenue Offset Tier 1	Revenue Offset Large Fire Meters	1	2	3	4			5
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)		
1		Cost of Service	\$773,541	\$342,377	\$414,276	\$45,282	\$82,342	\$183,898	\$14,295	\$116,751	\$0	\$0	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$2,133,285	
2		Private Fire Protection			-\$38,033	-\$6,215												\$44,248	\$0	
3	98.5%	Allocation of Public Fire to Meter Service (Fixed Charge)			-\$188,906	-\$30,870	\$334,776			-\$115,000	\$0									
4		Allocation of Peaking to Meter		\$0	-\$41,214	-\$1,803	\$43,018												\$0	
5		Total Adjusted Cost of Service	\$773,541	\$342,377	\$146,123	\$6,393	\$460,136	\$183,898	\$14,295	\$1,751	\$0	\$0	-\$3,010	\$118,214	\$39,407	\$1,769	\$3,611	\$531	\$44,248	\$2,133,285
6			36%	16%	7%	0%	22%	8.6%	1%	0%										100%
7		Unit of Service	653,350	653,350	1,059	1,418	4,278	2,403	653,350	4,278	200,881	653,350	201,040	9,084	15,620	2,770	8,975			
8			hcf	hcf	hcf/day	hcf/day	equivalent meter/yr	bills/yr	hcf	equivalent meters		Total hcf in Zone	Total hcf in Zone	Total hcf in Zone	Total hcf in Zone	Total hcf in Zone	Priv Fire Demand Unit			
9		Unit Cost of Service Rates	\$1.18	\$0.52	\$137.92	\$4.51	\$107.559	\$76.53	\$0.02	\$0.41	\$0.00	\$0.18	\$0.20	\$0.19	\$0.23	\$0.19	\$4.93			
10			hcf	hcf	hcf/day	hcf/day	equivalent meter/yr	per year	hcf	equivalent meter/yr							Yrly Charge per demand unit			

La Puente Valley

County Water District

Water Capacity Fee Report

July 2018



July 9, 2018

Mr. Greg Galindo
General Manager
La Puente Valley County Water District
112 N 1st Street
La Puente, CA 91744

Subject: Water Capacity Fee Report

Dear Mr. Galindo:

Raftelis is pleased to present to the La Puente County Water District (District) the attached Water Capacity Fee Report. The enclosed recommendations are based on sound principles and defensible methodologies and the resulting fees are fair and equitable since they are reflective of the current value of the utility.

We enjoyed the opportunity to help the District to develop water capacity fees and the associated water rates. Should you have any questions or comments regarding this report please contact the Project Manager - Steve Gagnon at (714) 351-2013.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in blue ink, appearing to read 'Steve Gagnon'.

Steve Gagnon, PE
Manager

1. Executive Summary

This document describes the purpose, methodology, and calculation of water capacity fees for the La Puente Valley County Water District (District). This executive summary provides a summary of these topics and the results of the study.

Economic and Legal Framework

Capacity fees can be levied on new customers connecting to a utility or customers with expanded connections to the utility. They are one-time fees paid up-front as a condition of new development or expansion which are designed to recover the cost of the facilities required to provide service. Capacity fees reimburse existing customers for their past capital investment which they have funded through payment of monthly/bi-monthly fees to cover capital costs and debt service payments. Using this approach, all customers, both existing and new, will equally contribute to the construction costs of capital facilities.

The legal grounds for charging capacity fees are established in Government Code Sections 66013, 66016, 66022, and 66023. Per Section 66013, capacity fees imposed by an agency “shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed...” This report establishes the nexus between the capacity fee and the cost of providing capacity in the water and wastewater utilities.

Approach

There are three accepted methods to calculate capacity fees. The two that are most prevalent are the buy-in approach and the incremental cost approach. The third is a hybrid of these two approaches. The buy-in approach is most appropriate for agencies that have capacity available in their current facilities. Capacity fees calculated using the buy-in methodology collect the cost of existing facilities. By contrast, the incremental approach is most appropriate for agencies anticipating construction of new facilities to meet new demand. The costs of the new facilities are distributed to customers based on their expected utilization of the new plant’s capacity. All methodologies are designed to ensure that “growth pays for growth.”

Raftelis recommends that the District use the buy-in approach to determine the District’s capacity fees since the District has capacity in existing facilities to serve new and expanding customers in the near term. These users will need to “buy into” the current system by paying for their share of capacity.

Buy-in Approach Calculation

There are two types of buy-in approaches; the system buy-in approach and the equity buy-in approach. The equity buy-in approach includes cash reserves while the system buy-in approach does not. The equity buy-in approach divides by current customer demand while the system buy-in approach divides by total plant capacity. The differences are fully explained in Section 4 and a summary calculation is provided below in Table 1.

There are a number of methods used to value utility infrastructure and assets. Raftelis recommends that the District value its system based on the Replacement Cost Less Depreciation (RCLD) method, which recognizes that the District’s water system assets are not new. This method escalates each asset’s purchase value and accumulated depreciation to current dollars using the asset’s acquisition date and the Engineering News Record’s nation-wide Construction Cost Index (ENR-CCI). The ENR-CCI is a widely-used index for determining construction cost inflation.

Raftelis calculated the water system asset value using the RCLD method and used the resulting total asset value to calculate two capacity fees based on the system buy-in and equity buy-in calculation approaches. Table 1 shows the resulting water capacity fees using these two methods. The District can select one of the methodologies after review by its legal counsel. The full derivation and calculations for these fees are described in Section 4.

Table 1: Current and Proposed Water Capacity Fees

Meter Size	Current Capacity Fee	Proposed Capacity Fee	
		System Buy-in	Equity Buy-in
5/8"	\$1,804.15	\$2,196	\$3,104
3/4"	\$2,706.23	\$3,295	\$4,656
1"	\$4,510.38	\$5,491	\$7,760
1.5"	\$9,020.76	\$10,982	\$15,520
2"	\$14,433.21	\$17,571	\$24,833
3"	\$28,866.43	\$35,143	\$49,665
4"	\$45,103.79	\$54,911	\$77,602
6"	\$90,207.59	\$109,821	\$155,204
8"	\$144,332.14	\$175,714	\$248,326
10"	NA	\$252,589	\$356,968

2. Introduction

The District engaged Raftelis to perform a water rate study and calculate capacity fees. The results of the water rate study are contained in a separate report. Capacity fees are one-time fees paid up front as a condition of new or expanded real estate development. Capacity fees are designed to recover the cost of the facilities needed to provide water (and/or wastewater) service. Per California Government Code Section 66013, the fees “shall not exceed the reasonable cost of providing service.” Therefore, the fees are required to reflect the estimated cost of the existing or additional system capacity needed to serve them. Other common terms for capacity fees are connection fees, impact fees, system development charges, development impact fees, plant and facility connection charges, and capital facility charges.

Current Fees

The District currently charges a capacity fee for new and expanded connections to the water system. The fee is levied according to water meter size, which is a reflection of the portion of system capacity used by the utility customer. Table 2 shows the District’s current capacity fees by meter size.

Table 2: Current Capacity Fees

Meter Size	Current Capacity Fee
5/8"	\$1,804.15
3/4"	\$2,706.23
1"	\$4,510.38
1.5"	\$9,020.76
2"	\$14,433.21
3"	\$28,866.43
4"	\$45,103.79
6"	\$90,207.59
8"	\$144,332.14
10"	NA

The proposed capacity fees reflect the current value of the water system as described in **Section 4**, which provides the nexus required by California Government Code Section 66013 between water capacity fees and the cost to provide water system capacity.

3. Capacity Fee Economic and Legal Environment

For publicly owned utilities, capital facilities are often funded by existing customers through (monthly or bimonthly) rate and charge revenue, among other sources. Existing customers' investment in existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. New and expanding customers will buy into the system that has excess capacity. Through the implementation of capacity fees, new and expanding customers pay for the cost of the excess system capacity that will serve them so that existing customers are not subsidizing capital costs for new customers. This effectively puts new customers on par with existing customers for the capital costs to build the utility. In other words, the new users are *buying into* the existing system by repaying existing customers for their prior investment. Thus, the term "buy-in."

Economic Basis

The economic philosophy behind capacity fees is that water (and wastewater) capital facility costs should be paid by those using the utility. To fairly distribute these costs, the capacity fee should reflect the cost to provide capacity to new users and not unduly burden existing users who continue to maintain the full capacity of the utility through their user charges.

The philosophy that those using the capacity should pay for the cost of capacity is often referred to using the phrase "growth should pay for growth." This principal is summarized in the American Water Works Association (AWWA) *Manual M1, Principles of Water Rates and Charges* in the Section on System Development Charges.

Legal Framework¹

The District has the authority to price and implement water capacity fees. The most salient limitation on this authority is the requirement that fees imposed on new and expanding development must bear a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of capacity fees. The basic statutory standards governing water (and wastewater) capacity fees are embodied by California Government Code Sections 66013, 66016, 66022, and 66023. Government Code Section 66013, in particular, contains requirements specific to pricing water and wastewater capacity fees:

"Notwithstanding any other provision of law, when a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed, unless a question regarding the amount the fee or charge in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue."

¹ Raftelis does not practice law nor does it provide legal advice. The above discussion is to provide a general review of state institutional constraints and is labeled "legal framework" for literary convenience only. The District should consult with its counsel for clarification of any of the topics discussed in this section.

Section 66013 also includes the following general requirements:

- Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.
- If the agency is a City, the capacity fee revenue must be segregated from the general fund to avoid commingling of capacity fees and the general fund.
- Section 66013 also requires annual reporting requirements for capacity fees revenue.

4. Capacity Fee Methodologies

There are three main methods to calculate capacity fees. Each approach has evolved largely on the basis of changing public policy, legal requirements, and the unique and special circumstances of each local agency. The three main methods are the “buy-in”, “incremental-cost”, and “hybrid” approaches.

Buy-In Method

The buy-in approach rests on the premise that new customers “buy-in” to the utility to reimburse existing customers who have already constructed and maintain the facilities that will serve new customers, including the costs associated with financing those services. Under this approach, a new single-family customer pays an amount equal to the value of the capacity required to serve a new home – which is measured in either gallons per day or equivalent dwelling units. One equivalent dwelling unit is the amount of water or wastewater used by an average single-family home.

To determine the value of capacity, the total value of the water utility is divided by either the *ultimate capacity* (system buy-in approach) of the system or the *current system demand* (equity buy-in approach). The equity buy-in approach also includes the system reserve balances.

