

CRESCENTA VALLEY WATER DISTRICT

2700 Foothill Boulevard
La Crescenta, California

Agenda for the
Adjourned Regular Meeting of the Board of Directors
of the Crescenta Valley Water District
to be held on Tuesday, July 27, 2021 at 7:00 p.m.

Posted: Thursday, July 22, 2021 at 4:30 p.m.

AUDIO & VIDEO CONFERENCING NOTICE

[This meeting will be held by audio & video conference only.]

Pursuant to the provisions of Executive Order N-08-21 issued by Governor Gavin Newsom on June 11, 2021, a local legislative body is authorized to hold public meetings via teleconference.

Any member of the public may participate using a touchtone phone. You may select any of the following phone numbers (there are more than one for increased reliability during this time of increased phone traffic)

(669) 900-6833

(346) 248-7799

(929) 205-6099

(253) 215-8782

(301) 715-8592

(312) 626-6799

Then, enter Access Code: 831 6012 5328

Those members of the public who are able to and would like to additionally participate through computer may access the Zoom audio & video conferencing tool available at the following link –

<https://us02web.zoom.us/j/83160125328>

Public comment may be made either by emailing comments ahead of the meeting or by speaking over the phone. Emailed comments will be sent to the Board of Directors prior to the meeting and posted on the District's website. Comments may be sent to Christy Colby, Regulatory and Public Affairs Manager, at (818) 248-3925 or customerservice@cvwd.com by 3pm on July 27, 2021.

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting the District by phone or in writing at the above email address. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

Any written materials distributed to the Board in connection with this agenda will be made available at the same time for public inspection at the District office located at the above address and posted on the District's website.

Call to Order and Determination of Quorum

Pledge of Allegiance

Adoption of Agenda

Public Comments

At this time, the public shall have an opportunity to comment on any non-agenda item relevant to the subject matter jurisdiction of the Board. This opportunity is non-transferable, and speakers are limited to one three-minute (3) comment. Under the provisions of the Brown Act, the Board is prohibited from taking action on items not listed on the agenda, except under certain circumstances.

Foothill Municipal Water District Report

1. Report on activities at Foothill Municipal Water District.

Consent Calendar

1. Consideration and approval of the Minutes of the Regular Board Meeting on July 13, 2021.
2. Ratification of Disbursements for June 2021.

Action Calendar

The public shall have an opportunity to comment on any action item as each item is considered by the Board. This opportunity is non-transferable, and speakers are limited to one two-minute (2) comment.

1. **Cost-of Service Report** – Consideration and motion to receive and file the Water and Wastewater Cost of Service Study as prepared by Raftelis Financial Consultants.
2. **Proposition 218 Notice** – Consideration and motion to approve the Proposition 218 Notice for mailing.
3. **Relief of High Water Bill – 5914 Canyonside Rd.** – Consideration and possible action to grant a request for relief from a high water bill by Janet Tenney at 5914 Canyonside Rd.
4. **Pilot Program for the Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939** – Consideration and motion to authorize the General Manager to enter into an agreement with Apex Manufacturing Services (APEX) to provide SCADA programming and integration services for the said project at a cost of \$21,180 and establish a contingency amount of \$2,120 (10% of contract) to cover the cost of unforeseen or additional work and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).
5. **Budget Schedule & Proposition 218 Process** – Placeholder for discussion and possible action for schedule, timing, and other considerations related to completing the budget and Proposition 218 process.

Information Items

Written Communications to District/Board of Directors

General Manager's Report

Attorney Report

Reports of Committees

- Engineering Committee
- Finance Committee
- Employee Relations Committee
- Policy Committee
- Community Relations/Water Conservation Committee
- Emergency Planning Committee
- Technology Committee

Directors' Oral Reports – Reports on issues, meetings, or activities attended by Directors.

Board Members' Request for Future Agenda Items

Closed Session – None

Adjournment

CRESCENTA VALLEY WATER DISTRICT REGULAR MEETING, BOARD OF DIRECTORS

July 13, 2021

Pursuant to the order of the Board of Directors of the Crescenta Valley Water District made at the Adjourned Regular Meeting on June 22, 2021, a Regular Meeting was held on July 13, 2021, at 7:00 p.m. through audio and video conference. A call-in number was clearly noted on the meeting Agenda, posted in accordance with the Brown Act, due to the COVID-19 pandemic, with President Sharon S. Raghavachary presiding.

At roll call, the following Directors and staff members were online:

Directors:
Sharon S. Raghavachary
James D. Bodnar
Kerry D. Erickson
Ken R. Putnam
Judy L. Tejeda

Attorney: **Thomas Bunn**

General Manager: **Nem Ochoa**

Director of Finance & Administration: **James Lee**

Director of Engineering: **David Gould**

Staff Members:
Christy Colby, Regulatory & Public Affairs Manager
Brook Yared, Engineering Manager
Arturo Montes, Finance & Administration Manager
Wendy Holloway, Customer Service Manager
Darlene Telles, Operations Coordinator
Tessa Allmon, Customer Service Representative
Alex Sandoval, Construction Supervisor

Public Participation:
Frank Colcord
Marilyn Tyler

PLEDGE OF ALLEGIANCE

Mr. Gould opened the meeting by leading the Directors and staff in reciting the Pledge of Allegiance.

ADOPTION OF AGENDA

It was moved by Director Tejeda, seconded by Director Bodnar, and carried by a 5-0 roll call vote that the Agenda for the Regular Meeting of July 13, 2021 be adopted as presented.

AYES:
Director Raghavachary
Director Bodnar
Director Erickson
Director Putnam
Director Tejeda

NOES: None

PUBLIC COMMENTS – Mr. Lee announced that two (2) public comments were received from Jonas Williams and one (1) public comment was received from Ms. Tyler. Mr. Lee stated that the comments were sent to each of the Directors and posted on the CVWD website. Mr. Tyler requested a meeting of the Community Advisory Committee to share their individual opinions of the Water and Wastewater 10-year funding plan with the Board of Directors. Mr. Williams voiced concern regarding the stated consumption of single-family residences in the Cost-of-Service Study.

FOOTHILL MUNICIPAL WATER DISTRICT REPORT – Mr. Colcord stated that CVWD customers consumed 9% more water by the end of June 2021 than the prior fiscal year. Mr. Colcord emphasized that CVWD's conservation rate is well ahead of the 15% voluntary water reduction order given by Governor Newsom due to the current drought conditions in the State. Mr. Colcord reminded the community to keep conservation in the forefront of their minds.

CONSENT CALENDAR

It was moved by Director Tejeda, seconded by Director Erickson, and carried by a 5-0 roll call vote to approve the Minutes of the Adjourned Regular Board Meeting held on June 22, 2021 through audio and video conference.

**AYES: Director Raghavachary
 Director Bodnar
 Director Erickson
 Director Putnam
 Director Tejeda**

NOES: None

Professional Engineering Services for Rehabilitation of Edmund #2 Reservoir, Project E-1036 – Mr. Gould requested consideration and motion to award a contract to Harper & Associates Engineering, Inc. to provide professional engineering services for the design of steel reservoir rehabilitation at Edmund No. 2 Reservoir. Mr. Gould presented pictures taken in August 2020 showing severe corrosion and rust scale on several surfaces along with the proposal from Harper & Associates Engineering, Inc. Mr. Gould stated that this project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA guidelines.

Following discussion:

It was moved by Director Bodnar , seconded by Director Tejeda, and carried by a 5-0 roll call vote to award a professional engineering services contract to Harper for the design of Steel Reservoir Rehabilitation at Edmund No. 2 Reservoir at a cost of \$16,100, and establish a contingency amount of \$1,610 (10% of contract) to cover the cost of unforeseen or additional work.

**AYES: Director Raghavachary
 Director Bodnar**

Director Erickson
Director Putnam
Director Tejada

NOES: None

Professional Engineering Services for Design of FY 21/22 Pipeline Replacement Projects, Projects E-1033 & E-1034 – Mr. Yared requested consideration and motion to authorize the General Manager to enter into an agreement with Tetra Tech to provide professional engineering services for the design of FY 21/22 pipeline replacement projects E-1033 and E-1034. Mr. Yared provided detailed information and maps with the location of each of the projects.

Following discussion:

It was moved by Director Bodnar, seconded by Director Tejada, and carried by a 5-0 roll call vote to enter into an agreement with Tetra Tech to provide professional engineering services for the design of FY 21/22 Pipeline Replacement Projects E-1033 and E-1034 at a cost of \$112,400 and establish a contingency amount of \$11,240 (10% of contract) to cover the cost of unforeseen or additional work.

AYES: Director Raghavachary
Director Bodnar
Director Erickson
Director Putnam
Director Tejada

NOES: None

Local Hazard Mitigation Plan, Project M-1004 – Mr. Gould provided a PowerPoint presentation of CVWD's Local Hazard Mitigation Plan (LHMP). Mr. Gould stated that the Local Hazard Mitigation Plan will be posted on the CVWD website and advertised in the Crescenta Valley Weekly. Links will be included on CV Town Council and CV Fire Safety websites and posted on CVWD's Facebook page to start the two-week public comment period from July 13 to July 27, 2021. Mr. Gould reported that the final plan will be submitted to Cal OES and FEMA for approval by July 31, 2021, after which the CVWD Board of Directors would adopt the LHMP. Mr. Gould emphasized that CVWD would apply for FEMA/OES grants for the implementation of Action Items in October 2021.

Budget Schedule & Proposition 218 Process – Mr. Montes presented the FY 2021-22 CVWD Meeting Schedule relating to the completion of the budget and Proposition 218 process, including the Water and Wastewater Rate Study. Mr. Montes highlighted the meeting dates required in order to implement the adopted rates on October 1, 2021. President Raghavachary requested that a Special Board Meeting be held on Tuesday, July 20, 2021 to review drafts of the Cost-of-Service Study and Proposition 218 Notice.

INFORMATION ITEMS – None

WRITTEN COMMUNICATIONS TO DISTRICT – None

REPORTS OF PERSONNEL – No report

GENERAL MANAGER – Mr. Ochoa reported that on July 8, 2021, Governor Newsom issued Executive Order N-10-21 to request a 15% voluntary reduction in water usage from 2020 consumption due to worsening drought conditions in the State of California. Mr. Ochoa stated that the Metropolitan Water District currently has 2.5 million acre feet of water in storage to meet the water demands of Southern California, but continued conservation efforts are in order. Mr. Ochoa reported that CVWD has exceeded its 20% reduction target and that current per capita usage amount is 106 gallons. Mr. Ochoa provide highlights of the June 2021 Field Maintenance and Operations Report. Mr. Gould reported 124.7 MG of water production for the month of June 2021. The average water usage is 0.2% less than 2020 and 8.5% greater than the 5-yr. average. Mr. Gould stated that the rainfall total for the Rainfall Year 2020/21 thus far is 7.54”, representing the second lowest total since 1964. Mr. Gould provided updates on the progress of FY 20/21 and FY 21/22 Capital improvement Projects, Grant Program, AMI Communication Network, and Developer Projects.

ATTORNEY – No report

REPORTS OF PERSONNEL – None

REPORTS OF COMMITTEES - None

Engineering Committee – Director Raghavachary reported that the Committee had not met; however, an audio/video conference meeting is scheduled for July 20, 2021.

Finance Committee – Director Raghavachary reported that the Committee had not met; however, an audio/video conference meeting is scheduled for July 14, 2021.

Employee Relations Committee – Director Bodnar reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

Policy Committee – Mr. Ochoa reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

Community Relations/Water Conservation Committee – Mr. Ochoa reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

Emergency Planning Committee – Director Tejeda reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

Executive Committee – Director Raghavachary reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

Technology Committee – Director Erickson reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

DIRECTORS' ORAL REPORTS

Director Erickson – Reported he had received a notice from SCE along with his bill stating a decrease in electric rates. He also shared that his son had experienced major damage inside of his home due to a break in an upstairs water connection.

Director Bodnar – No report

Director Tejeda – No report

Director Putnam – No report

Director Raghavachary – Received pictures from the Oroville dam area showing the devastation due to the low water levels.

BOARD MEMBERS REQUESTS FOR FUTURE AGENDA ITEMS – Director Bodnar requested a placeholder item to discuss CVWD’s potential plan regarding the Governor’s order for voluntary water conservation.

CLOSED SESSION – No reportable action

ADJOURNMENT

There being no other business to come before the Board, at 8:55 p.m., the meeting was adjourned to July 27, 2021, at 7:00 pm.