To provide an example of the buy-in approach; if an existing system can serve 100 single-family homes and a new customer wants to build a new single-family home (and connect to the water system), then the new customer would pay 1/100th of the total existing system net value. By paying the capacity fee, the new customer has bought into the existing system – thus, the term **buy-in**. The user has effectively acquired a financial position on par with existing customers and will face future capital and operating costs on equal financial footing with existing customers. This approach is suited for agencies that have excess capacity in their existing system. This is the methodology that Raftelis used for the District’s capacity fee study because the District does not have a major plant expansion planned to serve new customers.

Incremental Cost Method

For completeness, we will describe the two other methodologies. When new users connect to a utility system, they use either surplus capacity from the existing system or they require construction of new capacity to accommodate their needs. When a substantial amount of new facility construction is required to support growth, the incremental cost method may be used. Under the incremental-cost approach, new customers pay for the cost of additional capacity regardless of the value of past investments made by existing customers.

For instance, if it costs X dollars to provide new infrastructure (additional capacity) to serve 100 single-family homes and a new customer builds a home, then the new user would pay $\$X/100$ to connect to the system. In other words, a new customer pays the *incremental cost of capacity* – thus, the term **incremental cost** for this methodology. As with the equity buy-in approach, new connectors will effectively acquire a financial position that is on par with existing customers. This approach is best suited for growing communities where additional facilities are needed to accommodate growth and is not recommended for the District at this time.

Hybrid Method

In addition to the above two methodologies, there is also a hybrid approach which uses aspects of both the buy-in approach and the incremental cost approach. This is appropriate when agencies have some existing reserve (unused) capacity available, yet are also in the process of planning or building additional capacity. The fee produced by the hybrid approach recognizes that new customers benefit from both existing infrastructure and planned capital improvements.

Since the District has excess capacity in the water system to support customer growth, Raftelis calculated the capacity fees using the **buy-in** method.

5. Capacity Fee Calculation

Capacity Fee Methodology

Raftelis used the **buy-in** approach to calculate water capacity fees since there is enough capacity in the water system to serve new users for the near term. The buy-in approach first separately calculates the value of the water system.

Utility System Valuation Methodology

There are several ways to establish the value of a utility including:

1. Original Cost (also known as book cost or historical cost)
2. Original Cost Less Depreciation (which subtracts depreciation)
3. Replacement Cost
4. Replacement Cost Less Depreciation

The most common valuation method is the Replacement Cost Less Depreciation (RCLD). It is often preferred to valuation methods such as Original Cost Less Depreciation (OCLD), Original Cost (OC), and Replacement Cost (RC) because of its defensibility. Barring, for example, instances of water and wastewater systems that have depreciated significantly due to lack of replacement and repair, RCLD is the most legally-defensible option for valuation because the total asset value:

1. Is inflation-adjusted by the Engineering News Record nationwide Construction Cost Index (ENR-CCI), and thus recovers the cost of replacing the infrastructure in current dollars.
2. Accounts for depreciation and, thus, addresses the fact that the water system is not new and equipment and facilities have depreciated in value.

Water Capacity Fee

Table 3 shows the capacity fee calculation. We will walk the reader through each calculation for the system buy-in and equity buy-in calculation.

Table 3: Capacity Fee Buy-in Calculation

Water Capacity Fee Calculation		System Buy-in	Equity Buy-in
Buy-In Methodology	(A)	(B)	(C)
Line No.		Replacement Cost Less Depreciation	Replacement Cost Less Depreciation
1	Supply	\$2,879,503	\$2,879,503
2	Treatment	\$1,975,649	\$1,975,649
3	Pumping	\$390,341	\$390,341
4	Storage	\$2,742,688	\$2,742,688
5	Distribution	\$6,047,441	\$6,047,441
6	Fire Protection	\$24,519	\$24,519
7	Customer Accounting	\$313,245	\$313,245
8	General and Administrative	\$576,303	\$576,303
9	Total	\$14,949,690	\$14,949,690
10			
11	Less Contributed Assets	\$4,670,104	\$4,670,104
12	Less Outstanding Debt Principal	\$0	\$0
13	Total Water System Valuation - System Buy-in	\$10,279,585	\$10,279,585
14	Add Reserve Balances		\$3,183,672
15	Total Water System Valuation incl. Reserves - Equity Buy-in		\$13,463,258
16	Ultimate Max Day Plant Capacity (Gallons per day, GPD)	3,600,000	
17	Current 2010-2013 Max Day Demand (GPD, Water Master Plan)		3,336,277
18	System Buy-In Methodology - \$/GPD (Line 13/16)	\$2.86	
19			
20	Equity Buy-in Methodology - \$/GPD (Line 15/17)		\$4.04
21	Average SFR Water Use (GPD) from Water Master Plan	348	348
22	Observed Max Day/ Average Day Peaking Factor	2.21	2.21
23	Peak Max Day SFR Water Use (GPD)	769	769
24	System Buy-In Methodology charge per 5/8" Meter	\$2,196	
25			
26	Equity Buy-in Methodology charge per 5/8" Meter		\$3,104

Utility System Value

Lines 1 through 9 in Table 3 show the asset valuation of the water utility using the RCLD method and categorized by function. Land assets were escalated by the consumer price index rather than the ENR-CCI². Depreciation was not factored into the valuation of land assets since land is not normally depreciated.

Line 1 shows the value of the District's water supply assets. Line 2 shows the value of the treatment system. Lines 3 through 8 of Table 4 show the valuation of the remaining assets for the water system. Line 11 subtracts contributed assets since these assets were donated by builders/developers and therefore the District does not have a cost basis to recover the value of these assets. Line 12 subtracts the amount of outstanding principal debt from the total asset value because this would otherwise double charge customers – once through the capacity fees and again through monthly rates and charges. Line 12 has a value of \$0 because the District does not currently have outstanding debt. Line 13 shows the RCLD value of the water system for the system buy-in calculation adjusted by lines 11 and 12.

For the equity buy-in calculation, shown in column C, the utility value includes water enterprise reserves, as shown in Line 14. The basis for including reserves is that past customers have accumulated these reserves through their monthly bill payments and future users will benefit from these cash reserves since the reserves may lower rate revenue requirements. Thus, reserves can be counted as part of the value of the utility. This is similar to valuing a business in which cash equivalents are added to the discounted value of future cash flows to ascertain the total business value.

The District measures its system capacity in gallons per day (GPD). Line 18 shows the value of system capacity in dollars per gallon per day (\$/GPD) for the system buy-in capacity fee calculation. It is calculated by dividing Line 13 by Line 16 – which is the total water treatment plant peak capacity in GPD.

The system buy-in capacity fee for a single-family home (also known as an equivalent dwelling unit) must estimate the peak use, in gallons per day, for a single-family home as shown in Lines 21 through 23. This is because the plant and water distribution system were designed for peak flows/capacity needs and we are allocating peak capacity. Line 21, taken from the District's most recent Water Master Plan, shows that the average single-family use is 348 gallons per day and the observed max day to average day peaking factor is 2.21. Average use multiplied by the peaking factor yields the peak max day use in GPD shown on Line 23. We use this peak day use to price the capacity in the system for a typical single-family home or 5/8" connection – which is shown on Line 24.

The equity buy-in calculation is similar to the system buy-in calculation but uses the system value shown in Line 15, which includes reserves, and divides by current customer demand shown in Line 17, resulting in the value of capacity in \$/GPD shown in Line 20. Applying the same capacity estimates for the system buy-in (lines 21 through 23) yields the capacity fee for a single-family home under the equity buy-in shown in Line 26.

Table 4 shows the proposed capacity fees for larger size meters for each method. The capacity fee for an equivalent single-family dwelling is equal to the fee for a 5/8-inch meter. The capacity fee for larger meters is escalated in proportion to the safe potential flow through each meter size as estimated by the American Water Works

² The Consumer Price Index is not a perfect measure of land value inflation; however, under normal circumstances (barring local/regional recessions) and over time, real estate values generally tend to keep pace with salaries and inflation and, therefore, is a reasonable method of estimating a property's value in the absence of other reliable information. The Bureau of Labor Statistics recommends using the CPI- All Urban Consumers when adjusting prices because the regional CPIs are subject to high levels of volatility and sampling error due to the smaller sample size. Raftelis used the CPI-All Urban Consumers. The same argument is made for national and regional Engineering News Record Construction Cost Indexes.

Association, shown in the third column. For example, the flow through a 1-inch meter is 2.5 times (3rd column) that of a 5/8-inch meter, thus the capacity fee for a 1-inch meter is 2.5 times higher. Table 5 shows the proposed capacity fees using both the system buy-in and the equity buy-in calculation approaches. The District will select one capacity fee method after legal review. The last column shows the current number of meters by meter size.

Table 4: Capacity Fees for Larger Meter Sizes

Meter Size	Current Capacity Fee	AWWA Hydraulic Capacity Factors	Proposed Capacity Fee		Meter Count
			System Buy-in	Equity Buy-in	
5/8"	\$1,804.15	1.00	\$2,196	\$3,104	1450
3/4"	\$2,706.23	1.50	\$3,295	\$4,656	653
1"	\$4,510.38	2.50	\$5,491	\$7,760	161
1.5"	\$9,020.76	5.00	\$10,982	\$15,520	20
2"	\$14,433.21	8.00	\$17,571	\$24,833	98
3"	\$28,866.43	16.00	\$35,143	\$49,665	7
4"	\$45,103.79	25.00	\$54,911	\$77,602	10
6"	\$90,207.59	50.00	\$109,821	\$155,204	4
8"	\$144,332.14	80.00	\$175,714	\$248,326	0
10"	NA	115.00	\$252,589	\$356,968	0

6. Discussion

Capacity fees are established to promote equity between past and new customers so that new customers contribute to the investment made by current and past customers to build and maintain a valuable utility. Raftelis calculated capacity fees for the District's consideration based on system value using both the system buy-in and the equity buy-in methodologies. Both are acceptable methods to establish capacity fees and have been used in the past. In light of the regulations surrounding impact fees for other facility types (fire, library, police, parks etc.) one could argue that the system buy-in is the method least susceptible to legal challenge. However, water and wastewater capacity fees are unique and exempt from certain requirements. The equity method has been used in the past and results in a higher capacity fee since the methodology includes reserves in the valuation and divides by current customer demand (capacity) instead of ultimate capacity. Raftelis suggests the District consult its legal counsel if it wishes to implement the equity method capacity fee. The District can choose to establish a fee based on either method upon legal review or can choose to establish a lower fee than those presented in this report.

Annual Update

The District can choose to update their water system capacity fees annually or, at least, every few years. The easiest way to update the fees is to multiply the current fee by the yearly change in the (nationwide) ENR-CCI, which tracks changes in construction costs.

For example, if the ENR –CCI for FYE 2019 is 3% higher than the ENR-CCI for FYE 2018, then the District could increase the capacity fees by 3%. This method of escalating the District's capacity fees should be used for no more than four to five years. After four to five years, Raftelis recommends that the District update the fees based on the updated valuation of the District's infrastructure to reflect depreciation and additions to system assets and maintain capacity fee defensibility.

7. Conclusion

Raftelis finds that the proposed fees are viable and defensible water capacity fees which are reflective of the value of the District's water system. These fees follow generally accepted fee design criteria, adhere to the requirements of California government code, and reflect the District's current water asset value and consumption trends. Raftelis recommends that the District choose a capacity fee schedule to implement between the system buy-in or equity buy-in options or implement a lower fee. The proposed fees are reflective of the cost to provide the capacity to serve new customers and are based on the cost to "buy-in" to the water utility so that new customers are on par with the past investment made by existing customers.

Memo

To: Honorable Board of Directors

From: Rosa Ruhlman, Office Administrator

Date: July 6, 2018

Re: Changes to the District's Miscellaneous Fees



At the upcoming Board meeting, Staff will present information on changes to certain miscellaneous fees. This item is for discussion only and no action is recommended.

If you have any questions, please feel free to contact us.



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Summer Newsletter

La Puente Valley County Water District Newsletter • Summer 2018

WATER RATE ADJUSTMENTS

UNDER CONSIDERATION

As part of an ongoing commitment to responsible planning, La Puente Valley County Water District recently completed a study of its rates and fees to ensure they are adequate to support the cost of providing service.

This independent cost-of-service study takes into account the District's total cost for operations and maintenance, along with the cost for capital improvements. The study determined that rate increases are necessary to generate additional revenue needed to offset increases in the cost of providing service. As a result, the District's Board of Directors is considering a plan to adjust water rates over a five-year period to try to minimize a steep increase in rates.

The cost of meeting customers' essential water needs is going up due to several factors:



COST OF WATER – The District is fortunate to have rights to a local groundwater source in the Main San Gabriel Basin. Anything we pump over our allotment must be replaced to maintain healthy water levels in the basin – either by leasing rights or purchasing imported water. The cost for this water has increased by over 23% in the last four years.



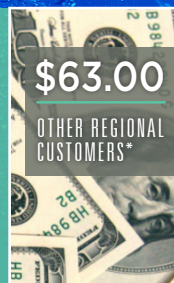
GROUNDWATER MANAGEMENT – In addition to this increase a new groundwater pumping assessment has been put into effect by the Main San Gabriel Watermaster in order to secure additional water resources to maintain water levels in the Basin. Although necessary, this assessment will have a large cost impact on all water providers that pump groundwater in the San Gabriel Valley.



CAPITAL INVESTMENTS – The District continuously invests in capital improvement projects that improve the performance of the water system or extend the life of existing facilities and equipment to avoid more expensive emergency repairs. Recommended improvements have been identified in the District's recently updated 10-year Water Master Plan, which prioritizes projects based on their benefit.

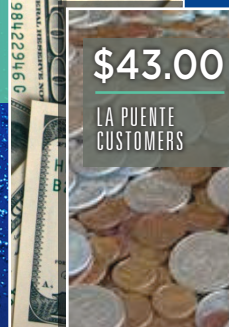


La Puente Valley County Water District offers its customers some of the lowest rates in the San Gabriel Valley. The current monthly bill for a District customer is \$43, compared to \$63 for neighboring water providers – a difference of more than 46 percent!



\$63.00

OTHER REGIONAL CUSTOMERS*



\$43.00

LA PUENTE CUSTOMERS

Average monthly customer costs*

Water providers included to calculate regional average

- Azusa Light & Water
- City of Covina
- City of Glendora
- City of Whittier
- Golden State Water Company
- Industry Public Utilities
- Rowland Water District
- San Gabriel County Water District
- San Gabriel Valley Water Company
- Suburban Water Systems
- Valencia Heights Water Company
- Valley County Water District
- Walnut Valley Water District

*Monthly costs based upon calculating water bills with 15 units (11,220 gallons) of water usage, which is about the average monthly usage for a residential customer.



CONNECT WITH US

Office Hours: Monday - Thursday 8 a.m.-5 p.m.
Friday 7 a.m.-3:30 p.m.

Phone: (626) 330-2126 | Fax: (626) 330-2679

E-mail: service@lapuentewater.com

GROUNDWATER CLEANUP PROGRESS

Significant progress has been made in groundwater cleanup in the San Gabriel Valley. There are six areas of the groundwater basin that the U.S. Environmental Protection Agency (EPA) has slated for cleanup. Five of these areas have treatment systems operating. The last area for treatment to be initiated is the Puente Valley Operable Unit (PVOU). The PVOU is divided into three sub-projects, the Shallow Zone North, Shallow Zone South and the Intermediate Zone. The Intermediate Zone (PVOU IZ) is the most critical in preventing migration of the contaminants. Northrop Grumman Systems Corporation has been ordered by the EPA to construct a treatment facility to treat the groundwater in the PVOU IZ.

The planning for this project has taken many years. In May of this year, a huge milestone was reached, when the EPA approved the final design of the PVOU IZ treatment facility. Construction of the treatment facility is set to begin in September of this year and is expected to take about a year to complete.

The District recently finalized an agreement with Northrop Grumman Systems Corporation to operate the new treatment facility. The facility will not only improve water quality in the groundwater basin, but provide an additional emergency water supply for the community of La Puente and create an additional revenue source for the District. The funds the District will receive for conveying water and operating the plant will be used offset the cost of water for the District's Customers.

The groundwater will be treated using multiple treatment processes and will be rigorously monitored before delivery to customers of the District and Suburban Water Systems.

The treatment technology is similar to that already used by the District, with the addition of reverse osmosis. The system will be the first groundwater treatment system in the San Gabriel Valley to incorporate reverse osmosis, a technology widely used for various treatment applications.

"The new treatment facility has been designed to safely treat multiple contaminants and will be strictly regulated by the State," said Greg Galindo, the District's General Manager and Chief Treatment Plant Operator. *"Our customers can rest assured that water from the facility will meet all state and federal drinking water regulations and will be safe to drink."*

STAFF SPOTLIGHT

ROSA RUEHLMAN

Board Secretary and Office Administrator Rosa Ruehlman was recognized recently for 40 years of dedicated service and loyalty to La Puente Valley County Water District.



Mrs. Ruehlman has also served as a Billing Clerk and Office Manager since she started with the District in April of 1978.

In that time, she "has always conducted her business in a kind and pleasant manner with her co-workers and has steadfastly treated the District's customers with courtesy and respect which has contributed greatly to the community's perception of the District," said a Board Resolution presented to Mrs. Ruehlman on May 14, 2018.

CONTINUING THE CALL FOR CONSERVATION

The Governor recently signed in to law two bills that overhaul the State's approach to water-use efficiency and carry out his order to make conservation a way of life in California.



The new laws require water providers to develop water budgets and other policies to meet efficient water use targets, which take into effect regional differences in supply, climate and geography.

*The new laws set a water use standard of **55 GALLONS** per-person, per-day through January 1, 2025, with incremental reductions over time. Outdoor residential standards will be based on upcoming landscaping and climate studies.*

In the meantime, we must continue to use water as efficiently as possible because droughts are expected to occur more frequently, and be more severe, with climate change.



The District offers numerous programs to help customers conserve, including free ultra-high-efficiency toilets, shower heads and faucet aerators, and other rebates.

PERMANENT WATER USE RULES



Repair leaks promptly



No irrigation during and within 48 hours after measurable rainfall



No runoff from over watering



No washing down driveways or other hardscapes



No washing vehicles unless using a hose with an automatic shut-off nozzle



For more information and water-saving tips, visit us online at LaPunteWater.com.



112 N. First Street
La Puente, CA 91744
(626) 330-2126

www.lapuentewater.com

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President

John P. Escalera
Vice President

Charlie Aguirre
Director

David Hastings
Director

Henry P. Hernandez
Director

Board Meetings

2nd & 4th Monday
5:30 p.m.
112 N. First Street, La Puente

Para obtener este boletín informativo en español, por favor llame al (626) 330-2126.

PROVIDING THE HIGHEST QUALITY SERVICES AT THE MOST REASONABLE RATES IS OUR GOAL.

La Puente Valley County Water District is committed to keeping its customers informed of issues that impact water services.

Read more inside...

Also in this issue:

Water Rates Consideration | Groundwater Cleanup Progress | Continuing Conservation



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STAFF REPORT



Meeting Date: July 9, 2018

To: Honorable Board of Directors

Subject: Single Pass Ion Exchange System Resin Replacement Services

Purpose - *To secure services for the replacement and disposal of 424 cubic feet (1 vessel change-out) of Perchlorate Selective Ion Exchange Resin at the District's Treatment Plant.*

Recommendation - *Authorize the General Manager to enter into agreement with Evoqua Water Technologies for Single Pass Ion Exchange Resin Replacement Services.*

Fiscal Impact - *The 2018 Treatment Plant Budget appropriates \$415,000 for Perchlorate Treatment. The 2018 year to date total for Perchlorate Treatment is \$214,110. The cost for the PSR 2 Plus resin replacement service is \$93,988.08, which is within the Budget appropriation. The cost for the ion exchange resin replacement services is a BPOU Project expense and shall be 100% reimbursed by the Cooperating Respondents.*

Previous Related Action - *In April 2017, the Board approved an agreement with Evoqua Water Technologies for the replacement and disposal of up to 1,696 cubic feet (4 vessel change-outs) of the PSR 2 Perchlorate Selective Ion Exchange Resin at the District's Treatment Plant.*

Summary

The District's Single Pass Ion Exchange System was placed into full continuous service on July 30, 2010. The system is comprised of four vessels, each with 425 cubic feet of perchlorate selective ion exchange resin. The vessels are arranged so that water produced from the District's well field is equally split between two pairs of vessels. The water requiring treatment must pass through two vessels (lead & lag) before being introduced into the UV treatment system. Sampling of the water between the lead and lag vessel determines when the ion exchange resin in the lead vessel should be replaced. When resin replacement occurs, the lag vessel is placed into the lead position and the vessel with the fresh resin is placed into the lag position. Since the system was put online, there have been numerous resin replacements performed, each replacing resin in the lead vessels.

Staff estimates the next ion exchange resin will be required within the month of July or early August of 2018. Normally, District staff prepares a Notice Inviting Bids (NIB) for Perchlorate Selective Ion Exchange Resin Replacement Services and sends it to three resin suppliers that are capable of performing the resin installation services. However, as previously reported in the monthly Engineering

& Compliance report, the District recently concluded a pilot study of the Dow Corporation's PSR 2 Plus perchlorate selective ion exchange resin for the treatment of perchlorate. The pilot study successfully demonstrated that the PSR 2 Plus resin had better throughput (~ 25 % more) than the PSR 2 resin. As a result, District staff drafted a letter to the State Water Resources Control Board's Division of Drinking Water (DDW) requesting to use the PSR 2 Plus resin for perchlorate treatment (**Enclosure 1**). After receiving comments/questions from the DDW, District staff provided a response memo to address their comments/questions and then subsequently received approval on June 7, 2018, to use the PSR 2 Plus resin for perchlorate treatment.