APPROVED

Sharon S. Raghavachary
President

James Lee
Director of Finance & Administration

CASH DISBURSEMENT LIST

June 2021



<u>Check#</u>	<u>Check Date</u>	<u>Payable To</u>	<u>Description</u>	<u>Water Amount</u>	<u>Wastewater Amount</u>
0	6/29/2021	CalPERS	PERS Contributions - June 2021	23,684.55	13,100.01
0	6/24/2021	Southern California Edison	Power purchased - June 2021	14,208.84	403.45
0		Los Angeles County Public Works	Excavation permits - June 2021	3,366.00	
0	6/24/2021	CalPERS	OPEB prefunding	60,000.00	40,000.00
0	6/29/2021	U.S. Bank St. Paul	Bond Debt Service Payment	46,520.00	
42757	6/9/2021	ADS, LLC	Monthly sewer monitoring - May 2021		1,100.00
42758	6/9/2021	Airgas National Carbonation	Well #2 - carbon dioxide rental tank - June 2021	61.24	
42759	6/9/2021	Airgas USA, LLC	Misc. supplies - May 2021	34.99	36.41
42760	6/9/2021	American Innotek, Inc.	Misc. supplies - May 2021		785.60
42761	6/9/2021	ARC	Monthly MPS Billing - May 2021	159.82	53.27
42762	6/9/2021	AT&T	Voice communication - May 2021	395.52	310.76
42763	6/9/2021	Regino Avalos	Pickens, Markridge & Rosemont - tree removal & brush clearing	5,140.00	
42764	6/9/2021	B.L. Wallace Distributor, Inc.	AMI meters	2,013.60	
42765	6/9/2021	Jennifer Bautista	Reimbursement - D2 class, exam, cert fee, & special comp.	1,344.99	
42766	6/9/2021	California Water Environment	DuRose - collection system maintenance grade 1 renewal		91.00
42767	6/9/2021	Cannon	S-962 - La Granada Lift Station design services - May 2021		1,879.37
42768	6/9/2021	CCS Interactive, Inc.	Monthly website services - June 2021	127.50	42.50
42769	6/9/2021	City of Glendale	Water purchase & well lease - October/November 2020	21,259.63	
42770	6/9/2021	City of Glendale Water & Power	Power purchased - May 2021	31,292.10	
42771	6/9/2021	Civiltec Engineering, Inc.	E-1021 - Design consulting services - April 2021	14,700.00	
42772	6/9/2021	Crescenta Valley Publishing, LLC	Urban Water Mgmt. Plan - 1/2 page ad - May 20 & 27, 2021	1,100.00	
42773	6/9/2021	Crosno Construction, Inc.	E-1018 - Rosemont rehab - Progress payment #4	86,904.86	
42774	6/9/2021	Cues, Inc.	Videotape inspection- annual GranitNet software upgrade		1,800.00
42775	6/9/2021	CV Strategies	Strategic communication services - April 2021	243.82	49.93
42776	6/9/2021	Morgen Durose	Reimbursement - water treatment T-4 license class	499.98	
42777	6/9/2021	DYI Home Center	Misc. hardware - May 2021	173.26	22.54
42778	6/9/2021	Eurofins Eaton Analytical, Inc.	Water analysis - May 2021	838.00	
42779	6/9/2021	Foothill Car Wash, Lube & Oil	Unit #51 - oil change	90.73	55.61
42780	6/9/2021	Graybar Electric Co., Inc.	E-1025 - New enclosures for radios	783.38	
42781	6/9/2021	Great America Leasing Corp.	Kyocera copier leases - June 2021	1,031.95	991.47
42782	6/9/2021	Gsolutionz Professional Services	Voice communication - June 2021	185.62	145.83
42783	6/9/2021	Hach Company	Misc. supplies	1,587.67	
42784	6/9/2021	Harper & Associates Eng., Inc.	E-1018 - Consulting Services - April 2021	27,484.50	

42785	6/9/2021	Highroad Information Technology	Managed services agreement & offsite backup - June 2021	5,350.55	1,174.45
42786	6/9/2021	J.A. Salazar Construction	D-19-115 - 4360 Ocean View - change order	6,700.00	
42787	6/9/2021	John Robinson Consulting, Inc.	E-1027 - Design services - May 2021	3,600.00	
42788	6/9/2021	J's Maintenance	Janitorial service - May 2021	852.72	269.28
42789	6/9/2021	Lagerlof, LLP	Legal services - March & April 2021	8,728.90	1,916.10
42790	6/9/2021	James Lee	C-1030 - Reimbursement - materials purchased for office	289.95	96.64
42791	6/9/2021	Logan Supply Co., Inc.	Misc. supplies - May 2021	55.11	57.35
42792	6/9/2021	Office Depot	Misc. supplies - May 2021	356.41	328.98
42793	6/9/2021	One Ring Networks, Inc.	Office - data communication - June 2021	1,012.50	337.50
42794	6/9/2021	O'Reilly Auto Parts	Misc. parts - May 2021	50.91	31.20
42795	6/9/2021	Paper Cuts, Inc.	Paper shredding - May 2021	2.60	2.40
42796	6/9/2021	Plumbers Depot, Inc.	Unit #53 - 6" heavy duty power hose & clamp & installation		559.20
42797	6/9/2021	Prohealth Glendale Medical Group	Employee health check	225.00	160.00
42798	6/9/2021	Protech Lift	Unit #17 - new rear tires, Unit #52 - replace engine hood prop & tune-up	653.10	400.27
42799	6/9/2021	Public Water Agencies Group	Emergency Preparedness Program - June 2021	481.88	481.87
42800	6/9/2021	Jonathan Russo	Reimbursement - collection system maintenance cert. - Grade 1		1,000.00
42801	6/9/2021	Norman Ryung	Refund check - 3052 Highridge	50.45	
42802	6/9/2021	Sawyer Petroleum	Diesel purchased - 513 gals. - May 2021	1,751.41	465.56
42803	6/9/2021	Southwest Hydrotech	Edmund #2, Rosemont Reservoir - Maintenance services	1,987.76	
42804	6/9/2021	Spectrum Business	Mills & Lowell - Data Communication - May 2021	420.27	147.64
42805	6/9/2021	Spectrum Business	Office & Glenwood - Data Communication - June 2021	3,633.23	1,276.53
42806	6/9/2021	System Integrated	E-1025 - final payment	63,640.00	
42807	6/9/2021	Systemated Business Products	Door hangers & construction door hangers	418.89	402.45
42808	6/9/2021	The Gas Company	Glenwood - gas purchased - May 2021	20.84	6.57
42809	6/9/2021	Toro's Lawnmower & Garden	Misc. repairs & supplies - May 2021	110.60	60.30
42810	6/9/2021	Total Graphics	New full color graphics court yard sign	350.00	
42811	6/9/2021	Tri-Xecutex Corp.	Remote access to change alarm codes	60.35	24.65
42812	6/9/2021	Ultra Welding, Inc.	Rosemont Reservoir - repair 8" pipe	1,000.00	
42813	6/9/2021	Underground Service Alert	Underground notifications - May 2021	237.87	111.92
42814	6/9/2021	UniFirst Corporation	Uniform rentals - May 2021	389.47	116.33
42815	6/9/2021	Univar Solutions USA, Inc.	Sodium Hypochloride - Glenwood - 500 gals. Mills - 640 gals.	3,395.61	
42816	6/9/2021	Wallace & Associates Consulting, Inc.	E-1008 & E-1019 - Construction Inspection Services - Apr & May 2021	29,304.00	
42817	6/9/2021	Waste Management - Sun Valley	Glenwood - disposal service - June 2021	916.61	289.44
42818	6/9/2021	Western Water Works	Stock - misc. parts - May 2021	1,356.71	
42819	6/11/2021	Raymond Dodge	Wellness reimbursement	175.50	58.50
42820	6/11/2021	Pam Leddy	Wellness reimbursement	225.00	75.00
42821	6/11/2021	Arturo Montes	Health reimbursement	217.92	145.29
42822	6/11/2021	Adam Sutphin	Tuition reimbursement - Spring 2021	1,746.59	
42823	6/14/2021	Maritess Allmon	Wellness reimbursement	72.36	24.12
42824	6/17/2021	Coram Design Center, Inc.	C-1030 - Office Remodel	9,000.00	3,000.00
42825	6/18/2021	Direct Connection	Water Quality Reports - postage	1,889.44	443.20
42826	6/18/2021	Los Angeles County Assessor	DVD of Addresses 2021	78.39	38.61

42827			Voided check #42827		
42828	6/22/2021	All American Landscape Co.	Main Office - monthly landscaping - May 2021	255.50	94.50
42829	6/22/2021	Associated Soils Engineering	E-1008 - Janet Lee pipeline services - May 2021	2,825.00	
42830	6/22/2021	AT&T Mobility	Voice communication - May 2021	1,236.42	369.32
42831	6/22/2021	Automated Controls & Equipment, Inc.	Well # 5 - 6" PVC valve & adapter	1,098.60	
42832	6/22/2021	Regino Avalos	Clear brush and weeds (3 sites) & Monthly services (7 sites) - May 2021	7,174.03	195.97
42833	6/22/2021	Kellen Boyce	Reimbursement - CWEA membership & Certification Grade 1		372.00
42834	6/22/2021	Bridgemoor Solutions, Inc.	Consulting services - Operators SOP	11,018.25	2,256.75
42835	6/22/2021	Bronson Photography	Ochoa - portrait	148.66	73.22
42836	6/22/2021	Cannon	E-1021 - Construction Inspection Services - May 2021	25,391.00	
42837	6/22/2021	Citibank (Costco)	Misc. supplies (Costco) - May 2021	170.00	97.71
42838	6/22/2021	City of Glendale	Glendale utility taxes - April/May 2021	38,116.57	
42839	6/22/2021	Civiltec Engineering, Inc.	E-1022 - Design consulting services - May 2021	880.00	
42840	6/22/2021	Clark Pest Control, Inc.	Monthly service at 4 sites - June 2021	234.75	21.25
42841	6/22/2021	Clifton Larson Allen	Progress billing for audit June 2021	1,645.00	1,855.00
42842	6/22/2021	Colonial Life & Accidents Ins.	Employee paid insurance - May 2021	223.67	
42843	6/22/2021	Consolidated Electrical Distributors, Inc.	Misc. supplies - June 2021	391.67	44.71
42844	6/22/2021	Coram Design Center, Inc.	C-1030 - Office remodel	4,410.45	1,470.15
42845	6/22/2021	CV Strategies	Strategic communication services - May 2021	1,219.07	249.68
42846	6/22/2021	Department of Consumer Affairs	Yared - Civil Engineer annual renewal	180.00	
42847	6/22/2021	Foothill Municipal Water	Water delivery - May 2021	308,575.53	
42848	6/22/2021	Grainger	Misc. supplies - June 2021	222.08	57.73
42849	6/22/2021	Graybar Electric Co., Inc.	La Granada Lift Station - Remote Terminal Unit enclosure		481.83
42850	6/22/2021	Harper & Associates Eng., Inc.	E-970 - Oak Creek rehabilitation - 1 year warranty	4,345.50	
42851	6/22/2021	Highroad Information Technology	C-1030 - Office remodel - Network recabling	11,827.38	2,662.79
42852	6/22/2021	InfoSend, Inc.	Printing & postage for billing - May 2021	1,331.09	12,778.89
42853	6/22/2021	LA Dept Water and Power	Power purchased - June 2021	56.22	
42854	6/22/2021	Lagerlof, LLP	Legal services - May 2021	603.10	132.38
42855	6/22/2021	Liebert Cassidy Whitmore	Legal services - May 2021	7,454.62	1,636.38
42856	6/22/2021	Lincoln Financial Group	Life & Disability Insurance - May 2021	902.24	601.49
42857	6/22/2021	LJ's Access Systems, Inc.	Oceanview - Repair Main gate	761.20	
42858	6/22/2021	LMS Electric	C-1030 - LED lights and fixtures	3,371.25	1,123.75
42859	6/22/2021	McMaster-Carr Supply Co	Well #2 - Equipment	287.59	
42860	6/22/2021	Arturo Montes	Director of Operations - CWEA job posting	367.50	122.50
42861	6/22/2021	Office Furniture Max	C-1030 - Re-install office equipment	3,285.00	1,095.00
42862	6/22/2021	Plumbers Depot, Inc.	Repair - Gas Detection Monitor Equipment	264.67	275.46
42863	6/22/2021	Raftelis Financial Consultants, Inc.	Professional services - Cost of Service Study - May 2021	1,472.22	301.53
42864	6/22/2021	Sawyer Petroleum	Supplies for booster pump motor maintenance	717.31	
42865	6/22/2021	Serge's Automotive	Unit #2 - replace transmission solenoid	279.00	171.00
42866	6/22/2021	Shell	Gas purchased - May 2021	1,798.29	537.14
42867	6/22/2021	So Cal Turf & Tractor	Unit #2 - service compressor - fuel filter, lube, flush fuel system	201.36	123.40
42868	6/22/2021	Southwest Hydrotech	Edmund #1 Reservoir - Maintenance services	4,511.75	

42869	6/22/2021	Springbrook Finance Holdings, Inc.	E-1020 - AMI services - May 2021	42.25	
42870	6/22/2021	Sully-Miller Contracting Co.	Cold mix for temporary repairs - 8 tons	840.76	
42871	6/22/2021	Darlene Telles	Reimbursement - pancake breakfast & work jeans	176.99	123.40
42872	6/22/2021	Toro's Lawnmower & Garden	Misc. tools - May 2021	75.92	61.86
42873	6/22/2021	Tri-Xecutex Corp.	Office - replace motion sensors, alarm monitoring July/Aug/Sept. 2021	656.19	268.01
42874	6/22/2021	Univar Solutions USA, Inc.	Sodium Hypochloride - Glenwood - 480 gal. - Mills - 558 gal.	3,526.60	
42875	6/22/2021	Wallace & Associates Consulting, Inc.	E-1008 - Construction Inspection Services - Jan. 2021	27,477.00	
42876	6/22/2021	Water Environment Federation	Yared - annual membership renewal	249.00	83.00
42877	6/22/2021	Water Well Redevelopers, Inc.	E-1028 - Videotape Inspection & Sonar Cleaning for Well 12 rehab.	6,575.30	
42878	6/22/2021	Westlake Ace Hardware	Misc. hardware - May 2021	295.70	54.88
42879	6/22/2021	Jacob Whittaker	Reimbursement - classes and supplies	350.22	104.60
42880	6/29/2021	David Inman	Wellness reimbursement	212.84	70.95
42881	6/29/2021	James Lee	Health reimbursement	667.34	444.90
42882	6/29/2021	Arturo Montes	Wellness reimbursement	225.00	75.00
42883	6/29/2021	Jonathan Russo	Wellness reimbursement	225.00	75.00
42884	6/29/2021	Brook Yared	Health reimbursement	321.05	214.04

\$ 987,212.15 \$ 105,146.27

Total Disbursements for June 2021

\$ 1,092,358.42

Payroll Report

Directors	\$ 1,530.00
Office Regular Payroll	\$ 122,107.00
Office OT	\$ 714.00
Plant Regular Payroll	\$ 10,719.00
Plant OT & Standby	\$ 15,679.00
Employer Payroll Taxes	\$ 17,676.00
Payroll Service Charges	\$ 386.00
Total Payroll for June 2021	<u><u>\$ 168,811.00</u></u>

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 1
July 27, 2021

To: Honorable President and Members of the Board of Directors
From: James Lee – Director of Finance and Administration
Subject: Cost of Service Study

ACTION ITEM:

Consideration and motion to receive and file the Water and Wastewater Cost of Service Study as prepared by Raftelis Financial Consultants.

BACKGROUND:

The District has worked with Raftelis Financial Consultants to complete the Water and Wastewater Cost of Service Study. The study determine equitable water and wastewater rates for all of CVWD's customers based on legal requirements including Article XIII D and Article X of the State Constitution.

The methodology, results, and rationale are detailed in the study, and the draft report was reviewed through a series of meetings, the last of which was the Special Board Meeting on July 20, 2021. Enclosed is the final report, which includes all comments from the previous meeting.

RECOMMENDATION

Receive and file the Water and Wastewater Cost of Service Study as prepared by Raftelis Financial Consultants.

Prepared by:



Arturo Montes
Finance & Administration Manager

Submitted by:



James Lee
Director of Finance & Administration

Attachment(s):

1. Cost of Service Study (Final)

Crescenta Valley Water District

Water and Wastewater Rate Study

Draft Report / July 21 2021



July 22, 2021

Arturo Montes
Finance & Administration Manager
Crescenta Valley Water District
2700 Foothill Boulevard
La Crescenta, CA 91214

Subject: Water and Wastewater Rate Study Report

Dear Mr. Montes,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water and Wastewater Rate Study Report (Study) for Crescenta Valley Water District (District) to develop water and wastewater rates which meet the requirements of California Constitution Article XIII D, Section 6 (commonly referred to as "Proposition 218"). In particular, this Study contains thorough details on the following:

1. The legal framework surrounding Proposition 218.
2. Recommended policy revisions.
3. Long term financial plans for the water and wastewater utilities.
4. Equitable cost of service-based water and wastewater rates.

The Study summarizes the key findings and results related to the development of rates and charges for water and wastewater service.

It has been a pleasure working with you, and we thank you, Mr. James Lee, other District staff, and the Board of Directors for the support provided during this study.

Sincerely,

A blue ink signature of Sudhir Pardiwala, written in a cursive style.

Sudhir Pardiwala
Executive Vice President

A blue ink signature of Kevin Kostiuk, written in a cursive style.

Kevin Kostiuk
Manager

A blue ink signature of Lauren Demine, written in a cursive style.

Lauren Demine
Senior Consultant

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Glossary

Term	Definition
ADA	Average Daily Attendance
AF	Acre Feet
AWWA	American Water Works Association
BOD	Biochemical Oxygen Demand
CCI	Construction Cost Index
CPI	Consumer Price Index
DU	Dwelling Unit
FMWD	Foothill Municipal Water District
FYE	Fiscal Year Ending (July 1 – June 30)
GPD	Gallons Per Day
GWP	Glendale Water and Power
KGAL	One Thousand Gallons
LA San	City of Los Angeles Bureau of Sanitation
M1 Manual	“Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1”, 7 th edition published by AWWA
MFR	Multi-Family Residential
O&M	Operations and Maintenance
R&R	Repair and Replacement
SFR	Single Family Residential
TSS	Total Suspended Solids
WEF	Water Environment Federation

1. Executive Summary

1.1. Background of the Study

The Crescenta Valley Water District (District) was founded in 1950 and serves potable water to approximately 8,000 connections servicing a population of 32,000. The water service area comprises approximately four-square miles in La Crescenta, Montrose, and a portion of the City of Glendale. The District relies on three sources of water supply: local groundwater production from the Verdugo Groundwater Basin, groundwater production from a leased water right from the City of Glendale and imported water from Foothill Municipal Water District (FMWD). On average, the District serves over 4,000 acre-feet (AF) of water annually.

The wastewater utility serves approximately 5,600 accounts in La Crescenta, Montrose, and a portion of the City of La Canada-Flintridge. The wastewater utility operates a collection system with wastewater transported for treatment at City of Los Angeles (Los Angeles Bureau of Sanitation-Glendale Plant) facilities. The collection system consists of 64 miles of mainline sewers and 27 miles of laterals.

In 2020, The District contracted with Raftelis Financial Consultants, Inc. (Raftelis) to conduct a Rate Study (Study) to include a five-year Financial Plan for the water and wastewater utilities. This Study presents the Financial Plans, Cost of Service Analyses, and the resulting five-year water and wastewater rates for implementation beginning October of 2021¹.

This Executive Summary compiles the current and proposed water and wastewater charges and contains a description of the rate study process, methodology, results, and recommendations for the District's rates. The District's last rate adjustment was effective on September 1, 2019. The District wishes to establish fair and equitable rates that:

- » Proportionately allocate the costs of providing service in accordance with California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218).
- » Meet the District's fiscal needs in terms of operational expenses, reserve targets, and capital investment to maintain the water and wastewater systems.
- » Maintain affordable charges for customers with low water use and a price signal for those whose higher usage creates greater demands and burdens on the District's water system and sources of supply.
- » Provide revenue stability and financial sustainability.
- » Are easy for customers to understand and easy for District staff to implement and update in the future.

1.2. Objectives of the Study

The major objectives of the Study include the following:

1. Develop Financial Plans for the water and wastewater funds to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding of District financial reserves, and fund capital repairs and replacements (R&R).
2. Conduct a Cost-of-Service analysis for the water and wastewater systems.

¹ Implementation date reflects the billing date and not service date.

3. Develop fair and equitable water and wastewater rates that adequately recover costs, provide revenue stability for recovering fixed costs, and maintain affordable service, while complying with the requirements of Proposition 218.

1.3. Legal Requirements and Rate Setting Methodology

1.3.1. CALIFORNIA CONSTITUTION – ARTICLE XIII D, SECTION 6 (PROPOSITION 218)

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

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any 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 property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA's *M1 Manual*, "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Raftelis follows industry standard rate setting methodologies set forth by the AWWA *M1 Manual* to ensure this Study meets Proposition 218 requirements and creates rates that do not exceed the proportionate cost of providing water services on a parcel basis.

1.3.2. CALIFORNIA CONSTITUTION – ARTICLE X, SECTION 2

Article X, Section 2 of the California Constitution 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."

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

In addition, Section 106 of the Water Code declares that the highest priority use of water is for domestic purposes, with irrigation secondary. To meet the objectives of Article X, Section 2, Water Code Section 375 et seq., a water purveyor may utilize its water rate design to incentivize the efficient use of water. The District established inclining tiered (also known as inclining block) water rates to incentivize customers to use water in an efficient manner.

The inclining tier rates (as well as rates for uniform rate classes) need to be based on the proportionate costs incurred to provide water to customer classes and on a parcel basis within each customer class to achieve compliance with Proposition 218.

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

1.3.3. COST-BASED RATE-SETTING METHODOLOGY

To develop water and wastewater rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the District, there are four major steps discussed below.

1.3.3.1. Calculate the Revenue Requirement

The rate-making process starts by determining the base year (Test Year) revenue requirement, which for this Study is Fiscal Year End (FYE) 2021 which runs from July 1, 2020, through June 30, 2021. The revenue requirement should sufficiently fund the utility’s O&M expenses, debt service, capital expenses, and reserve funding.

1.3.3.2. Cost of Service Analysis

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

1. Functionalize costs. Examples of functions are water supply, pumping, storage, treatment, transmission and distribution, meter servicing, hydrants, conservation, and billing and customer service for water and collection and treatment for wastewater.
2. Allocate functionalized costs to cost components. Cost components include variable supply, base delivery, (supply and base delivery costs are called base costs) maximum day, maximum hour², fire protection, meter servicing, conservation, and customer service and billing costs for water and collection, Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS) service for wastewater.
3. Distribute the cost components. Distribute cost components, using unit costs, to customer classes in proportion to their demands and burdens on the water system. This is described in the M1 Manual published by AWWA and the MOP 27 published by WEF.

A COS analysis for water 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 demands³). Peaking costs are incurred during peak times of consumption. There are additional costs associated with designing, constructing, and operating and maintaining facilities to meet peak demands. These peak demand costs should be allocated to those customers whose water usage patterns generate additional costs for the utility. In other words, not all customer classes and not all customers share the same responsibility for peaking related costs.

² Collectively maximum day and maximum hour costs are known as peaking costs or extra-capacity costs.

³ System capacity is the system’s ability to supply water to all delivery points at the time when demanded. Coincidental 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’ relative demands during the peak month, day, and hour demand.

1.3.3.3. 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 utility objectives, such as conservation, affordability for essential needs, and revenue stability, among other objectives. Rates act as a public information tool in communicating these objectives to customers.

1.3.3.4. Rate Adoption

Rate adoption is the last step of the rate-making process. Raftelis documents the rate study results in this Report which reflect the basis upon which the rates were calculated, the rationale and justifications behind the proposed charges, any changes to rate structures, and anticipated financial impacts to ratepayers.

1.4. Water - Results and Recommendations

Table 1-1 shows the proposed revenue adjustments selected by the District Board and used to calculate the proposed water rates. Although this table shows anticipated revenue adjustments for FYE 2022 through 2026, the District will review and confirm the revenue adjustments on an annual basis⁴. The first revenue adjustment is proposed for implementation in October of 2021. All future revenue adjustments will take effect at the beginning of each fiscal year, beginning July 1, 2022. The assumptions used in calculating the revenue adjustments are described in more detail in Section 4.

Table 1-1: Proposed Water Revenue Adjustments

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Effective Month	October	July	July	July	July
Revenue Adjustment	8%	8%	8%	7%	7%

1.4.1. FACTORS AFFECTING REVENUE REQUIREMENTS

The following items affect the potable water fund's revenue requirement (i.e., costs) and thus its water rates. The District's expenses include Operation and Maintenance (O&M) expenses and capital expenses (including debt service).

- » **Capital Funding:** The District has planned approximately \$28.5 million in water capital expenditures over the five-year period to be funded through revenues and reserves. These capital expenditures include both capital projects and capitalized expenses associated with the capital program. A more detailed discussion of the projected capital improvement projects to be funded for the five-years is provided in Table 4-10.
- » **Reserve Funding:** The District has established reserve policies for the water utility (further discussed in Section 2.1) to meet operating cash flow needs, protect against rate spikes in times of reduced water demand, and ensure funding in the event of asset failure or other unforeseen circumstances or events. Figure 4-3 shows the reserve balances for the selected Financial Plan. The defined reserve policy is 90 days of cash to meet operating expenses (less water purchase costs from FMWD), or roughly \$1.5M in FYE 2022; \$1M in unrestricted emergency funds corresponding to the annual depreciation; and 25 percent of the commodity revenue equal to approximately \$2.9M for rate stabilization. The total target for FYE 2022 is approximately \$5.5M.

⁴ The Board maintains the right to implement rates that are *lower* than adopted. If it is determined that a rate *higher* than has been adopted is required, the Board is required to re-notice customers in accordance with Proposition 218 in order to adopt new rates.

1.4.2. PROPOSED BI-MONTHLY FIXED CHARGES

Table 1-2 shows the current and proposed rates for the bi-monthly service charge, by meter size, over the Study period. The rates for the current and proposed bi-monthly fixed charges are based on the size of the meter serving a property. Proposed October 2021 rates reflect the updated cost of service rates and the revenue adjustment percentage shown in Table 1-1. The proposed rates beginning July 2022 are adjusted by the revenue adjustment percentage found in Table 1-1. All rates are rounded up to the nearest whole penny.

Table 1-2: Current and Proposed Water Bi-Monthly Fixed Charges (\$/meter size)⁵

Meter Size (Inches)	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
3/4"	\$54.10	\$58.39	\$63.07	\$68.12	\$72.89	\$78.00
1"	\$80.69	\$86.37	\$93.28	\$100.75	\$107.81	\$115.36
1 1/2"	\$147.19	\$156.32	\$168.83	\$182.34	\$195.11	\$208.77
2"	\$227.01	\$240.27	\$259.50	\$280.26	\$299.88	\$320.88
3"	\$479.72	\$506.09	\$546.58	\$590.31	\$631.64	\$675.86
4"	\$852.17	\$897.83	\$969.66	\$1,047.24	\$1,120.55	\$1,198.99

1.4.3. PROPOSED COMMODITY RATES

Table 1-3 shows the proposed rates for the commodity charge by customer class. Proposed October 2021 rates reflect the updated cost of service rates and the revenue adjustment. The proposed rates beginning July 2022 are adjusted by the revenue adjustment percentage found in Table 1-1. The rates for the current and proposed commodity charge are based on the amount of water delivered in units of one thousand gallons (kgal). All rates are rounded up to the nearest whole penny.

Table 1-3: Current and Proposed Water Commodity Rates (\$/kgal)⁶

Customer Class	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
SFR						
Tier 1	\$5.17	\$5.10	\$5.51	\$5.96	\$6.38	\$6.83
Tier 2	\$8.14	\$9.50	\$10.26	\$11.09	\$11.87	\$12.71
Tier 3	\$12.29	\$13.39	\$14.47	\$15.63	\$16.73	\$17.91
Multi-Family/Commercial	\$7.33	\$8.10	\$8.75	\$9.45	\$10.12	\$10.83
Irrigation						
Tier 1	\$5.66	\$5.39	\$5.83	\$6.30	\$6.75	\$7.23
Tier 2	\$10.89	\$10.18	\$11.00	\$11.88	\$12.72	\$13.62

1.4.4. PRIVATE FIRE SERVICE CHARGES

Table 1-4 shows the current and proposed private fire service charges by connection size. The rates for the current and proposed bi-monthly private fire service charges are proportional to the potential flow through each fire connection size. Proposed October 2021 rates reflect the updated cost of service rates and the revenue adjustment percentage shown in Table 1-1. The proposed rates beginning July 2022 are adjusted by the revenue adjustment percentage found in Table 1-1. All rates are rounded up to the nearest whole penny.

⁵ Outside of District customers pay an additional \$0.40 per meter size for administrative services.