Provided the effort to approve the PSR 2 Plus resin and its distinctive purpose to prove that the resin can provide better throughput (~ 25%) in a full-scale operation, District staff solely procured a proposal (Details of the proposal received is enclosed as **Enclosure 2**) from Evoqua Water Technologies.

District staff continually works with the Cooperating Respondents (CRs) to find operational efficiencies at our treatment facility that do not impact the effectiveness of the treatment systems. Staff approaches each effort with the safe guard of public health as our number one goal. The CRs are aware and support the District's efforts related to gaining approval from DDW for the use of the PSR 2 Plus resin.

Fiscal Impact

The cost for the ion exchange resin replacement services is a BPOU Project expense and shall be 100% reimbursed by the Cooperating Respondents. The 2018 Treatment Plant Budget appropriates \$415,000 for Perchlorate Treatment. The 2018 year to date total for Perchlorate Treatment is \$214,110. The proposal received from Evoqua for the PSR 2 Plus resin replacement service is \$93,988.08, which is within the Budget appropriation for this expense category.

Recommendation

Staff requests the Board authorize the General Manager to enter into an agreement with Evoqua Water Technologies for the PSR 2 Plus Single Pass Ion Exchange Resin Replacement Services.

Respectfully Submitted,

Greg B. Galindo

General Manager

Enclosures

- 1: PSR 2 Plus Request Letter to DDW and Subsequent Approval Email from DDW
- 2: Proposal for PSR 2 Plus from Evoqua Water Technologies



Enclosure 1

**PSR 2 Plus Request Letter to DDW and
Subsequent Approval Email from DDW**

William R. Rojas
President

John P. Escalera
Vice President

Henry P. Hernandez
Director



David Hastings
Director

Charles Aguirre
Director

Greg B. Galindo
General Manager

112 N First St. / P.O. Box 3136
La Puente, CA 91744
(626) 330-2126 – Fax (626) 330-2679
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April 11, 2018

VIA EMAIL

Terry Kim, P.E.
State Water Resources Control Board
Division of Drinking Water
500 N. Central Avenue, Suite 500
Glendale, CA 91203

RE: REQUEST TO USE THE DOW CORPORATION'S PSR-2 PLUS PERCHLORATE SELECTIVE RESIN AT LA PUENTE VALLEY COUNTY WATER DISTRICT

Dear Mr. Kim,

The La Puente Valley County Water District (District) is presently operating under domestic water supply permit # 1910060PA-002, which stipulates usage of the virgin DOWEX PSR-2 resin (or better) that meets the specifications identified in the approved O&M Plan. As an economic alternative, the District is proposing the use of the Dow Corporation's PSR 2 Plus perchlorate selective resin.

The District conducted a pilot study of the Dow Corporation's PSR 2 Plus perchlorate selective resin for the treatment of perchlorate. In summary, the resin demonstrated to be effective at removing perchlorate. Details of the pilot results, operational data, lab samples and protocol is included as **Attachment 1** enclosed herein. In addition, **Attachment 2** provides product specifics on the PSR 2 Plus along with the NSF certification.

Provided your approval, the District proposes to conduct the following water quality monitoring (in addition to our monitoring required by our permit) after a new bed of PSR 2 Plus resin (vessel) is placed into service. The purpose of the additional monitoring is to provide further assurance that the resin is functioning as piloted with no nitrate sloughing or nitrosamine leaching issues during the first 24 hours of operations.

- Combined Influent to Single Pass Ion Exchange (SPIX) – Collect water quality samples within 1 hour operation with new resin bed in service for analysis of perchlorate, nitrate, sulfate, nitrosamines, VOCs, 1,4-dioxane, bacteriological parameters and field pH.

- Effluent of Each SPIX Treatment Vessel (that has fresh resin, lag vessel) – Collect water quality samples after 15 minutes following start of operation with fresh resin and after 8 hours and 24 hours for analysis of perchlorate, nitrate, sulfate, and field pH; after 30 minutes, 4 hours, and 24 hours of operation for analysis of nitrosamines; after 1 hour for analysis of bacteriological parameters.
- Combined Effluent of UV/Oxidation Treatment System – Collect water quality samples after 40 minutes, 4 hours, and 24 hours of operation for analysis of nitrosamines.
- Plant Effluent – Collect water quality samples after 8 hours and 24 hours of operation for analysis of perchlorate, nitrate, sulfate, field pH, VOCs, 1,4-dioxane, and bacteriological parameters.

If you have any questions with this request or information provided in the attachments, please feel free to contact me.

Sincerely,

Roy Frausto

Roy Frausto
Engineering & Compliance Manager
La Puente Valley County Water District

Attachment(s)

1 – Pilot Results, Lab Samples and Protocol

2 – PSR 2 Plus Product Information

From: Kim.Terry@Waterboards
To: [Roy Frausto](#); ["Greg Galindo"](#); ["Cesar Ortiz"](#)
Cc: Bergquist.Sutida@Waterboards
Subject: RE: PSR 2 Plus Resin Approval Request
Date: Thursday, June 07, 2018 2:58:22 PM

Hi Roy,

Your response is noted. Also, I spoke with Greg just now regarding rinsing the resin on-site with partially treated water. This partially treated water has been treated by the air strippers but not by the IX resin, UV/Oxidation, or chlorination; hydrogen peroxide (from the UV/Ox process) and chlorine are oxidants that can potentially accelerate nitrosamine leaching from the IX resin. This explanation is noted as well.

Therefore, your request to switch resins for the BPOU single pass ion exchange treatment system from PSR-2 Plus to DOWEX PSR-2 Plus is granted by the Division of Drinking Water, Central District. We understand that the PSR-2 Plus resin is manufactured by Dow Chemical Company and supplied by Evoqua Water Technologies.

Sincerely,
Terry

From: Roy Frausto [mailto:rfrausto@lapuentewater.com]
Sent: Thursday, June 07, 2018 7:39 AM
To: Kim, Terry@Waterboards <Terrence.Kim@waterboards.ca.gov>
Cc: 'Greg Galindo' <ggalindo@lapuentewater.com>; 'Cesar Ortiz' <cortiz@lapuentewater.com>; Bergquist, Sutida@Waterboards <Sutida.Bergquist@waterboards.ca.gov>
Subject: RE: PSR 2 Plus Resin Approval Request

Good morning Terry,

Several years ago, an approved Purolite resin was used during a normal resin change out that resulted in high HPC's. Through follow up investigations, it was found that the resin off-site rinsing procedure was performed in Pennsylvania and then transferred to CA for loading. Provided this experience, an internal decision was made to reduce the train flow by half (still within the operating design parameter of the SPIX system) during any resin change outs to minimize any potential high HPC water with the full flow of the 2nd effluent train. In addition, provisions were added to our RFP document (see attached page, item 1 and 6) to require the off-site rinsing facility within 250 miles of our Treatment Plant and require the loading of the resin within 48 hours of the off-site rinsing procedure.

With that being said, this flow reduction procedure in the train also provides the same benefit by minimizing any potential leaching of nitrosamines through blending of the 2nd effluent train.

Regards,



Enclosure 2

Proposal for PSR 2 Plus from Evoqua Water Technologies

Date: June 12, 2018

Project: La Puente Valley County Water District Ion Exchange Resin Purchase and Replacement Service Proposal

Proposal to: Greg Galindo and Cesar Ortiz
La Puente Valley County Water District
112 N. First Street
La Puente, CA 91744

Dear Greg and Cesar,

Evoqua Water Technologies is pleased to provide the following proposal in response to your RFP for La Puente Valley County Water District Ion Exchange Resin Purchase and Replacement Service. The following proposal provides pricing for PSR2 Plus. We are excited to introduce the enhanced PSR2 Plus resin and the increased throughput and savings it will bring to La Puente Valley County Water District.

Evoqua appreciates the trust La Puente has put in Evoqua in years past as your resin supplier. We never stop trying to improve. Our focus is to provide excellent service to La Puente while ensuring safe and compliant drinking water.

In the RFP, the minimum water throughput guarantee is 95,000 bed volumes; however, based on the water quality provided, **we estimate the performance of the PSR2 Plus media to provide a throughput of 128,000 bed volumes.** This is an additional 35% throughput.

Evoqua provides more resin for perchlorate in the state of California than any other supplier. There are several reasons for this. For one, we provide a resin that has established performance. As importantly, Evoqua has a performance prediction model that is extremely accurate. We understand the resin is expensive, and the stakeholders need to be able to know what their costs are going to be. By providing accurate throughputs, La Puente avoids the headaches of missing the numbers. For this reason, our throughputs may seem conservative compared to other suppliers. We would rather under promise and over deliver than frustrate our customers.

Although the bids are sometimes evaluated on a dollar per acre foot, if a supplier cannot provide accurate bed volume predictions, the throughput can be misleading. Evoqua tries to provide the best value for both overall cost per cubic foot and cost per acre foot. The resins are not that different. We don't gamble on the throughput to get our dollar per acre foot lower. We provide accurate \$/AF predictions and the best \$/cu ft value. We believe this is a better value for La Puente and your stakeholders.

In addition to accurate forecasting data and resin value, Evoqua works hard to provide excellent service during the exchange. Evoqua is local. Our branch is only about 20 miles from your site. This means we can stop by to help troubleshoot very easily. It also means the resin is rinsed and prepared locally before loading.

We are well versed in the needs that La Puente has for an exchange. We arrive on time. Our service is consistent. Evoqua provides all documentation for nitrosamine testing before loading.

Evoqua has committed many resources to this account with technical service and troubleshooting. Our goal is to make sure you are running optimally. We have brought in technical experts from across the country to meet when there were issues. We provide operator training and continuing education credits. We provided a profile instruction class. We are committed to being your partner in the long-term.

We look forward to being your resin supplier of choice. Thank you for allowing Evoqua Water Technologies this opportunity to be of service. Please contact me at 714-262-1560 should you have any questions or if we may be of further assistance.