⁶ SFR stands for Single Family Residential

Table 1-4: Current and Proposed Bi-Monthly Private Fire Service Charges (\$/bi-monthly bill)

Private Fire Connection Size (Inches)	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
1"	\$15.85	\$18.15	\$19.61	\$21.18	\$22.67	\$24.26
2"	\$24.46	\$27.16	\$29.34	\$31.69	\$33.91	\$36.29
3"	\$44.05	\$47.62	\$51.43	\$55.55	\$59.44	\$63.61
4"	\$77.83	\$82.93	\$89.57	\$96.74	\$103.52	\$110.77
6"	\$199.05	\$209.61	\$226.38	\$244.50	\$261.62	\$279.94
8"	\$408.15	\$428.13	\$462.39	\$499.39	\$534.35	\$571.76
10"	\$722.67	\$756.83	\$817.38	\$882.78	\$944.58	\$1,010.71

1.5. Wastewater - Results and Recommendations

Table 1-5 shows the proposed revenue adjustments selected by the District Board and used to calculate the proposed wastewater rates. Although this table shows anticipated revenue adjustments for FYE 2022 through 2026, the District will review and confirm the revenue adjustments on an annual basis. The first revenue adjustment is proposed for implementation in October of 2021. All future revenue adjustments will take effect at the beginning of each fiscal year, beginning July 1, 2022. The assumptions used in calculating the revenue adjustments are described in more detail in Section 7.

Table 1-5: Proposed Wastewater Revenue Adjustments

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Effective Month	October	July	July	July	July
Revenue Adjustment	8%	8%	8%	7%	7%

1.5.1. FACTORS AFFECTING REVENUE REQUIREMENTS

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

- » **Capital Funding:** The District has planned approximately \$1.3 million in capital expenditures over the five-year period. These capital expenditures include both capital projects and capitalized expenses associated with the capital program. Capital projects are expected to be funded exclusively through rate revenues. A more detailed discussion of the projected capital improvement projects to be funded through the five-year CIP is provided in Table 7-8.
- » **Reserve Funding:** The District has established reserve policies for the wastewater utility (further discussed in Section 2.2) to meet operating cash flow needs, protect against rate spikes, and ensure funding in the event of asset failure or other unforeseen circumstances or events. Figure 7-3 shows the reserve balances for the proposed Financial Plan. The defined reserve policy is 90 days of cash to meet operating expenses (less wastewater treatment and disposal charges), or roughly \$593k in FYE 2022; \$1M in unrestricted emergency funds; and \$889k for rate stabilization representing 25 percent of rate revenue. The total target for FYE 2022 is approximately \$2.4M.

1.5.2. PROPOSED WASTEWATER CHARGES

Table 1-6 and Table 1-7 show the current and proposed wastewater rates for the Study period. Table 1-6 shows the wastewater fixed charge by customer class. The fixed charges are per dwelling unit (DU) for residential customers and per account for non-residential customers. Table 1-7 shows the wastewater variable rate by customer class. The variable rates are based on minimum winter water use for residential customers, actual water use for non-residential customers, and average daily attendance (ADA) for schools. Proposed October 2021 rates reflect the updated cost of service rates and the revenue adjustment percentage shown in Table 1-5. The proposed rates beginning July 2022 are adjusted by the revenue adjustment percentage found in Table 1-5. All rates are rounded up to the nearest whole penny.

Table 1-6: Current and Proposed Fixed Wastewater Service Charges (\$/DU or account)

Customer Class	Unit	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
Single Family	DU	\$47.79	\$50.23	\$54.25	\$58.59	\$62.70	\$67.09
Multi Family	DU	\$31.25	\$29.58	\$31.95	\$34.51	\$36.93	\$39.52
Commercial/Institutional (minimum charge)	Account	\$31.25	\$29.58	\$31.95	\$34.51	\$36.93	\$39.52

Table 1-7: Current and Proposed Variable Rates for Wastewater (\$/kgal water or \$/100 ADA)

Customer Class	Unit	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
Single Family, winter water use	kgal	\$1.93	\$2.13	\$2.31	\$2.50	\$2.68	\$2.87
Multi Family, winter water use	kgal	\$2.15	\$2.37	\$2.56	\$2.77	\$2.97	\$3.18
Commercial/Institutional, actual water use	kgal	\$5.10	\$5.48	\$5.92	\$6.40	\$6.85	\$7.33
Primary School/Elementary	100 ADA	\$84.86	\$91.21	\$98.51	\$106.40	\$113.85	\$121.82
Middle School	100 ADA	\$169.73	\$182.42	\$197.02	\$212.79	\$227.69	\$243.63
Secondary School/Middle School	100 ADA	\$254.59	\$273.62	\$295.51	\$319.16	\$341.51	\$365.42

2. Financial Reserve Policies

Reserves are used to provide working capital or cash for ongoing expenses, cope with fiscal emergencies such as revenue shortfalls, asset failure, and natural disasters, among other factors. Sound reserve policy results in prudent financial management, with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies.

2.1. Water Utility Financial Reserves Policy

Table 2-1 details the District's adopted policy by reserve type and target level in FYE 2022 for the water utility. The target for the Water Operating Fund equals 90 days of annual operating expenses, or approximately \$1.5M. This reserve provides cash flow in case of revenue shortfalls and for working capital. Considerations for billing frequency, seasonal fluctuations in expenditures, and seasonal fluctuations in demand, among others, determine the reserve target. It is important to note that the operating reserve excludes water production and purchase costs, which account for roughly 40 percent of total operating costs.

A Rate Stabilization Reserve is for unplanned challenges (e.g., droughts) related to water sales and/or water costs. An amount equal to a percentage of annual volumetric rate revenue is set aside to be utilized during revenue shortfalls, to smooth out rate impacts, or to forego implementation of water shortage surcharges temporarily. Each utility is unique and rate stabilization reserves are influenced by several variables, including water supply reliability, source cost exposure, and revenues from fixed versus variable sources, among others. The District has adopted a policy that 25 percent of commodity rate revenue be set aside for rate stabilization.

An Emergency Reserve is intended to provide immediate funds in the event of a critical asset failure, loss due to a natural disaster (e.g., earthquake, flood, fire), or other unforeseen catastrophic events. An appropriate Emergency Reserve considers the replacement cost of an essential facility, the time necessary to bring a facility back online, and historical information on the frequency of line breaks or other unanticipated repairs, among other factors. The District targets \$1M for the Emergency Reserve.

Table 2-1: Water Financial Reserves Policy

Reserve Type	Policy	FY 2022 Target Level
Operating Reserve	90 days of Operating Expenses	\$1,547,759
Rate Stabilization Reserve	25% of Commodity Revenue	\$2,983,093
Emergency Reserve	100% of Annual Depreciation	\$1,000,000
Total Reserves		\$5,530,852

2.2. Wastewater Utility Financial Reserves Policy

Table 2-2 details the District adopted policy by reserve type, and target level in FYE 2022 for the wastewater utility. The target for the Wastewater Operating Fund equals 90 days of annual operating expenses, or approximately \$593 thousand. This reserve provides cash flow in case of revenue shortfalls and for working capital. Considerations for billing frequency and seasonal fluctuations in revenues and expenditures, among others, determine the reserve target.

A Rate Stabilization Reserve is for unplanned challenges related to wastewater costs. An amount equal to a percentage of annual wastewater rate revenue is set aside to be utilized during revenue shortfalls, to smooth out rate impacts, or to fund unplanned operating costs (e.g., Los Angeles Bureau of Sanitation treatment expenditures). Each

utility is unique and rate stabilization reserves are influenced by several variables. The District has adopted a policy that 25 percent of rate revenue be set aside for rate stabilization.

An Emergency Reserve is intended to provide immediate funds in the event of a critical asset failure, loss due to a natural disaster (e.g., earthquake, flood, fire), or other unforeseen catastrophic events. An appropriate Emergency Reserve considers the replacement cost of an essential facility, the time necessary to bring a facility back online, and historical information on the frequency of line breaks or other unanticipated repairs, among other factors. The District targets \$1M for the Emergency Reserve.

Table 2-2: Wastewater Financial Reserves Policy

Reserve Type	Policy	FY 2022 Target Level
Operating Reserve	90 days of Operating Expenses	\$593,494
Rate Stabilization Reserve	25% of Commodity Revenue	\$889,097
Emergency Reserve	100% of Annual Depreciation	\$1,000,000
Total Reserves		\$2,482,592

3. General Assumptions

3.1. Water Utility

To project revenues and expenses for multiple years, it is necessary to make informed assumptions regarding inflation, water demands, account growth, etc. so that the multi-year financial plan can be developed. This section details the assumptions used in this study.

3.1.1. INFLATION

The Study Period is from Fiscal Year End (FYE) 2022 to 2026 with proposed revenue adjustments and rates presented for the five years FYE 2022 through FYE 2026. Various types of assumptions and inputs are incorporated into the Study based on discussions with and/or direction from District staff. These include the projected number of accounts, annual growth rates in water consumption for different customer classes, and inflation factors, among other assumptions.

The cost escalation factors below show projected increases in various cost categories across the Study period. The factors are applied to all years beginning FYE 2022. Raftelis used the FYE 2021 budget, so no inflationary factors are applied to that year. Raftelis worked with District staff to escalate individual budget line items according to appropriate escalation factors. Inflationary factors are presented in Table 3-1.

A general inflation rate of 3 percent is based on the long-term change in the Consumer Price Index (CPI). Salaries track general inflation with benefits outpacing general inflation and therefore an escalation of 5 percent is used. Power costs reflect the price of electricity related to producing groundwater, pumping water through the distribution system, and treatment of raw water. Capital cost escalation is estimated at 4 percent per year based on historical construction cost index (CCI) inflation.

Table 3-1: Water Inflationary Assumptions

Escalation Factors	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
General	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Salary	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Benefits	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Power	0.00%	2.50%	2.50%	3.00%	3.00%	3.00%
Capital	0.00%	4.00%	4.00%	4.00%	4.00%	4.00%

3.1.2. PROJECTED WATER DEMAND AND ACCOUNT GROWTH

Water demand is a critical factor in the development of the financial plan. To estimate future water demand two primary factors are used – annual account growth and water demand relative to prior year.

It is estimated that the total number of residential accounts will grow by 1 percent in every year of the Study period and total potable water demand per account is also projected to increase by 1 percent resulting in usage growth of about 2 percent per year. Long term demand is anticipated to reach approximately 3,900 acre feet (AF) in FYE 2026 versus the current level of approximately 3,500 AF.

In order to predict non-operating revenues, the Study assumes that miscellaneous revenues will increase at 1 percent per year through FYE 2026. Interest rates earned on reserves are based on conservative estimates in a low interest financial environment. These revenue growth assumptions are show below in Table 3-2.

Table 3-2: Account, Demand, and Revenue Growth Assumptions for Water⁷

	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Account Growth	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Water Demand Factor	100.0%	101.0%	101.0%	101.0%	101.0%	101.0%
Usage Growth	101.0%	102.0%	102.0%	102.0%	102.0%	102.0%
Water Demand (AFY)	3,570	3,641	3,715	3,789	3,865	3,943
Miscellaneous Revenues	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Reserve Interest	0.00%	2.25%	2.25%	2.25%	2.25%	2.25%

The District purveys water from three sources of supply including the Verdugo Basin, Glendale Water and Power (GWP), and Foothill Municipal Water District (FMWD). The supply mix incorporates availability, maximum allotments or yields, and new sources, and so the mix changes each year. The total water supply needed to meet demand (shown in Table 3-2) is calculated using the following formula to factor in the water loss in the system:

$$\text{Total Water Production (AF)} = \text{Total Water Demand (AF)} / (1 - \text{Water Loss})$$

System water loss is estimated by the District to be 6.4 percent. Table 3-3 summarizes the various sources of supply, the amount provided by each source (in AF) to meet demand (including water loss) in FYE 2021, and the purchase cost (if any) in FYE 2021. The sources are listed in order of use (priority).

Table 3-3: Water Sources of Supply⁸

Source	FYE 2021 (AF)	FYE 2021 Cost (\$/AF)
Groundwater (Verdugo Basin)	1,920	\$185
Groundwater (GWP)	240	\$579
FMWD Tier 1	1,654	\$1,105
FMWD Tier 2	0	\$1,180
FMWD Fixed Charges		\$460
FMWD Power Costs		\$179

Based on projections and inputs from District staff, the respective water source future supply costs are shown in Table 3-4. Total water supply costs reflect increases in energy costs for locally produced water, as well as rate increases from wholesalers. Future increases in FMWD water are projected at 2.5 percent per year.

⁷ AFY stands for Acre Feet per Year. Once acre foot is equal to 325,851 gallons.

⁸ FMWD pricing runs on calendar year. Costs shown for FMWD Tier 1 and Tier 2 are weighted between July-December pricing and January-June pricing to align with fiscal year.

Table 3-4: Water Costs Assumptions (\$/AF)

Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Groundwater (Verdugo Basin)	\$185	\$195	\$205	\$215	\$225	\$232
Groundwater (GWP)	\$579	\$593	\$608	\$624	\$639	\$658
FMWD Tier 1 Variable Rate	\$1,105	\$1,145	\$1,174	\$1,203	\$1,249	\$1,286
FMWD Tier 2 Variable Rate	\$1,180	\$1,196	\$1,227	\$1,290	\$1,354	\$1,395
FMWD Fixed Charges	\$460	\$461	\$455	\$455	\$443	\$456
FMWD Power Costs	\$179	\$189	\$199	\$209	\$219	\$226

Similarly, using projected availability from the several sources of supply and factoring in system water loss, Table 3-5 shows the anticipated water supply mix through the Study period. The District has an adjudicated yield of 3,200 AF from the Verdugo Groundwater Basin. The District does not anticipate purchasing Tier 2 water from FMWD in any year.

Table 3-5: Water Supply Mix Assumptions (AF)

Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Groundwater (Verdugo Basin)	1,920	2,060	2,130	2,160	2,160	2,160
Groundwater (GWP)	240	308	308	308	308	308
FMWD Tier 1	1,654	1,522	1,531	1,580	1,662	1,745
FMWD Tier 2	0	0	0	0	0	0
Total	3,814	3,890	3,969	4,048	4,130	4,213

3.2. Wastewater Utility

3.2.1. INFLATION

The Study Period is from Fiscal Year End (FYE) 2022 to 2026 with proposed revenue adjustments and rates presented for the five years FYE 2022 through FYE 2026. Various types of assumptions and inputs are incorporated into the Study based on discussions with and/or direction from District staff. These include the projected number of accounts, annual growth rates in water consumption for different customer classes, and inflation factors, among other assumptions.

The cost escalation factors below show projected increases in various cost categories across the Study period. The factors are applied to all years beginning FYE 2022. Raftelis used the FYE 2021 budget, so no inflationary factors are applied to that year. Raftelis worked with District staff to escalate individual budget line items according to appropriate escalation factors. Inflationary factors are presented in Table 3-6.

A general inflation rate of 3 percent is based on the long-term change in the Consumer Price Index (CPI). Salaries track general inflation with benefits outpacing general inflation and therefore an escalation of 5 percent is used. Power costs reflect the price of electricity related to pumping costs. Capital cost escalation is estimated at 4 percent per year based on historical construction cost index (CCI) inflation.

Table 3-6: Wastewater Inflationary Assumptions

Escalation Factors	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
General	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Salary	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Benefits	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Power	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Capital	0.00%	0.00%	4.00%	4.00%	4.00%	4.00%
Treatment	0.00%	4.00%	4.00%	4.00%	2.00%	2.00%

3.2.2. PROJECTED WASTEWATER FLOWS AND ACCOUNT GROWTH

To estimate future wastewater flows two primary factors are used – account growth and water demand relative to prior year. It is estimated that the total number of wastewater accounts will grow by 1 percent in each year of the Study period and wastewater flows are expected to remain the same per account.

In order to predict rate revenues, the Study assumes that all other non-operating revenues will increase at 1 percent. Interest rates earned on reserves are based on conservative estimates in a low interest financial environment. These revenue growth assumptions are show below in Table 3-7.

Table 3-7: Account, Demand, and Miscellaneous Revenue Growth Assumptions for Wastewater

	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Account Growth	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Wastewater Flows	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Miscellaneous Revenues	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Reserve Interest	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

4. Water Utility Financial Plan

This section describes the water utility's customer account and water use data and corresponding financial plan. To develop the financial plan, Raftelis projects annual expenses and revenues; capital expenditures; and models reserve balances and calculates debt service coverage ratios to estimate the amount of additional rate revenue needed in each fiscal year. This section of the Study provides a discussion of O&M expenses, the capital improvement plan, water reserve funding, projected revenue under existing rates and the revenue adjustments required to ensure the fiscal sustainability and solvency of the water utility.

4.1. Water Revenue Requirements

A review of a utility's revenue requirements is a key first step in the rate study process. The review involves an analysis of annual operating revenues under current rates, operation and maintenance (O&M) expenses, transfers between funds, capital expenditures, and reserve requirements.

4.1.1. REVENUES FROM CURRENT WATER RATES

The current rates were last adjusted in September 2019. The District's water service charges have two components – a fixed charge component (bi-monthly service charge) and a variable volumetric charge component (commodity charge). The bi-monthly service charge increases with the size of the water meter serving a property, as larger meter sizes generally consume more water on average and impose greater demands on the system; therefore, the costs to provide service to these customers are higher. A typical single-family home with a 3/4" meter currently has a bi-monthly service Charge of \$54.10. The rates for the current service charges are shown in Table 4-1. Customers designated as "outside district" are charged an additional \$0.40 administrative charge per bi-monthly billing period.

Table 4-1: Current Water Bi-Monthly Service Charges

Meter Size (Inches)	Current Rates
3/4"	\$54.10
1"	\$80.69
1 1/2"	\$147.19
2"	\$227.01
3"	\$479.72
4"	\$852.17

In addition to the bi-monthly service charge, the District also imposes a fixed bi-monthly fire protection charge on properties that are required as a condition of extending or initiating water service to install a private fire suppression system, or where the customer or property owner has installed a private fire service for the purpose of fire service protection. The rates for the bi-monthly fire protection charge are established on the basis of the size of the fire service serving a property and are calculated to recover the costs associated with fire service capacity in the water distribution system. The current bi-monthly fire protection charges for private fire services are shown in Table 4-2.

Table 4-2: Current Bi-Monthly Private Fire Protection Charges

Private Fire Connection Size (Inches)	Current Rates
1"	\$15.85
2"	\$24.46
3"	\$44.05
4"	\$77.83
6"	\$199.05
8"	\$408.15
10"	\$722.67

The volumetric component of a customer's water bill is calculated on the basis of the number of units of water delivered to a property, measured in units of one thousand gallons (kgal), multiplied by the rates that vary by customer class and tier. The current tier widths and rates are shown in Table 4-3. The rates in Table 4-3, multiplied by the amount of use in each respective tier and/or class, determine the water use component of a customer's bill.

Table 4-3: Current Bi-Monthly Commodity Rates by Tier

Customer Class	Current Rates
SFR Bi-Monthly Tier	
Tier 1 0-10	\$5.17
Tier 2 11-26	\$8.14
Tier 3 27+	\$12.29
Multi-Family/Commercial	\$7.33
Irrigation	
Tier 1 0-80	\$5.66
Tier 2 81+	\$10.89

Table 4-4 shows the projected number of water accounts by meter size, by fiscal year. The number of accounts is escalated each year based on the growth assumptions identified in Table 3-2. Similarly, Table 4-5 shows estimated private fire service accounts using the same assumptions as water accounts. Both tables include inside district and outside district accounts.

Table 4-4: Projected Water Accounts by Meter Size

Meter Size	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
3/4"	6,974	7,044	7,114	7,185	7,257	7,330
1"	877	885	894	903	912	921
1 1/2"	150	152	154	155	157	158
2"	66	66	67	68	68	69
3"	28	29	29	29	29	30
4"	2	2	2	2	2	2
Total	8,097	8,178	8,260	8,343	8,426	8,510

Table 4-5: Projected Private Fire Line Accounts by Connections Size

Private Fireline Size	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
1"	1	1	1	1	1	1
2"	8	8	8	8	8	8
3"	2	2	2	2	2	2
4"	70	70	71	72	73	73
6"	18	18	19	19	19	19
8"	6	6	6	6	6	6
10"	2	2	2	2	2	2
Total	107	108	109	110	111	113

Water demand projections through FYE 2026 are shown in Table 4-6. Projected water sales for FYE 2022 through FYE 2026 were calculated by multiplying the FYE 2021 water sales by the usage growth assumptions identified in Table 3-2. Water demand is anticipated to increase through FYE 2026 to approximately 3,943 AF annually.

Table 4-6: Projected Water Usage by Class and Tiers (kgal)

Customer Class	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
SFR						
Tier 1	373,035	380,533	388,182	395,985	403,944	412,063
Tier 2	278,515	284,113	289,823	295,649	301,591	307,653
Tier 3	122,547	125,011	127,523	130,086	132,701	135,369
Multi-Family/Commercial	340,851	347,702	354,691	361,820	369,093	376,511
Irrigation						
Tier 1	16,336	16,664	16,999	17,341	17,689	18,045
Tier 2	31,888	32,529	33,182	33,849	34,530	35,224
Total Water Sales (kgal)	1,163,172	1,186,551	1,210,401	1,234,730	1,259,548	1,284,865
Total Water Sales (AF)	3,570	3,641	3,715	3,789	3,865	3,943

Table 4-7 shows the rate revenue generated in each Study year with projected demand and the current rates. Note, revenues for FYE 2021 and beyond use FYE 2021 rates from Table 4-1, Table 4-2, and Table 4-3 to project future rate revenues.

The overall adequacy of water revenues is measured by comparing the projected annual revenue requirement to be met from rates with projected revenues under the existing rates. This is completed in the cost-of-service analysis in Section 5.

Table 4-7: Projected Water Rate Revenue with Current Rates

Revenue Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Service Charges	\$3,087,461	\$3,118,336	\$3,149,519	\$3,181,014	\$3,212,824	\$3,244,952
Commodity Charges	\$8,640,367	\$8,814,038	\$8,991,200	\$9,171,923	\$9,356,279	\$9,544,340
Total Rate Revenue	\$11,727,828	\$11,932,374	\$12,140,719	\$12,352,938	\$12,569,103	\$12,789,293

The District also derives revenues from other non-rate sources. These revenues consist of other operating, miscellaneous, and non-operating revenues and are summarized in Table 4-8.

Table 4-8: Projected Water Non-Rate Revenues

Revenue Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Other Operating Revenues	\$160,000	\$163,400	\$166,888	\$170,467	\$174,138	\$177,905
Non-Operating Revenues	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
CIP Source Revenues	\$277,500	\$303,025	\$303,555	\$154,091	\$154,632	\$155,178
Interest Income	\$213,000	\$144,387	\$144,901	\$133,839	\$125,374	\$117,929
Total Non-Rate Revenue	\$675,500	\$636,562	\$641,867	\$485,714	\$482,282	\$479,995

4.1.2. OPERATING AND MAINTENANCE (O&M) EXPENSES

Total projected O&M expenses are shown in Table 4-9. These expenses are summarized by department. Operating expenses use the District's FYE 2021 budget values and project future expenses using the inflationary assumptions from Table 3-1.

Table 4-9: Projected Water O&M Expenses

O&M Expenses	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Water Production	\$3,361,620	\$3,305,569	\$3,406,640	\$3,590,446	\$3,818,865	\$4,099,381
Purchased Power	\$322,291	\$336,988	\$352,356	\$370,221	\$388,993	\$408,716
Compensation	\$1,893,113	\$1,949,906	\$2,008,404	\$2,068,656	\$2,130,715	\$2,194,637
Benefits	\$1,242,742	\$1,304,879	\$1,370,123	\$1,438,629	\$1,510,561	\$1,586,089
Plant - Water Operation	\$533,010	\$540,767	\$548,680	\$556,752	\$564,986	\$573,386
Distribution System	\$851,178	\$882,519	\$915,035	\$948,999	\$984,243	\$1,020,815
General and Administrative	\$889,548	\$916,114	\$943,475	\$971,779	\$1,000,932	\$1,030,960
Fire and Debris Recovery	\$12,000	\$12,360	\$12,731	\$13,113	\$13,506	\$13,911
Total O&M Expenditures	\$9,105,502	\$9,249,103	\$9,557,443	\$9,958,595	\$10,412,801	\$10,927,894

4.1.3. PROJECTED CAPITAL IMPROVEMENT PLAN

The District has planned \$30.9M in capital expenditures over the Study period for the Water utility, as shown in Table 4-10. The District anticipates funding a portion of the capital improvements in FYE 2021 and FYE 2022 with existing bond proceeds. The District plans on funding the remaining capital projects with rate revenues.

Table 4-10: Projected Water Capital Improvement Plan

Capital Projects	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Pipeline	\$2,300,000	\$2,600,000	\$2,800,000	\$0	\$0	\$0
Other CIP	\$2,700,000	\$2,608,750	\$2,427,163	\$5,939,726	\$6,760,092	\$7,755,608
Existing Bond Proceeds	(\$2,695,174)	(\$2,340,592)	\$0	\$0	\$0	\$0
Total Rate Funded Capital Projects	\$2,304,826	\$2,868,158	\$5,227,163	\$5,939,726	\$6,760,092	\$7,755,608

4.1.4. DEBT SERVICE

The water utility has two outstanding long-term debt obligations. The total debt service payment obligation for each year of the Study period is summarized in Table 4-11. The total debt service payment in FYE 2021 is \$565,274.

Table 4-11: Existing Water Annual Debt Service

Existing Debt	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Pacific Western Infrastructure Loan	\$275,274	\$0	\$0	\$0	\$0	\$0
Certificates of Participation, Series 2020	\$290,000	\$558,238	\$581,381	\$579,781	\$580,781	\$581,381
Total Existing Debt	\$565,274	\$558,238	\$581,381	\$579,781	\$580,781	\$581,381

4.2. Existing Water Financial Plan – No Revenue Adjustments

Table 4-12 displays the proforma of the District's water utility under current rates over the Study period. The proforma incorporates revenues and expenses to show the overall position of the utility. All projections shown in the table are based upon the District's current rate structure and does not include any rate adjustments. The proforma incorporates the water enterprise data shown in the preceding tables of this section.

Under the "status-quo" scenario, revenues generated from rates and other miscellaneous revenues are inadequate to achieve reserve targets and fund capital, over the Study period.

Table 4-12: Existing Water Financial Plan with Current Rates

Existing Financial Plan	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues						
Revenues from Existing Rates	\$11,727,828	\$11,932,374	\$12,140,719	\$12,352,938	\$12,569,103	\$12,789,293
Total Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
Non-Rate Revenues	\$675,500	\$628,508	\$602,850	\$386,999	\$356,908	\$362,065
Total Revenue	\$12,403,328	\$12,560,882	\$12,743,569	\$12,739,937	\$12,926,011	\$13,151,358
Expenses						
Operating Expenses	\$9,105,502	\$9,249,103	\$9,557,443	\$9,958,595	\$10,412,801	\$10,927,894
Rate Funded CIP	\$2,304,826	\$2,868,158	\$5,227,163	\$5,939,726	\$6,760,092	\$7,755,608
Debt Service	\$565,274	\$558,238	\$581,381	\$579,781	\$580,781	\$581,381
Total Expenses	\$11,975,602	\$12,675,499	\$15,365,986	\$16,478,101	\$17,753,674	\$19,264,883
Net Cash Flow	\$427,725	(\$114,617)	(\$2,622,417)	(\$3,738,165)	(\$4,827,663)	(\$6,113,525)
Beginning Balance	\$5,757,000	\$6,184,725	\$6,070,109	\$3,447,691	(\$290,474)	(\$5,118,136)
Ending Balance	\$6,184,725	\$6,070,109	\$3,447,691	(\$290,474)	(\$5,118,136)	(\$11,231,662)
<i>Target Balance</i>	<i>\$5,410,895</i>	<i>\$5,530,852</i>	<i>\$5,640,794</i>	<i>\$5,751,827</i>	<i>\$5,864,223</i>	<i>\$5,978,105</i>
Calculated Debt Coverage	583%	593%	548%	480%	433%	382%
Required Debt Coverage	125%	125%	125%	125%	125%	125%

4.3. Proposed Water Financial Plan

Based on discussions with the District regarding its expected revenue requirements over the Study period, Raftelis proposes that the District adopt the revenue adjustment schedule found in Table 4-13. The FYE 2022 revenue adjustment is proposed to be implemented October 1, 2021, with all subsequent adjustments occurring on July 1 of each fiscal year.