Warmest Regards,

Patricia Tinnerino
Sales Engineer

Attachments:

Scope of Work

Bid Schedule

References

PSR2 Plus Data Sheet

PSR2 Plus NSF Certification

California Contractor's License

Confidentiality Statement

This document and all information contained herein are the property of Evoqua Water Technologies LLC. The design concepts and information contained herein are proprietary to Evoqua Water Technologies LLC and are submitted in confidence. They are not transferable and must be used only for the purpose for which the document is expressly loaned. They must not be disclosed, reproduced, loaned or used in any other manner without the express written consent of Evoqua Water Technologies LLC. In no event shall they be used in any manner detrimental to the interest of Evoqua Water Technologies LLC. All patent rights are reserved. Upon the demand of Evoqua Water Technologies LLC, this document, along with all copies or extracts, and all related notes and analyses, must be returned to Evoqua Water Technologies LLC or destroyed, as instructed by Evoqua Water Technologies LLC. Acceptance of the delivery of this document constitutes agreement to these terms and conditions.

BASE SCOPE OF SUPPLY

The scope of supply for each exchange will be as follows:

1. One (1) vessel resin exchange. Each vessel currently contains 424 cubic feet of resin.
2. PSR2 Plus resin has been quoted and will be provided by Evoqua for exchanges.
3. Resin will be pre-rinsed in our Los Angeles resin handling facility which is less than 30 miles away utilizing proprietary techniques, to minimize on-site rinse water requirements. The resin will then be loaded in sterilized sluice vehicles dedicated for potable use, delivered to the site and then sluiced into the required vessel. This process will greatly reduce the amount of rinse waters required onsite. Super sacks or other resin vendor marked containers will not be brought on site.
4. Before each vessel is exchanged, Evoqua will provide documentation for bacteriological testing and nitrosamine testing done after our rinse procedure in Los Angeles. La Puente will give approval to load the resin after these results have been reviewed.
5. The resin rinse procedure will have been done within a short time of the scheduled loading time – definitely less than 48 hours.
6. Each exchange price includes: all labor, freight, disposal of spent resin and supply of new resin.
7. Empty vessels will first be inspected and then disinfected by Evoqua prior to fresh resin installations.
8. Prices are provided on a unit basis and assume 424 cubic feet of resin to be installed per vessel.
9. Spent resin will be landfilled at Clean Harbors Buttonwillow LLC. Evoqua provides turnkey service which includes coordinating the disposal. Contact information for primary disposal location is as follows:

Clean Harbors Environmental Services
Sales Manager Distributor Services
586.214.7400
zellner.c@cleanharbors.com

10. It is assumed that resin will not be loaded with uranium in excess of 0.05% (wt).

COMMENTS AND CLARIFICATIONS

- This proposal pricing is valid for thirty (30) days from Bid Date.
- Any testing and analytical to be done by others except as named above
- All spent resin will be collected and removed from site at same time.
- Exchange pricing (Total Unit Price \$/cu. ft including all services) will be invoiced on a 424 cf basis, net 45 days upon completion of exchange of each 424 cf.
- Throughput guarantee is in accordance with the RFP and Q and A email follow up.

- Please note the Evoqua will be supplying PSR2 Plus resin as named in RFP. There are minor deviations from RFP, properties will be in accordance with attached data sheets.
- Please note that Evoqua will provide copies of standard Dow QA documents for each lot provided in lieu of specific analysis requested in RFP.
- Please note that Evoqua has included sales tax of 8.75% in submitted pricing. Should sales tax change during the execution of this project, this will be adjusted accordingly. Evoqua's price does not include, and Evoqua shall not be responsible for, any other taxes, permits, tariffs, duties or fees (or any incremental increases to such taxes, permits, tariffs, duties or fees enacted by governmental agencies) unless specifically agreed herein or otherwise by Evoqua in writing.
- Except as clarified within this proposal, offering is provided in accordance with La Puente provided Terms and Conditions in the RFP.

Bid Schedule

The Ion Exchange Resin Supplier hereby declares that he has carefully examined the District's Request for Proposals to Provide Perchlorate Selective Resin and Replacement Service at the District's Puente Avenue Treatment Facility and will accept in full payment therefore the following amounts:

ITEM No.	DESCRIPTION OF BID ITEMS	VALUE
	GENERAL INFORMATION	
1	Type of Resin (Strong Base Anion Exchange Resin)	Dowex™ PSR2 Plus
2	Resin Structure Macroporous / Gel	Gel
3	Quantity of Resin Proposed (cu. ft)	424
4	Years of Experience in resin supply	45 years
5	Date of Manufacturer of Resin	2018
6	Guaranteed Bed Volumes of Water Treated	95,000
7	Origin of Resin (USA/Other)	USA – Midland, MI
8	Maximum days the resin will be stored after off site pre-rinsing (days)	Initial rinse within 3 days followed by subsequent rinsing after samples are taken and before loading
9	Is resin NSF 61 Certified?	Yes
10	Resin Production Facility Certification (ISO 9001)	Yes
	UTILITIES REQUESTED	
11	Potable water required (gpm and psig)	12,360 gallons (estimate) per vessel for all site services (initial fill, backwash and rinse) @ 60 psi minimum
12	Compressed air	Evoqua will provide
13	Electric Power	110v for vessel entry equipment
	WASTE GENERATED	
14	Off Site rinsing (a) Bed Volumes	20 Bed Volumes
	(b) Gallons	63,430 total per 424 cf
15	On Site Rinsing or Backwashing (a) Bed volumes (no more than 2) per vessel)	2 Bed Volumes
	(b) Gallons	6,343 total per 424 cf
	(c) Expected nitrosamine concentration in rinse water	<10 ppt NDMA
16	Backwash Waste (gallons/vessel)	Not recommended
17	FIRST REPLACMENT RESIN DELIVERY SCHEDULE	As requested

	COSTS	Unit Costs	Extended Costs
18	Resin \$/ cu. ft. for 424 cu. ft.	\$172.41	\$73,101.84
19	Resin service \$/ cu. ft. for 424 cu. ft.	See Below	See Below
20	Tax \$/ cu. ft of resin for 424 cu. ft.	\$15.09	\$6,398.16
21	Off site resin rinse cost \$/cu. ft. for 424 cu. ft.	\$11.84	\$5,020.16
22	On site resin rinse cost \$/cu. ft. for 424 cu. ft.	None Provided	None Provided
23	Confined Space entry (vessel inspection) per vessel	None Provided	None Provided
24	Disinfection of Vessels and Piping per vessel	None Provided	None Provided
25	Removal and disposal of spent resin \$/cu. ft. for 424 cu. ft. Including any required waste material analysis – Disposal location to be Buttonwillow (Clean Harbors) Landfill.	\$12.58	\$5,333.92
	OTHER COSTS		
26	Warranty	Included	Included
27	Business License	Included	Included
28	Freight	Included	Included
29	Loading	\$9.75	\$4,134.00
30	Rentals (If Applicable)	Not Applicable	Not Applicable
31	Temporary Site Piping (If Required)	Not Applicable	Not Applicable
32	TOTAL COST PER REPLACEMENT		
33	Total Unit Price \$/cu. ft including all services for replacement	\$221.67	\$93,988.08
	OPTIONAL SERVICES		
34	Bac-T Testing	Per Bed	\$450
35	Disinfection of resin per cu. ft (if required)	Per cubic foot	\$4.60

REFERENCES - DRINKING WATER OPERATING SYSTEMS IN CALIFORNIA

In California, Evoqua has been selected as the supplier of perchlorate reduction equipment and services to remove perchlorate and nitrate from well sites for the following projects. In these cases system engineering design and media selection were the sole responsibility of Evoqua through our Environmental Services Group. A partial list of drinking water applications includes:

Pomona Water Company, Pomona, CA

2012 – present; 11,500 gpm – Once Through IX

Perchlorate removal for 2 wells with 6 trains of HP1220HF vessels. CDPH operating permit issued. Contact: Tim Hampton, (909) 802-7420

City of Loma Linda, Loma Linda, CA

2010 – present: 4800 gpm – Once Through IX

Perchlorate removal for 2 wells with 3 trains of HP1220HF vessels. CDPH operating permit issued. Contact: Russ Handy, 909-799-4410

San Gabriel Valley Water Co. Well B-6

2013 to present: – Once through IX

Perchlorate removal using on-site vessels at multiple sites. Product water used for municipal supply. Started up Mar 2013. Contact: Oscar Ramos, 626-448-6183

Rialto, Airport Well 3, GeoLogic Associates, San Bernardino, CA

2007 – present: 1900 gpm – Once Through IX

Perchlorate removal at well site with one train of HP1220 vessels. CDPH operating permit issued. Contact: Ralph Murphy, (909) 383-8728.

West Valley Water Company

May 03 - present: 6,500 gpm – Once Through IX

Perchlorate removal using on-site vessels at multiple sites. Product water used for municipal supply. CDPH operating permit issued. Contact: Al Robles: (909) 644-7815

Resin Bed Life Warranty La Puente Valley County Water District June 12, 2018

As part of this proposal, 424 cubic feet of resin PSR2 Plus has been offered. Each vessel will contain 424 cubic feet. Each 424 cubic feet of resin supplied is warranted to treat a minimum of 95,000 bed volumes when placed into the lead position. Please note the following conditions with regard to the Guarantee portion of this proposal:

This warranty shall be deemed void if the customer fails to meet any of the following conditions pertaining to resin use and the system in which resin is used:

- a. The design parameters (system, equipment and peripheral components) must be consistent with sound engineering practice and the system is operated within the design parameters.
- b. Feed water must not contain any oxidizing agents including, without limitation, chlorine, ozone or permanganate.
- c. Sequestrants, cleaning or treatment chemicals, and any other chemicals used in the system must be compatible with the resin.
- d. The resin must be operationally protected against excessive hydraulic changes including, without limitation, water hammer, and rapid pressure swings.
- e. Influent water to each vessel shall be free of entrained air to the extent that entrained air could disrupt resin beds in any system.
- f. The system shall not be backwashed or the beds otherwise hydraulically altered once a service run has started, as this will reduce the expected throughput.
- g. The resin must be maintained in a clean condition and must not be contaminated by particulate matter, colloidal or precipitated solids, biological growth or foreign materials (including but not restricted to cationic surfactants, solvents, soluble oils, free oils, lipids, and high molecular weight natural polymers).
- h. Customer is responsible for ensuring that frequent, adequate system performance data are routinely recorded in a systematic format that is regularly reviewed. Data collected to include weekly flow, pressure and meter readings and monthly incoming water analyses including perchlorate, sulfate, chloride, nitrate and alkalinity. Perchlorate readings shall be provided on a weekly basis and shall include product water from the lead and lag vessels. Customer agrees to make this data available to Evoqua on a reasonable basis at Evoqua's reasonable request.
- i. Customer must keep resin moist at all times after installation.
- j. Resin loss from the bed will be excluded from this warranty. Without limitation, loss of resin due to failure of distributors, resin traps, and backwash procedures are the responsibility of the customer.
- k. Representative samples of used resin must be provided by customer after each exchange, upon request by Evoqua.