Although Table 4-13 shows anticipated revenue adjustments for FYEs 2022 through 2026, the District will review and confirm the required revenue adjustments on an annual basis. The rates presented in Section 6 are based on the proposed Financial Plan below.

Revenue adjustments represent the average increase in rates for the District's water utility as a whole. Actual percentage increases (or decreases) in rates are dependent upon the cost-of-service analysis in Section 5 and are unique to each customer class and meter size receiving water service. The proposed revenue adjustments help ensure adequate revenue to fund operating expenses, fund the long-term capital program, and comply with existing debt covenants. The reserves under the proposed revenue adjustments fall just below reserve targets in the later years of the five-year plan.

Table 4-13: Proposed Water Revenue Adjustments

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Effective Month	October	July	July	July	July
Revenue Adjustment	8%	8%	8%	7%	7%

Table 4-14 shows the proforma for the District's water utility with additional revenues from the revenue adjustments in the proposed financial plan. These revenue adjustments allow the enterprise to fund all operating expenses, and capital expenditures during the Study period.

Total rate revenue (revenue from existing rates plus revenue from adjustments) becomes the revenue requirement for the cost-of-service analysis in Section 5.

Table 4-14: Proposed Water Financial Plan

Proposed Financial Plan	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues						
Revenues from Existing Rates	\$11,727,828	\$11,932,374	\$12,140,719	\$12,352,938	\$12,569,103	\$12,789,293
Total Revenue Adjustments	\$0	\$715,942	\$2,020,216	\$3,208,206	\$4,372,688	\$5,655,991
Non-Rate Revenues	\$675,500	\$636,562	\$641,867	\$485,714	\$482,282	\$479,995
Total Revenue	\$12,403,328	\$13,284,879	\$14,802,802	\$16,046,858	\$17,424,074	\$18,925,279
Expenses						
Operating Expenses	\$9,105,502	\$9,249,103	\$9,557,443	\$9,958,595	\$10,412,801	\$10,927,894
Rate Funded CIP	\$2,304,826	\$2,868,158	\$5,227,163	\$5,939,726	\$6,760,092	\$7,755,608
Debt Service	\$565,274	\$558,238	\$581,381	\$579,781	\$580,781	\$581,381
Total Expenses	\$11,975,602	\$12,675,499	\$15,365,986	\$16,478,101	\$17,753,674	\$19,264,883
Net Cash Flow	\$427,725	\$609,380	(\$563,184)	(\$431,244)	(\$329,600)	(\$339,604)
Beginning Balance	\$5,757,000	\$6,184,725	\$6,794,105	\$6,230,921	\$5,799,677	\$5,470,077
Ending Balance	\$6,184,725	\$6,794,105	\$6,230,921	\$5,799,677	\$5,470,077	\$5,130,473
<i>Target Balance</i>	<i>\$5,410,895</i>	<i>\$5,530,852</i>	<i>\$5,640,794</i>	<i>\$5,751,827</i>	<i>\$5,864,223</i>	<i>\$5,978,105</i>
Calculated Debt Coverage	583%	723%	902%	1050%	1207%	1376%
Required Debt Coverage	125%	125%	125%	125%	125%	125%

Figure 4-1 through Figure 4-4 display the FYE 2021 through FYE 2026 proposed financial plan in a graphic format. Figure 4-1 shows the proposed revenue adjustments- in percentage terms- as blue bars, as well as the calculated and minimum debt coverage requirements shown as green and red lines, respectively. Under the proposed revenue adjustments the District meets its debt coverage requirement easily.

Figure 4-1: Proposed Water Revenue Adjustments

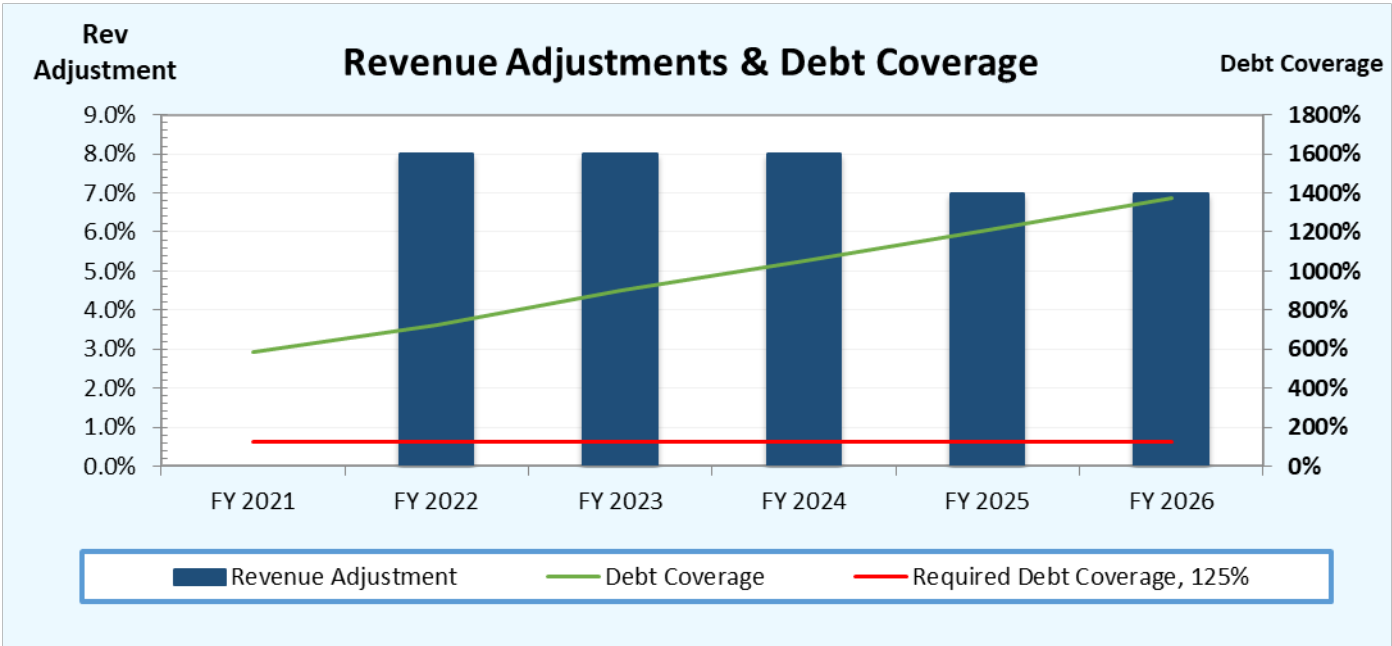


Figure 4-2 illustrates the Operating Financial Plan in a graphic format. It compares existing and proposed revenues with projected expenses. The expenses represent O&M, water supply costs, debt service, and reserve funding. Total revenues at existing and proposed rates are shown by the horizontal black and blue lines, respectively. Revenue from existing rates, in black, does not meet future total expenses (inclusive of reserve funding) and shows the need for revenue adjustments.

Figure 4-2: Proposed Water Operating Financial Plan

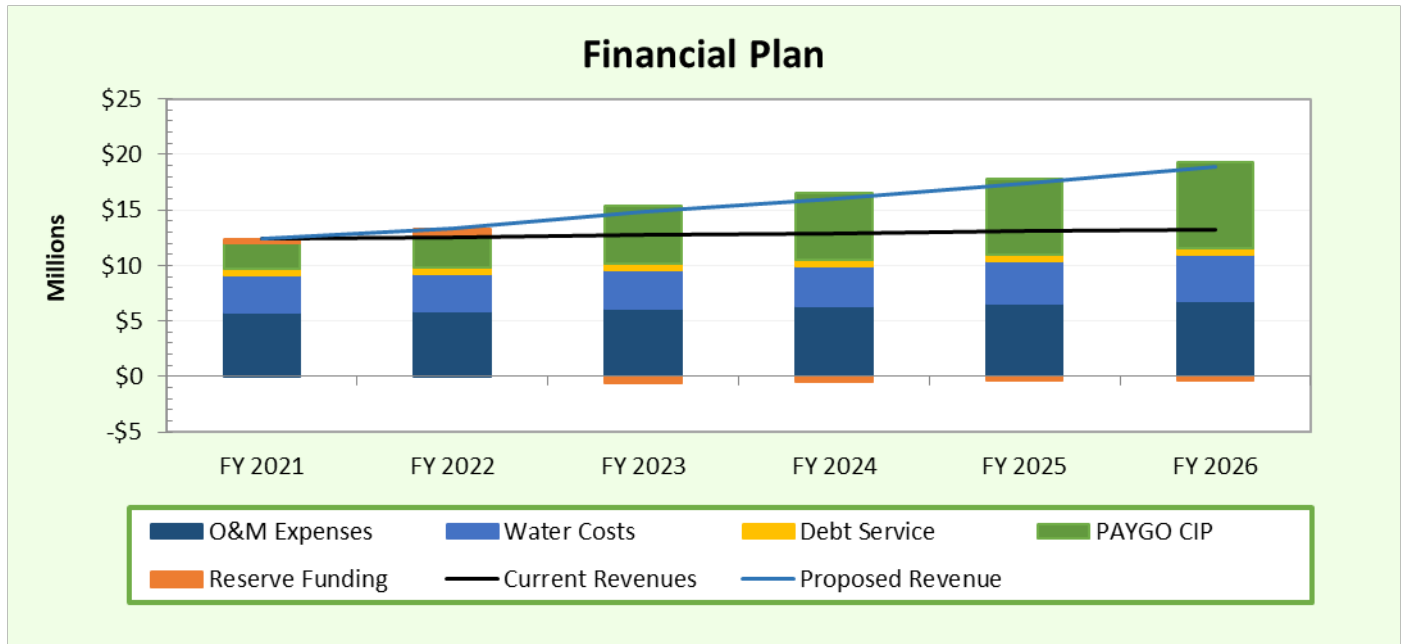


Figure 4-3 shows the water utility’s ending balance by fiscal year. The orange bars indicate the ending balance, while the green line indicates the total target balance. The reserves fall just below the target in the last two years of the plan.

Figure 4-3: Proposed Water Ending Fund Balances

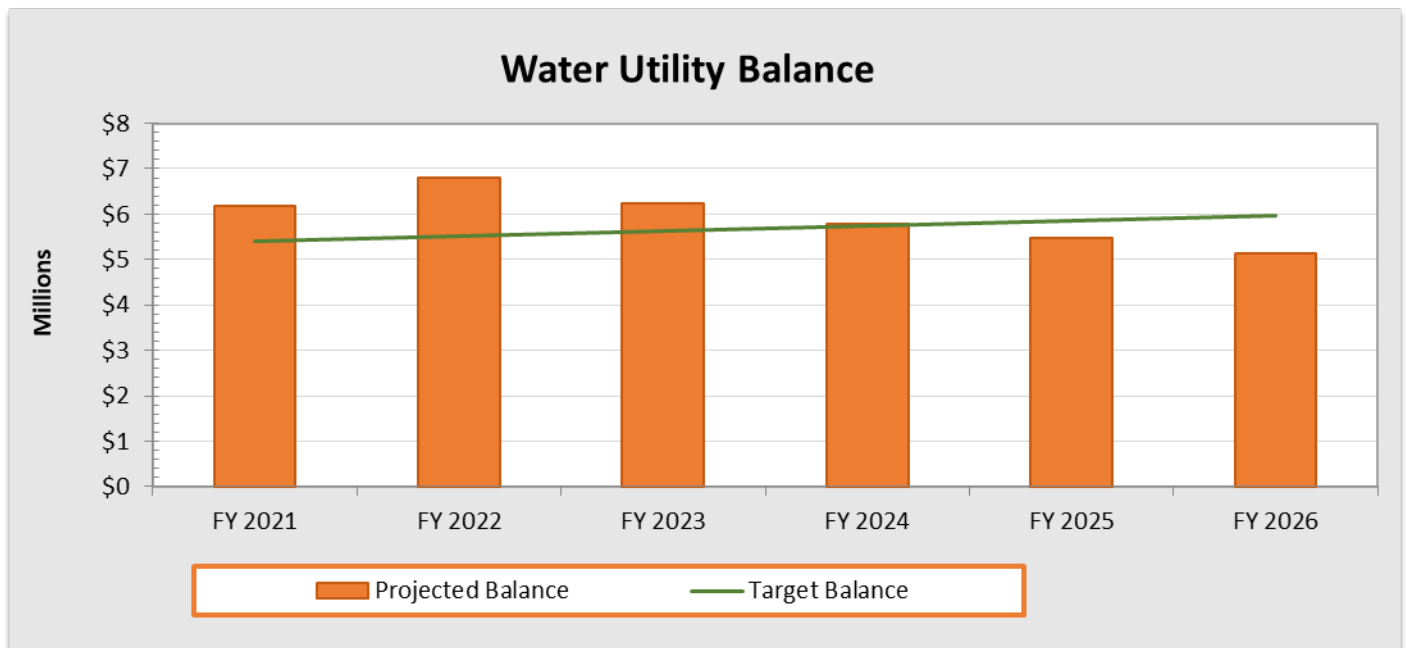
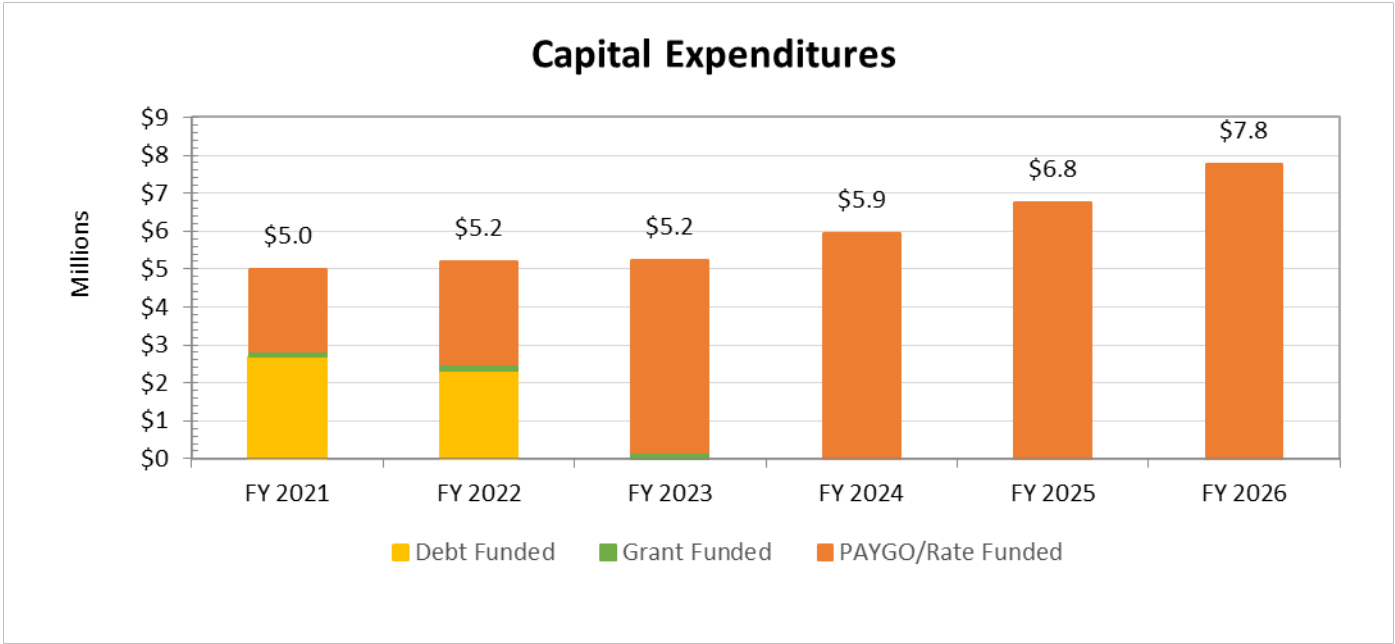