- l. The end of resin life for each 424 cubic feet of resin contained within a single vessel is defined as the point two (2) weeks after the effluent of that vessel has 4.0 µg/l perchlorate or greater. This detection of 4.0 µg/l of perchlorate shall be part of a normal breakthrough curve. Obvious analytical or sampling error in a sample result will eliminate this sample result from being utilized in determining the validity of the warranty. Total bed volumes treated for each 424 cubic feet of resin will be 95,000 bed volumes, which includes the volume of water treated during the two (2) week period after 4.0 µg/l perchlorate is detected in the effluent. Normal operation of the IX system is expected during the 2-week period.
- m. The guarantee is based on the water quality and flow restrictions listed below. If actual concentrations of any single contaminant identified in table below varies from the stated "IX Influent Data" concentration by more than 20%, the warranty will be adjusted in accordance with Section n.

Description	IX Influent Data
Average Flow Rate	1,250 gpm/train
Operational Schedule	24/7
Daily Volume (ave)	3.6 MGD /both trains
Perchlorate	39.8 µg/l
Sulfate	59 mg/l
Chloride	30.9 mg/l
Nitrate	32.0 mg/l
Alkalinity (as CaCO ₃)	169 mg/l

*Maximum flow per system is 1,500 gpm and minimum flow is 425 gpm

- n. The 6-week running average influent perchlorate, sulfate, chloride, nitrate and alkalinity shall be used to determine conditions for reduction of the bed volume guarantee. When the bed is exhausted, the 6-week running average influent concentration of the constituents listed above shall be calculated for each week beginning 6 weeks from installation of the resin to the week corresponding to exhaustion of the bed. If any 6-week running average exceeds the influent concentrations in the middle row of the Ion Exchange Influent Water Quality table, the deduction equation below shall be calculated for week 6 to the week corresponding to the exhaustion of the bed. The maximum deduction calculated shall be used to determine the revised guarantee.

Revised Guarantee =
 Original Guaranteed Bed Volumes Treated per Replacement - Deduction

Where:

Deduction = Original Guaranteed Bed Volumes Treated per Replacement x
 ([0.12 x ECl] + [0.88 x ENO₃] + [0.32 x ESO₄] + [0.32 x ECIO₄] + [0.16 x EHCO₃])

$E = \text{increase in identified contaminant} = (\text{actual-base})/\text{base}$

Please note the following with regards to this equation:

- 1) E can only be zero or a positive value.
 - 2) Increases in multiple contaminant levels will result in additive deducts as dictated by the formula.
 - 3) The average perchlorate concentration over any 6-week period must not exceed 180% of base, and the average of any other contaminant over any 6-week period must not exceed 120% of base. The warranty is void for values beyond these increases.
 - 4) 'base' is defined by the Ion Exchange Influent Water Quality stated in the table above.
- o. The sole remedy for Evoqua's failure to achieve the warranted bed life will be the provision of additional resin sufficient to achieve the minimum bed volume guarantee. A minimum amount of 424 cubic feet of resin is required per vessel, however, and the additional volume of resin needed to make a complete exchange must be purchased by La Puente Valley County Water District. This remedy is limited to a maximum of the supplied volume of resin.

(a) Example:

Assuming all conditions of warranty are met and total bed volumes of water treated is 94,000 bed volumes vs. the guarantee of 95,000 bed volumes. Actual additional resin required is defined as:

$$\frac{((\text{Guaranteed BVs} - \text{Actual BVs})/(\text{Guaranteed BVs})) \times \text{cf of resin}}{(95,000-94,000)/95,000 \times 424 \text{ cf} = 4.46 \text{ cf of resin}}$$

In this example, 4.46 cubic feet of additional resin will be required. Additional volumes needed to complete a specific fill are the responsibility of La Puente Valley County Water District.

- p. Effluent of perchlorate system will be less than 4 µg/l of perchlorate as defined by E.P.A. analytical method 314. This is contingent upon adherence to all other aspects of stated warranty.
- q. While the resin supplied under this contract is operating in the lag position, the resin in the lead position shall be exchanged no later than two (2) weeks after 4.0 µg/l perchlorate is detected in the effluent of the lead vessel. No more than 9,600 BV shall be run through the lead vessel during this 2-week period.
- r. This warranty will not extend past a period of two (2) years from time of first resin installation by Evoqua.
- s. Customer will allow inspection of any exhausted resin and vessels before a resin exchange if requested by Evoqua.
- t. Warranty will be void if resin is removed for any reason other than perchlorate breakthrough, including without limitation uranium loading and silt accumulation.
- u. Bacteria levels in the influent and influent delivery mechanisms such as, for example, piping and manifolds in any well, shall be <10 cfu/ml on a 6 month rolling average. EWT assumes no responsibility or liability relating to the bacteriological quality of the influent or within the wells and shall bear no costs relating to resin sterilization due to bacteria in the influent or elsewhere in the wells. If Evoqua is

- requested to backwash and sanitize a specific resin bed after the start of a particular run then Conditions b., c. and f. apply.
- v. THE FOREGOING SETS FORTH EWT'S SOLE AND EXCLUSIVE WARRANTY AND REMEDY WITH RESPECT TO RESIN BED LIFE. SELLER MAKES NO OTHER WARRANTIES OF ANY KIND THEREOF, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.

EVOQUA WATER TECHNOLOGIES LLC

Standard Terms of Sale

1. **Applicable Terms.** These terms govern the purchase and sale of equipment, products, related services, leased products, and media goods if any (collectively herein "Work"), referred to in Seller's proposal ("Seller's Documentation"). Whether these terms are included in an offer or an acceptance by Seller, such offer or acceptance is expressly conditioned on Buyer's assent to these terms. Seller rejects all additional or different terms in any of Buyer's forms or documents.
2. **Payment.** Buyer shall pay Seller the full purchase price as set forth in Seller's Documentation. Unless Seller's Documentation specifically provides otherwise, freight, storage, insurance and all taxes, levies, duties, tariffs, permits or license fees or other governmental charges relating to the Work or any incremental increases thereto shall be paid by Buyer. If Seller is required to pay any such charges, Buyer shall immediately reimburse Seller. If Buyer claims a tax or other exemption or direct payment permit, it shall provide Seller with a valid exemption certificate or permit and indemnify, defend and hold Seller harmless from any taxes, costs and penalties arising out of same. All payments are due within 30 days after receipt of invoice. Buyer shall be charged the lower of 1 ½% interest per month or the maximum legal rate on all amounts not received by the due date and shall pay all of Seller's reasonable costs (including attorneys' fees) of collecting amounts due but unpaid. All orders are subject to credit approval by Seller. Back charges without Seller's prior written approval shall not be accepted.
3. **Delivery.** Delivery of the Work shall be in material compliance with the schedule in Seller's Documentation. Unless Seller's Documentation provides otherwise, delivery terms are ExWorks Seller's factory (Incoterms 2010). Title to all Work shall pass upon receipt of payment for the Work under the respective invoice. Unless otherwise agreed to in writing by Seller, shipping dates are approximate only and Seller shall not be liable for any loss or expense (consequential or otherwise) incurred by Buyer or Buyer's customer if Seller fails to meet the specified delivery schedule.
4. **Ownership of Materials and Licenses.** All devices, designs (including drawings, plans and specifications), estimates, prices, notes, electronic data, software and other documents or information prepared or disclosed by Seller, and all related intellectual property rights, shall remain Seller's property. Seller grants Buyer a non-exclusive, non-transferable license to use any such material solely for Buyer's use of the Work. Buyer shall not disclose any such material to third parties without Seller's prior written consent. Buyer grants Seller a non-exclusive, non-transferable license to use Buyer's name and logo for marketing purposes, including but not limited to, press releases, marketing and promotional materials, and web site content.
5. **Changes.** Neither party shall implement any changes in the scope of Work described in Seller's Documentation without a mutually agreed upon change order. Any change to the scope of the Work, delivery schedule for the Work, any Force Majeure Event, any law, rule, regulation, order, code, standard or requirement which requires any change hereunder shall entitle Seller to an equitable adjustment in the price and time of performance.
6. **Force Majeure Event.** Neither Buyer nor Seller shall have any liability for any breach or delay (except for breach of payment obligations) caused by a Force Majeure Event. If a Force Majeure Event exceeds six (6) months in duration, the Seller shall have the right to terminate the Agreement without liability, upon fifteen (15) days written notice to Buyer, and shall be entitled to payment for work performed prior to the date of termination. "Force Majeure Event" shall mean events or circumstances that are beyond the affected party's control and could not reasonably have been easily avoided or overcome by the affected party and are not substantially attributable to the other party. Force Majeure Event may include, but is not limited to, the following circumstances or events: war, act of foreign enemies, terrorism, riot, strike, or lockout by persons other than by Seller or its sub-suppliers, natural catastrophes or (with respect to on-site work), unusual weather conditions.
7. **Warranty.** Subject to the following sentence, Seller warrants to Buyer that the (i) Work shall materially conform to the description in Seller's Documentation and shall be free from defects in material and workmanship and (ii) the Services shall be performed in a timely and workmanlike manner. Determination of suitability of treated water for any use by Buyer shall be the sole and exclusive responsibility of Buyer. The foregoing warranty shall not apply to any Work that is specified or otherwise demanded by Buyer and is not manufactured or selected by Seller, as to which (i) Seller hereby assigns to Buyer, to the extent assignable, any warranties made to Seller and (ii) Seller shall have no other liability to Buyer under warranty, tort or any other legal theory. The Seller warrants the Work, or any components thereof, through the earlier of (i) eighteen (18) months from delivery of the Work or (ii) twelve (12) months from initial operation of the Work or ninety (90) days from the performance of services (the "Warranty Period"). If Buyer gives Seller prompt written notice of breach of this warranty within the Warranty Period, Seller shall, at its sole option and as Buyer's sole and exclusive remedy, repair or replace the subject parts, re-perform the Service or refund the purchase price. Unless otherwise agreed to in writing by Seller, (i) Buyer shall be responsible for any labor required to gain access to the Work so that Seller can assess the available remedies and (ii) Buyer shall be responsible for all costs of installation of repaired or replaced Work. If Seller determines that any claimed breach is not, in fact, covered by this warranty, Buyer shall pay Seller its then customary charges for any repair or replacement made by Seller. Seller's warranty is conditioned on Buyer's (a) operating and maintaining the Work in accordance with Seller's instructions, (b) not making any unauthorized repairs or alterations, and (c) not being in default of any payment obligation to Seller. Seller's warranty does not cover (i) damage caused by chemical action or abrasive material, misuse or improper installation (unless installed by Seller) and (ii) media goods (such as, but not limited to, resin, membranes, or granular activated carbon media) once media goods are installed. **THE WARRANTIES SET FORTH IN THIS SECTION 7 ARE THE SELLER'S SOLE AND EXCLUSIVE WARRANTIES AND ARE SUBJECT TO THE LIMITATION OF LIABILITY PROVISION BELOW. SELLER MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.**
8. **Indemnity.** Seller shall indemnify, defend and hold Buyer harmless from any claim, cause of action or liability incurred by Buyer as a result of third party claims for personal injury, death or damage to tangible property, to the extent caused by Seller's negligence. Seller shall have the sole authority to direct the defense of and settle any indemnified claim. Seller's indemnification is conditioned on Buyer (a) promptly, within the Warranty Period, notifying Seller of any claim, and (b) providing reasonable cooperation in the defense of any claim.