Figure 4-4 shows the total CIP of the water utility and the corresponding funding source. Rate funded capital is shown in orange, grant funded in green, and debt funded in yellow.

Figure 4-4: Proposed Water CIP Funding



5. Water Cost of Service Analysis

5.1. Methodology

The principles and methodology of a cost-of-service analysis were described in Section 0. A cost-of-service analysis distributes a utility's revenue requirements (costs) to each customer class. After determining a utility's revenue requirements, the next step in a cost-of-service analysis is to functionalize its O&M costs. The **functions** include:

1. Supply (FMWD)
2. Pumping (GWP)
3. Pumping (Verdugo)
4. Reservoir
5. Transmission
6. Treatment
7. Distribution
8. Meters
9. Hydrants
10. Customer
11. Conservation
12. General

The functionalization of costs allows us to better allocate to the **cost causation components** (plainly, cost components). Organizing the costs in terms of end function allows direct correlation between the cost component and the rate, coupling the cost incurred by the utility to the demand and burden that the customer places on the utility's system and/or water resources. The principal service requirements that drive costs include the annual volume of water consumed, the peak water demands incurred, and the number of customers or meter equivalents in the system. Accordingly, these service requirements are the basis for the selection of the categories utilized in the functional allocation process.

This method of functionalizing costs is consistent with the AWWA M1 Manual and is widely used in the water industry to perform cost of service analyses.

Table 5-1 shows the functionalization of the District's water O&M expenses for the rate setting year (FYE 2021 found in Table 4-9). Functionalizing O&M expenses allows Raftelis to follow the principles of rate setting theory in which the end goal is to allocate the District's O&M expenses to cost causation components.

Table 5-1: Functionalization of Water O&M Expenses

Cost Category	O&M Expenses by Function (\$)	O&M Expenses by Function (%)
Supply (FMWD)	\$2,867,460	31%
Pumping (GWP)	\$138,960	2%
Pumping (Verdugo)	\$355,200	4%
Reservoir	\$0	0%
Transmission	\$0	0%
Treatment	\$545,010	6%
Distribution	\$2,269,661	25%
Meters	\$0	0%
Hydrants	\$0	0%
Customer	\$587,683	6%
Conservation	\$50,500	1%
General	\$2,291,028	25%
Total	\$9,105,502	100%

5.2. Allocation of Functionalized Expenses to Cost Components

After functionalizing expenses, the next step is to allocate the functionalized expenses to cost components. The cost components include:

1. **Supply** are costs related to the purchase and production of water supplies including raw water and treated water to meet annual demands.
1. **Base Delivery** (average) are delivery costs that vary with the average quantity of water demanded within the water system under average conditions. Costs may include operation and maintenance expenses for; treatment, pumping, transmission and distribution facilities, and Capital costs related to plant investment, that are associated with serving customers at a constant, or average, annual rate of use. Base delivery costs are therefore spread over all units of water equally.
2. **Peaking** (maximum day and maximum hour) are costs divided into maximum day demand and maximum hour demand.

- The maximum day demand is the maximum amount of water used in a single day in a year.
- The maximum hour demand is the maximum usage in an hour on the maximum usage day.

Different facilities, such as distribution and storage facilities, and the O&M costs associated with those facilities, are designed to meet the peak demands placed on the system by customers. Therefore, peaking⁹ costs include the O&M and capital costs associated with meeting peak customer demand exceeding the average annual rate of use.

3. **Meter** (meter service) costs include maintenance and capital costs related to meters and associated services.
4. **Customer** (billing and customer service) are costs directly associated with serving customers, irrespective of the amount of water used, and generally include meter reading, bill generation, accounting, customer service, and collection expenses.

⁹ Peaking costs are also referred to as extra capacity or capacity costs.

5. **Fire Protection** are costs of providing both public and private fire protection service. They capital-related and maintenance costs for fire hydrants and private fire connections, as well as costs for, storage, transmission, and distribution of water as these facilities and infrastructure must be upsized to meet fire protection demands placed on the water system.
6. **Conservation** costs include all costs of funding, administering, and executing water conservation and efficiency related programs and services.
7. **General** (general and administrative) are costs incurred in operating and maintaining the water system not otherwise recovered in the other functionalized cost components. These costs are allocated to the other cost components in proportion to the relative percentages of the other cost components.

In order to allocate functionalized expenses to these cost components, system wide peaking factors must be identified (shown in column (B) of Table 5-2). Peaking factors represent the ratio of water moving through the system during the maximum day and maximum hour, relative to the average day.

The system-wide peaking factors are used to derive the cost causation component allocation bases (i.e., percentages) shown in columns (C) through (E) of Table 5-2. The max day factor of 1.5 was provided by the District and is based on 5-yr average of the ratio of maximum day demand to average day demand. The max hour factor incorporates the max day factor and a system multiplier of 2.25 (2.25 times max day demand of 1.5) to approximate max hour demand (3.38 times average day). To derive the percentages shown in columns (C) through (E) we must first establish the base use equal to the average daily demand during the year, which is assigned a factor of 1.00. The percentages are then calculated as follows:

- » Using the maximum day basis, costs are allocated 67 percent ($1.00/1.50$) to base delivery (average daily demand) use and the remaining 33 percent ($0.50/1.50$) to maximum day (peaking) use.
- » Using the maximum hour basis, costs are allocated 30 percent ($1.00/3.38$) to base delivery, 15 percent ($(1.5-1)/3.38$) to maximum day, and the remaining 56% ($(3.38-1)/3.38$) of costs to maximum hour.

These allocation bases are used to assign the functionalized costs to the cost causation components.

Table 5-2: System-Wide Peaking Factors

Allocation Factor	System Wide Factor	Base Delivery	Max Day	Max Hour	Total
(A)	(B)	(C)	(D)	(E)	(F)
Base Delivery	1.00	100%	0%	0%	100%
Max Day	1.50	67%	33%	0%	100%
Max Hour	3.38	30%	15%	56%	100%

Table 5-3 shows the allocation for the District's O&M costs. The top row of Table 5-3 shows the cost causation components and the left most column shows the cost functions. Table 5-3 allocates O&M costs for FYE 2021 as shown in Table 4-9.

For example, treatment related costs are allocated using maximum day allocation in Table 5-2 (67 percent to base delivery, 33 percent to max day, 0 percent to max hour) because treatment facilities are constructed to meet maximum day demand. This means that 67 percent of costs are due to meeting base delivery customer demands, 33 percent of costs are due to meeting max day demands.

The remaining functions shown in Table 5-1 are similarly allocated based on the parameters used to design each function (facility). Additionally, reservoirs and distribution systems are designed to provide fire flow. Based on ISO standards, 15% of the associated system costs are assigned to fire flow.

Capital costs are allocated on the basis of the assets of the system in recognition of the fact that the assets need to be replaced over time and capital expenses over a period of time will match the overall asset base. Table 5-4 shows the allocation for capital costs. This distribution of costs allows the allocations to the cost causation components, and ultimately the rates, to remain relatively stable. Water system assets were provided by the District and are allocated in Table 5-4 .

Table 5-3: Allocation of Functionalized O&M Expenses to Cost Causation Components

Function	O&M Expenses by Function (\$)	Supply	Base Delivery	Max Day	Max Hour	Fire Protection	Meters	Customer	Conservation	General	Total
Supply (FMWD)	\$2,867,460	100%									100%
Pumping (GWP)	\$138,960	100%									100%
Pumping (Verdugo)	\$355,200	100%									100%
Reservoir	\$0		57%	28%		15%					100%
Transmission	\$0		67%	33%		0%					100%
Treatment	\$545,010		67%	33%		0%					100%
Distribution	\$2,269,661		25%	13%	47%	15%					100%
Meters	\$0						100%				100%
Hydrants	\$0					100%					100%
Customer	\$587,683							100%			100%
Conservation	\$50,500								100%		100%
General	\$2,291,028									100%	100%
Total O&M	\$9,105,502	\$3,361,620	\$934,958	\$467,479	\$1,071,784	\$340,449	\$0	\$587,683	\$50,500	\$2,291,028	\$9,105,502
% O&M		37%	10%	5%	12%	4%	0%	6%	1%	25%	100%
% O&M		37%	10%	5%	12%	4%	0%	6%	1%	25%	100%

Table 5-4: Allocation of Functionalized Capital Expenses to Cost Causation Components

Function	Assets by Function (\$)	Supply	Base Delivery	Max Day	Max Hour	Fire Protection	Meters	Customer	Conservation	General	Total
Treatment	\$743,846		67%	33%							100%
Reservoir	\$5,901,420		57%	28%		15%					100%
Distribution	\$18,482,371		25%	13%	47%	15%					100%
Transmission	\$0		67%	33%							100%
Meters	\$0						100%				100%
General	\$5,475,486									100%	100%
Wells	\$6,212,807	100%									100%
Fire	\$0					100%					100%
Total Assets	\$36,815,929	\$6,212,807	\$8,494,855	\$4,247,427	\$8,727,786	\$3,657,569	\$0	\$0	\$0	\$5,475,486	\$36,815,929
% Assets		17%	23%	12%	24%	10%	0%	0%	0%	15%	100%

5.3. Revenue Requirement

Table 5-2 shows the revenue requirement derivation with the total revenue required from rates shown in the last line (\$). The total (COS to be Recovered from Water Rates) represents the total O&M and capital revenue requirements that are allocated to the cost components.

Raftelis calculated the revenue requirement using Fiscal Year 2021 expenses, rate funded capital and O&M expenses including costs directly related to the supply, treatment, and distribution of water, as well as routine maintenance of system facilities.

To arrive at the rate revenue requirement, the non-rate revenues, adjustments for annual cash balances (which fund capital and reserves) and any mid-year rate increases (to ensure annual revenue requirement) are subtracted. The result is the total revenue required from rates. This total is the amount that the bi-monthly service charge and commodity rates are designed to collect.

Table 5-5: Revenue Required from Water Rates (FYE 2021)

Revenue Requirements	Operating	Capital	Total
Water Supply	\$3,361,620		\$3,361,620
Compensation	\$1,893,113		\$1,893,113
Benefits	\$1,242,742		\$1,242,742
Plant - Water Operation	\$533,010		\$533,010
Distribution System	\$851,178		\$851,178
General and Administrative	\$889,548		\$889,548
Fire and Debris Recovery	\$12,000		\$12,000
Purchased Power	\$322,291		\$322,291
Cash Funded CIP		\$2,304,826	\$2,304,826
Debt Service		\$565,274	\$565,274
Other Operating Revenues	-\$135,000		-\$135,000
Sub-total Revenue Requirement:	\$8,970,502	\$2,870,100	\$11,840,602
Revenue Offsets			
Rental Property Income	\$25,000		\$25,000
Non-Operating Revenues	\$238,000		\$238,000
CIP Source Revenues		\$277,500	\$277,500
Total Revenue Offsets	\$263,000	\$277,500	\$540,500
Adjustments			
Transfer to (from) Reserves	\$0	-\$427,725	-\$427,725
Annualized Rate Increase	\$0	\$0	\$0
Total Adjustments	\$0	-\$427,725	-\$427,725
COS to be Recovered from Water	\$8,707,502	\$3,020,325	\$11,727,828

Table 5-6 shows the revenue requirement for FYE 2021 by cost causation component. The operating revenue requirement shown in the top row of column (L) is allocated to the cost components using the O&M allocation percentages shown in Table 5-3. Capital expense funding in column (L) is allocated in the same manner as in Table 5-4. General costs in column (K) are redistributed in proportion to the resulting allocation of the other cost components. Public fire protection costs in column (F) are reallocated to the meter service component¹⁰.