9. **Assignment.** Neither party may assign this Agreement, in whole or in part, nor any rights or obligations hereunder without the prior written consent of the other party; provided, however, the Seller may assign its rights and obligations under these terms to its affiliates or in connection with the sale or transfer of the Seller's business and Seller may grant a security interest in the Agreement and/or assign proceeds of the agreement without Buyer's consent.

10. **Termination.** Either party may terminate this agreement, upon issuance of a written notice of breach and a thirty (30) day cure period, for a material breach (including but not limited to, filing of bankruptcy, or failure to fulfill the material obligations of this agreement). If Buyer suspends an order without a change order for ninety (90) or more days, Seller may thereafter terminate this Agreement without liability, upon fifteen (15) days written notice to Buyer, and shall be entitled to payment for work performed, whether delivered or undelivered, prior to the date of termination.

11. **Dispute Resolution.** Seller and Buyer shall negotiate in good faith to resolve any dispute relating hereto. If, despite good faith efforts, the parties are unable to resolve a dispute or claim arising out of or relating to this Agreement or its breach, termination, enforcement, interpretation or validity, the parties will first seek to agree on a forum for mediation to be held in a mutually agreeable site. If the parties are unable to resolve the dispute through mediation, then any dispute, claim or controversy arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, including the determination of the scope or applicability of this agreement to arbitrate, shall be determined by arbitration in Pittsburgh, Pennsylvania before three arbitrators who are lawyers experienced in the discipline that is the subject of the dispute and shall be jointly selected by Seller and Buyer. The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. The Arbitrators shall issue a reasoned decision of a majority of the arbitrators, which shall be the decision of the panel. Judgment may be entered upon the arbitrators' decision in any court of competent jurisdiction. The substantially prevailing party as determined by the arbitrators shall be reimbursed by the other party for all costs, expenses and charges, including without limitation reasonable attorneys' fees, incurred by the prevailing party in connection with the arbitration. For any order shipped outside of the United States, any dispute shall be referred to and finally determined by the International Center for Dispute Resolution in accordance with the provisions of its International Arbitration Rules, enforceable under the New York Convention (Convention on the Recognition and Enforcement of Foreign Arbitral Awards) and the governing language shall be English.

12. **Export Compliance.** Buyer acknowledges that Seller is required to comply with applicable export laws and regulations relating to the sale, exportation, transfer, assignment, disposal and usage of the Work provided under this Agreement, including any export license requirements. Buyer agrees that such Work shall not at any time directly or indirectly be used, exported, sold, transferred, assigned or otherwise disposed of in a manner which will result in non-compliance with such applicable export laws and regulations. It shall be a condition of the continuing performance by Seller of its obligations hereunder that compliance with such export laws and regulations be maintained at all times. BUYER AGREES TO INDEMNIFY AND HOLD SELLER HARMLESS FROM ANY AND ALL COSTS, LIABILITIES, PENALTIES, SANCTIONS AND FINES RELATED TO NON-COMPLIANCE WITH APPLICABLE EXPORT LAWS AND REGULATIONS.

13. **LIMITATION OF LIABILITY.** NOTWITHSTANDING ANYTHING ELSE TO THE CONTRARY, SELLER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, AND SELLER'S TOTAL LIABILITY ARISING AT ANY TIME FROM THE SALE OR USE OF THE WORK, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR ALL WARRANTY CLAIMS OR FOR ANY BREACH OR FAILURE TO PERFORM ANY OBLIGATION UNDER THE CONTRACT, SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE WORK. THESE LIMITATIONS APPLY WHETHER THE LIABILITY IS BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.

14. **Rental Equipment / Services.** Any leased or rented equipment ("Leased Equipment") provided by Seller shall at all times be the property of Seller with the exception of certain miscellaneous installation materials purchased by the Buyer, and no right or property interest is transferred to the Buyer, except the right to use any such Leased Equipment as provided herein. Buyer agrees that it shall not pledge, lend, or create a security interest in, part with possession of, or relocate the Leased Equipment. Buyer shall be responsible to maintain the Leased Equipment in good and efficient working order. At the end of the initial term specified in the order, the terms shall automatically renew for the identical period unless canceled in writing by Buyer or Seller not sooner than three (3) months nor later than one (1) month from termination of the initial order or any renewal terms. Upon any renewal, Seller shall have the right to issue notice of increased pricing which shall be effective for any renewed terms unless Buyer objects in writing within fifteen (15) days of issuance of said notice. If Buyer timely cancels service in writing prior to the end of the initial or any renewal term this shall not relieve Buyer of its obligations under the order for the monthly rental service charge which shall continue to be due and owing. Upon the expiration or termination of this Agreement, Buyer shall promptly make any Leased Equipment available to Seller for removal. Buyer hereby agrees that it shall grant Seller access to the Leased Equipment location and shall permit Seller to take possession of and remove the Leased Equipment without resort to legal process and hereby releases Seller from any claim or right of action for trespass or damages caused by reason of such entry and removal.

15. **Miscellaneous.** These terms, together with any Contract Documents issued or signed by the Seller, comprise the complete and exclusive statement of the agreement between the parties (the "Agreement") and supersede any terms contained in Buyer's documents, unless separately signed by Seller. No part of the Agreement may be changed or cancelled except by a written document signed by Seller and Buyer. No course of dealing or performance, usage of trade or failure to enforce any term shall be used to modify the Agreement. To the extent the Agreement is considered a subcontract under Buyer's prime contract with an agency of the United States government, in case of Federal Acquisition Regulations (FARs) flow down terms, Seller will be in compliance with Section 44.403 of the FAR relating to commercial items and those additional clauses as specifically listed in 52.244-6, Subcontracts for Commercial Items (OCT 2014). If any of these terms is unenforceable, such term shall be limited only to the extent necessary to make it enforceable, and all other terms shall remain in full force and effect. The Agreement shall be governed by the laws of the Commonwealth of Pennsylvania without regard to its conflict of laws provisions. Both Buyer and Seller reject the applicability of the United Nations Convention on Contracts for the international sales of goods to the relationship between the parties and to all transactions arising from said relationship.

**DOWEX™ PSR2 Plus Cl Ion Exchange Resin**

For Selective Removal of Perchlorate from Potable Water

Description

DOWEX™ PSR2 Plus Cl Ion Exchange Resin is a strong base anion exchange resin for the selective removal of perchlorate from potable water.

Designed to offer exceptional selectivity for perchlorate, the gel matrix also helps achieve high capacity while the uniform particle size (UPS) allows operation at lower pressure losses compared to conventional perchlorate removal resins.

Typical Physical and Chemical Properties

Matrix	Styrene-divinylbenzene, gel
Type	Strong base anion
Physical Form	White to yellow spherical beads
Ionic Form as Shipped	Cl ⁻ Form
Total Exchange Capacity	≥ 0.7 eq/L
Water Retention Capacity	25 – 35%
Particle Size	
Particle Diameter ^b	700 ± 50 μm
Uniformity Coefficient	≤ 1.1
< 300 μm	1% max
Particle Density	1.07 g/mL
Bulk Density, as Shipped ^c	690 g/L (43 lb/ft ³)

^b For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

^c As per the backwashed and settled density of the resin, determined by ASTM D-2187.

Suggested Operating Conditions

Maximum Operating Temperature	60°C (140°F)
pH Range	0 – 14
Bed Depth, min.	1000 mm (3.1 ft)
Typical Service Flowrate	4 – 64 BV*/h (0.5 – 8 gpm/ft ³)
Typical Linear Velocity	12 – 54 m/h (5 – 22 gpm/ft ²)

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin

Please contact your Dow representative for system design and application testing details.

Commissioning and Limits of Use

DOWEX™ PSR2 Plus CI Resin is suitable for use in potable water applications after an initial commissioning pretreatment at ambient temperature.

Note

These resins may be subject to drinking water application restrictions in some countries.

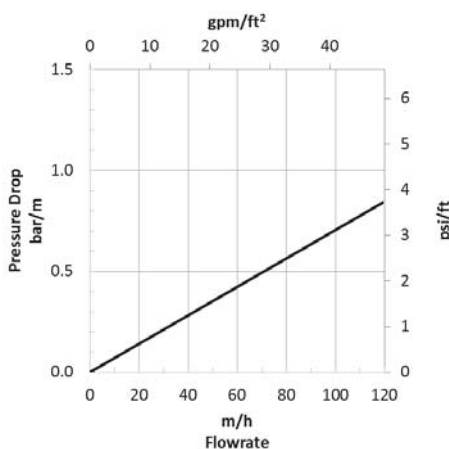
Please check the application status before use and sale.

Hydraulic Characteristics

Pressure drop data for DOWEX™ PSR2 Plus CI Resin as a function of service flowrate at 20°C (68°F) is shown in Figure 1. The pressure drop for other water temperatures can be calculated with the provided equations. Pressure drop data are valid at the start of the service run with clean water and a correctly classified bed.

Figure 1: Pressure Drop

Temperature = 20°C (68°F)



For other temperatures use:

$$P_T = P_{20^\circ\text{C}} / (0.026 T_{\text{C}} + 0.48), \text{ where } P \equiv \text{bar/m}$$

$$P_T = P_{68^\circ\text{F}} / (0.014 T_{\text{F}} + 0.05), \text{ where } P \equiv \text{psi/ft}$$

Packaging

- 5-ft³ (0.14-m³) fiber drums
- 1000-L (264-gal) super sacks

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

For more information, contact our Customer Information Group:

Asia Pacific	+86 21 3851 4988
Europe, Middle East, Africa	+31 115 672626
Latin America	+55 11 5184 8722
North America	1-800-447-4369

www.dowwaterandprocess.com

WARNING: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. Nothing in this document should be treated as a warranty by Dow.



Water Quality Association

1/11/2017



CERTIFIED DRINKING WATER SYSTEM COMPONENTS

NSF/ANSI 61 (03/05/2012): Drinking Water System Components - Health Effects is within WQA's ANSI and SCC approved scope of accreditation under the Drinking Water System Component Scheme

The Dow Chemical Company

1803 Bldg/#416

Midland, MI 48674

United States

<http://www.dow.com> (<http://www.dow.com>)

Product Type: Ion Exchange Resin

Brand Name	Model	Water Contact Temp	Water Contact Material	Size
	AMBERLITE PWA15 Anion Exchange Resin ⁴	Cold (23C)	SYN	525-625 um
	AMBERLITE PWA17 Anion Exchange Resin ³	Cold (23C)	SYN	16x50 mesh
	DOWEX MARATHON C Cation Exchange Resin ⁴	Cold (23C)	SYN	525-625 um
	DOWEX PSR-2 Anion Exchange Resin ^{1,2}	Cold (23C)	SYN	16x50 mesh
	DOWEX PSR2 Plus (CL) Ion	Cold(23C)	SYN	0.5 - 0.9 mm

Exchange Resin¹¹¹²

DOWEX SAR Anion Exchange Resin ⁵	Cold (23C)	SYN	16x50 mesh
DOWEX TAN-1 Anion Exchange Resin ⁷	Cold (23C)	SYN	16x50 mesh
Dowex RSC Na Cation Exchange Resin ⁸	Cold (23C)	SYN	16x50 mesh
HCR-S Cation Exchange Resin	Cold (23C)	SYN	16x50 mesh
HCR-S Cation Exchange Resin ⁶	Cold (23C)	SYN	300-1200 um

Facility: Fombio, Italy

Product Type: Ion Exchange Resin

Brand Name	Model	Water Contact Temp	Water Contact Material	Size
	Dowex HCR-S/S Cation Exchange Resin	Cold (23C)	SYN	16x50 mesh

Facility: Midland, MI

Product Type: Ion Exchange Resin

Brand Name	Model	Water Contact Temp	Water Contact Material	Size
	HCR-S/S Cation Exchange Resin ^{9,4} ¹⁰	Cold (23C)	SYN	16x50 mesh

¹ Anion Resin² Certified for water treatment plant applications. This product has not been evaluated for point of use applications.³ This product is certified with a minimum flow rate of = 0.4 gpm/ft³ of media.

⁴ This product is certified with a minimum flow rate of = 0.8 gpm/ft³ of media.

⁵ Flush at least 3 BV water.

⁶ This product is certified with a minimum of = 1.0 gpm/ft³ of media.

⁷ Flush 3 BV water at < 20 BV/hour.

⁸ This product is certified with a minimum flow rate of = 0.72 gpm/ft³ of media.

⁹ Flush 3 BV water at > 20 BV/hour.

¹⁰ The regeneration water consumption is at least .21 liters of regeneration water consumption per 100 grams of media.

¹¹ This product is certified with a minimum flow rate of 0.38 gpm/ft³ of media

¹² For conditioning the resin; soak 1 hour with water. Then, rinse with RO/DI water at 10BV/hr = 0.044 gallons/minute for 20BV.



Lloyd's Register
LRQA

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

**The Dow Chemical Company
Ion Exchange Resins
Midland Operations
963 Building
Midland, Michigan 48667, USA**

has been approved by Lloyd's Register Quality Assurance
to the following Quality Management System Standards:

ISO 9001:2008

The Quality Management System is applicable to:

**Design, Development, Technical Services
and Manufacture of Ion Exchange Resins.**

Approval
Certificate No: UQA 0111287

Original Approval: June 3, 1999

Current Certificate: July 1, 2014

Certificate Expiry: June 30, 2017


Issued by: Lloyd's Register Quality Assurance, Inc.



1330 Enclave Parkway, Suite 200, Houston, Texas 77077, USA

This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.

Macro Revision 14

CONTRACTOR'S LICENSING STATEMENT

I, the undersigned Contractor, am aware of Business and Profession Code Section 7028.15 and understands the information shown below shall be included with the bid. Any bid not containing this information, or information is subsequently proven to be false shall be considered non-responsive and shall be rejected.

Name of Contractor Evoqua Water Technologies LLC

Business Address 14250 Gannet Street

La Mirada, CA 90638

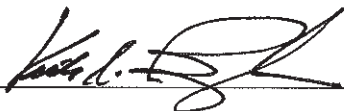
Corporation organized under the laws of the State of California

State License No. 989497

State License Classification A- General Contracting

State License Expiration Date 1/31/2020

I certify under penalty of perjury under the laws of the State of California that the representations made in this bid are true and correct.

SIGNED 

TITLE District Manager

DATE 4/18/2018

Contractor's License Detail for License # 989497

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.

Per B&P 7071.17 , only construction related civil judgments reported to the CSLB are disclosed.

Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.

Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Business Information

EVOQUA WATER TECHNOLOGIES LLC
1828 METCALF AVE
ATTN HARRY BRYANT
THOMASVILLE, GA 31792
Business Phone Number:(229) 224-2878

Entity Ltd Liability

Issue Date 01/03/2014

Expire Date **01/31/2020**

License Status

This license is current and active.

All information below should be reviewed.

Classifications

A - GENERAL ENGINEERING CONTRACTOR

Bonding Information

Contractor's Bond

This license filed a Contractor's Bond with WESTCHESTER FIRE INSURANCE COMPANY.

Bond Number: K09065623

Bond Amount: \$15,000

Effective Date: 01/01/2016

Contractor's Bond History

LLC EMPLOYEE/WORKER BOND

This license filed a LLC Employee/Worker Bond with WESTCHESTER FIRE INSURANCE COMPANY.

Bond Number: K0906641A

Bond Amount: \$100,000

Effective Date: 06/20/2014

LLC Employee/Worker Bond History

Bond of Qualifying Individual

This license filed Bond of Qualifying Individual number **K09066378** for HARRY BRYANT JR in the amount of **\$12,500** with WESTCHESTER FIRE INSURANCE COMPANY.

Effective Date: 06/20/2014

BQI's Bond History

Workers' Compensation

This license has workers compensation insurance with the TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA

Policy Number: TC2JUB8B35073A

Effective Date: 12/31/2016

Expire Date: 12/31/2018

Workers' Compensation History

Liability Insurance Information

This license has liability insurance with GREAT AMERICAN E & S INSURANCE COMPANY

Policy Number: PL9953269

Amount: \$4,000,000

Effective Date: 12/31/2016

Expiration Date: 12/31/2018

Liability Insurance History



Upcoming Events

To: Honorable Board of Directors

From: Rosa Ruehlman, Office Administrator *RRR*

Date: 07/09/2018

Re: Upcoming Board Approved Meetings and Conferences for 2018.

Day/Date	Event	<u><i>Aquirre</i></u>	<u><i>Escalera</i></u>	<u><i>Hastings</i></u>	<u><i>Hernandez</i></u>	<u><i>Rojas</i></u>
Thursday, July 26, 2018	SCWUA Breakfast at 8:00 am at the Sheraton at the Pomona Fairplex.					
Wednesday, August 8, 2018	SGWWA Breakfast Meeting at the Pomona Mining Company at 8:00 am in Pomona, CA					
Tuesday, September 18, 2018	SG Valley Water Forum 2018 at 7:30 – 1:30 pm. Sharaton Fairplex Conference Center in Pomona, CA					
Monday-Thursday, September 24-27, 2018	CSDA 2018 Annual Conference at Indian Wells, CA.					
Wednesday-Friday, October 3-5, 2018	WaterSmart Innovations Conference at South Point Hotel in Las Vegas, NV.					
Monday– Thursday, October 22-25, 2018	AWWA CA/NV 2018 Fall Conference at the Westin Mission Hills, Palm Springs, CA					
Tuesday – Thursday, Nov. 27-30, 2018	ACWA 2018 Fall Conference in San Diego					

SGVWA – San Gabriel Valley Water Association Quarterly Breakfast, are held on the Second Wednesday of February, May, August and November at the Pomona Mining Co. in Pomona, CA. (Dates and location are subject to change).

SCWUA – Southern California Water Utilities Association Luncheons are typically held on the fourth Thursday of each month with the exception of November and December due to the Thanksgiving and Christmas holiday and are held at the Pomona Fairplex in Pomona, CA. (Dates are subject to change)

Board Member Training and Reporting Requirements:

NEXT DUE DATE

Schedule of Future Training and Reporting for 2016	<u>Aguirre</u>	<u>Escalera</u>	<u>Hastings</u>	<u>Hernandez</u>	<u>Rojas</u>
Ethics 1234 2 year Requirement	11/22/18	12/01/18	12/01/18	10/11/18	9/26/19
Sexual Harassment 2 Year Requirement	05/09/19	11/28/19	05/09/19	10/10/18	05/09/19
Form 700 Annual Requirement	04/01/19	04/01/19	04/01/19	04/01/19	04/01/19
Form 470 Short Form Semi Annual Requirement	07/31/19	07/31/19	07/31/19	07/31/19	07/31/19

If you have any questions on the information provided or would like additional information, please contact me at your earliest convenience.

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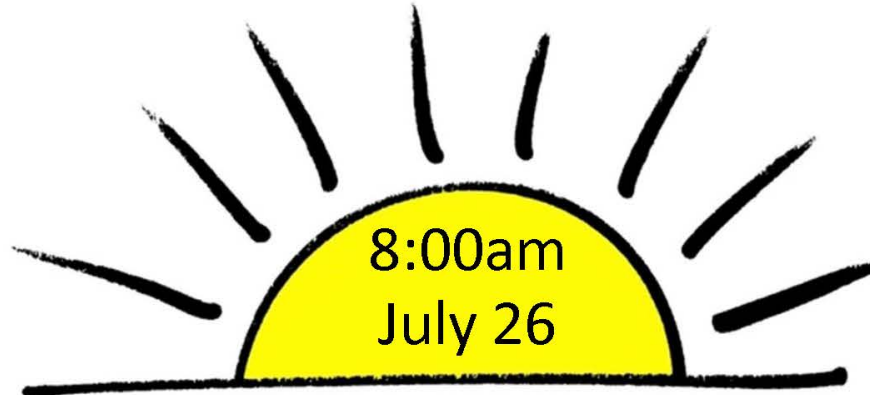


Southern California Water Utilities Association

Established in 1932

Next Event: Thursday, July 26, 8:00 a.m.

For the first time ever—Breakfast with SCWUA!
Come Join Us for a Great Program



Update: The Water Replenishment District's Groundwater Reliability Improvement Project (GRIP)

Presented by Robb Whitaker

General Manager—Water Replenishment District of Southern California

Date:	Thursday, July 26, 2018	Time:	8:00 a.m. to 10:00 a.m.
Where:	Pomona Fairplex Sheraton 601 W McKinley Ave, Pomona	Cost:	\$30.00 – payable at the door

Three Ways to Register

RSVP: By Monday, July 23

1	Online: www.scwua.org	2	Email: www.facebook.com/scwua	3	Phone: (909) 293-7040
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