¹⁰ Since public fire protection costs are a function of system capacity, they are reallocated to the meter component.

Table 5-6: Revenue Requirement by Cost Component

Cost of Service	Supply	Base Delivery	Max Day	Max Hour	Fire Protection	Meters	Customer	Conservation	Revenue Offsets	General	Total
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Operating Expenses	\$3,311,780	\$921,096	\$460,548	\$1,055,894	\$335,402	\$0	\$578,970	\$49,751	\$0	\$2,257,061	\$8,970,502
Capital Expenses	\$509,690	\$696,906	\$348,453	\$716,015	\$300,062	\$0	\$0	\$0	\$0	\$449,201	\$3,020,325
Revenue Offsets	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$263,000)	\$0	(\$263,000)
Total Cost of Service	\$3,821,470	\$1,618,002	\$809,001	\$1,771,909	\$635,463	\$0	\$578,970	\$49,751	(\$263,000)	\$2,706,262	\$11,727,828
Allocation of General Cost	\$1,113,881	\$471,615	\$235,807	\$516,475	\$185,225	\$0	\$168,758	\$14,501	\$0	(\$2,706,262)	\$0
Allocation of Public Fire Protection					(\$752,411)	\$752,411					\$0
Allocated Cost of Service	\$4,935,350	\$2,089,617	\$1,044,808	\$2,288,384	\$68,276	\$752,411	\$747,728	\$64,253	(\$263,000)	\$0	\$11,727,828
	42%	18%	9%	20%	1%	6%	6%	1%	-2%	0%	100%

5.4. Unit Cost Component Derivation

The end goal is to proportionately distribute the cost components to each user class. To do so we must first calculate the cost component unit costs, which starts by determining the total water demanded by each class for each cost component. Projected usage (base units of service) for FYE 2021 is shown in Table 5-7.

Table 5-7: Projected Water Usage in FYE 2021

Customer Class	Annual Usage (kgal)
SFR	
Tier 1	373,083
Tier 2	278,482
Tier 3	122,533
MFR/Commercial	340,851
Irrigation	
Tier 1	16,336
Tier 2	31,888
Total	1,163,172

Second, the customer class peaking factors need to be established for the maximum day and maximum hour requirements for each class and are the basis for the peaking unit rate differentials discussed in Section 6.

Analyzing usage characteristics gives us a better understanding of the actual usage patterns in the District. In the absence of maximum day (max day) data for each customer class, the maximum month (max month) values are used. Since peaking costs are proportional to the peaking experienced by each class, the relative values are more important than the actual values. The max month data derived from the usage patterns are a good proxy for the max day factors.

Max month values are calculated within the FYE 2020 usage analysis. Max day factors are set equal to max month factors. Similarly, since max hour factors for each customer class are not available, we use the District's system wide max hour factor to approximate the max hour factors for each class. The max hour factors are determined by multiplying the max day factors in Table 5-8 by the system multiplier max hour factor of 2.25, which is the max hour factor.

Table 5-8: Customer Class Peaking Factors

Customer Class	Base Delivery	Max Day	Max Hour	Max Month
SFR				
Tier 1	1.00	1.04	2.34	1.04
Tier 2	1.00	1.38	3.11	1.38
Tier 3	1.00	1.98	4.45	1.98
MFR/Commerc	1.00	1.18	2.66	1.18
Irrigation				
Tier 1	1.00	1.14	2.57	1.14
Tier 2	1.00	1.47	3.30	1.47

Table 5-9 shows the calculation of cost component units for average (daily) demand, max day demand, and max hour demand, as well as the total equivalent meters and annual number of bills issued (discussed in detail in Section 6.2).

Daily use is calculated as annual use divided by 365 days. For example, SFR Tier 1 customers are estimated to use 373,083 kgal annually, or 1,022 kgal daily. The max day demand is then calculated as the daily demand multiplied by the max day factor (1,022 X 1.04). However, we must subtract the anticipated daily usage (1,022) from the max day usage (1,064) to calculate the incremental max day units of service (42). Max hour units of service are calculated similarly, and the calculation is completed for all customer classes.

Table 5-9: Derivation of Cost Component Units (FYE 2021 Usage)

Customer Class	Annual Usage (kgal)	Daily Usage (kgal)	Max Day Factor	Max Day Demand	Max Day Requirements	Max Hour Factor	Max Hour Demand	Max Hour Requirements	Equivalent Meters	Equivalent Fire Lines	No. of Bills
SFR											
Tier 1	373,083	1,022	1.04	1,064	42	2.34	2,394	1,330			
Tier 2	278,482	763	1.38	1,056	293	3.11	2,376	1,320			
Tier 3	122,533	336	1.98	664	328	4.45	1,494	830			
MFR/Commercial	340,851	934	1.18	1,105	171	2.66	2,486	1,381			
Irrigation											
Tier 1	16,336	45	1.14	51	6	2.57	115	64			
Tier 2	31,888	87	1.47	128	41	3.30	289	160			
Meters									9,659	7,081	49,225
Total	1,163,172	3,187		4,068	882		9,154	5,086	9,659	7,081	49,225

5.5. Allocation of Expenses and Revenue recovery by Cost Components

The cost components shown in Table 5-10 are recovered from customers through fixed (bi-monthly service charge) and variable volumetric (commodity) charges. Table 5-10 shows the total revenue requirement to be collected through rates, calculated in Table 5-6, in the second column from the left. While Table 5-10 shows the allocation to rate components in percentage terms, Table 5-11 shows the allocation in dollars.

Supply and Base Delivery (combined and called base) costs are based on average demand and are included in the commodity rate along with a percentage of the peaking costs. A portion (45 percent each) of max day and max hour costs are reallocated to the meter component which allows the District to recover 26 percent of revenues from fixed sources, the remaining 55 percent is allocated to commodity rates. Commodity charge revenue represents 74 percent of the total revenue requirement. The District has proposed this revenue split to maintain affordability and revenue stability. Combining Table 5-6 and Table 5-11 results in the peaking cost allocations to commodity and meter in the adjusted cost of service as shown in Table 5-12.

Revenue offsets in column (J) are maintained as a cost component and utilized as a rate component in Section 6. The total adjusted cost of service is divided by the respective units of service from Table 5-9 to calculate the unit cost of the various cost components. For example, the unit cost for the base delivery component is determined by dividing the total base delivery cost in column (C) by total water use to derive a base delivery unit cost of \$1.80 as shown in the bottom row of column (C). Max day and max hour costs are divided by the total max day and max hour use to determine a unit rate in kgal/day in columns (D) and (E). Annual customer costs are divided by the estimated number of annual bi-monthly bills in (column (H) and meter costs are divided by total meter equivalencies to determine a cost per equivalent meter in (column (G). The unit costs are used to distribute the cost components to the customer classes in the next section.

Table 5-10: Cost Recovery, Rate Components (Percentage)

Cost Components	Revenue Requirement	Commodity Rate Components (74%)						Service Charge Components (26%)		
		Supply	Base Delivery	Max Day	Max Hour	Conservation	Revenue Offsets	Fire Protection	Meters	Customer
Supply	\$4,935,350	100%								
Base	\$2,089,617		100%							
Max Day	\$1,044,808			55%					45%	
Max Hour	\$2,288,384				55%				45%	
Fire Protection	\$68,276							100%		
Meters	\$752,411								100%	
Customer	\$747,728									100%
Conservation	\$64,253					100%				
Revenue Offsets	(\$263,000)						100%			
Total	\$11,727,828	\$4,935,350	\$2,089,617	\$574,645	\$1,258,611	\$64,253	(\$263,000)	\$68,276	\$2,252,348	\$747,728

Table 5-11: Cost Recovery, Rate Components (Values)

Cost Components	Revenue Requirement	Commodity Rate Components (74%)						Service Charge Components (26%)		
		Supply	Base Delivery	Max Day	Max Hour	Conservation	Revenue Offsets	Fire Protection	Meters	Customer
Supply	\$4,935,350	\$4,935,350								
Base	\$2,089,617		\$2,089,617							
Max Day	\$1,044,808			\$574,645					\$470,164	
Max Hour	\$2,288,384				\$1,258,611				\$1,029,773	
Fire Protection	\$68,276							\$68,276		
Meters	\$752,411								\$752,411	
Customer	\$747,728									\$747,728
Conservation	\$64,253					\$64,253	\$0			
Revenue Offsets	(\$263,000)						(\$263,000)			
Total	\$11,727,828	\$4,935,350	\$2,089,617	\$574,645	\$1,258,611	\$64,253	(\$263,000)	\$68,276	\$2,252,348	\$747,728

Table 5-12: Unit Cost Calculation

Cost of Service	Supply	Base Delivery	Max Day	Max Hour	Fire Protection	Meters	Customer	Conservation	Revenue Offsets	General	Total
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Allocated Cost of Service	\$4,935,350	\$2,089,617	\$1,044,808	\$2,288,384	\$68,276	\$752,411	\$747,728	\$64,253	(\$263,000)	\$0	\$11,727,828
Adjustment from COS Component			(\$470,164)	(\$1,029,773)		\$1,499,937					\$0
Adjusted Cost of Service	\$4,935,350	\$2,089,617	\$574,645	\$1,258,611	\$68,276	\$2,252,348	\$747,728	\$64,253	(\$263,000)	\$0	\$11,727,828
Unit of Measure	kgal	kgal	kgal/day	kgal/day	Equivalent Fire Lines	Equivalent Meters	Number of Bills	kgal	Revenue Offsets		
Unit of Service	1,163,172	1,163,172	882	5,086	7,081	9,659	49,225	1,163,172	1,163,172		
Unit Cost	\$4.24	\$1.80	\$651.75	\$247.49	\$1.61	\$38.86	\$15.19	\$0.06	(\$0.23)		

5.6. Distribution of Cost Components to Customer Classes

The final step in a cost-of-service analysis is to distribute the cost components to the user classes using the unit costs derived in Table 5-12. This is the ultimate goal of a cost-of-service analysis and yields the cost to serve each customer class. Table 5-13 shows the derivation of the cost of service for each class. The cost components shown in columns (B) through (G) are collected through the commodity (volumetric) rates (\$/kgal). The cost components shown in columns (H) through (J) are collected through the District's bi-monthly service charge.

To derive the cost of service for each class, the unit costs from Table 5-12 are multiplied by the units shown in Table 5-9 for each class. For example, the base delivery cost for the MFR/Commercial class is calculated by multiplying the base delivery unit cost (\$1.80) by the annual MFR/Commercial use (340,851 kgal) to arrive at a total of \$612,332. Similar calculations for each of the remaining user classes and cost components yield the total cost of service for each user class shown in the column (K) of Table 5-13. Note that the total cost of service is equal to the revenue requirement in Table 5-6 as intended. The cost of service for each user class has now been calculated and rates can now be derived to collect those costs for each class.

Table 5-13: Derivation of Class Cost of Service

Customer Class	Supply	Base Delivery	Max Day	Max Hour	Conservation	Revenue Offsets	Fire Protection	Meters	Customer	Total
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
SFR										
Tier 1	\$1,582,993	\$670,236	\$27,294	\$329,163	\$20,609	(\$84,356)				\$2,545,939
Tier 2	\$1,181,602	\$500,288	\$190,971	\$326,675	\$15,383	(\$62,966)				\$2,151,952
Tier 3	\$519,909	\$220,128	\$214,051	\$205,454	\$6,769	(\$27,705)				\$1,138,606
MFR/Commercial	\$1,446,234	\$612,332	\$111,464	\$341,797	\$18,828	(\$77,068)				\$2,453,587
Irrigation										\$0
Tier 1	\$69,313	\$29,347	\$4,213	\$15,845	\$902	(\$3,694)				\$115,926
Tier 2	\$135,300	\$57,286	\$26,652	\$39,677	\$1,761	(\$7,210)				\$253,466
Meters								\$2,252,348	\$747,728	\$3,000,076
Private Fire Lines							\$68,276			\$68,276
Total	\$4,935,350	\$2,089,617	\$574,645	\$1,258,611	\$64,253	(\$263,000)	\$68,276	\$2,252,348	\$747,728	\$11,727,828

6. Water Rate Design and Derivation

6.1. Existing Rate Structure and Rates

As explained in Section 4 of this Study, the rate structure for the District's water service charges currently has two components – a fixed bi-monthly service charge component and a variable volumetric commodity rate component. The bi-monthly service charge increases with the size of the water meter serving a property. As larger meter sizes impose a greater demand on the system, the costs to provide service to these customers is higher. A typical single-family home with a 3/4" meter currently has a bi-monthly service charge of \$54.10. The current rates for the bi-monthly service charge are shown in Table 6-1.

Table 6-1: Current Bi-Monthly Service Charges

Meter Size (Inches)	Current Rates
3/4"	\$54.10
1"	\$80.69
1 1/2"	\$147.19
2"	\$227.01
3"	\$479.72
4"	\$852.17

The current commodity charges are calculated on the basis of the amount of water delivered in kgal. The current commodity rates are shown in Table 6-2.

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

Customer Class	Current Rates
SFR	
Tier 1	\$5.17
Tier 2	\$8.14
Tier 3	\$12.29
Multi-Family/Commercial	\$7.33
Irrigation	
Tier 1	\$5.66
Tier 2	\$10.89

In addition to the bi-monthly service charge, the District also imposes a fixed bi-monthly fire protection charge on properties that are required as a condition of extending or initiating water service to install a private fire suppression system, or where the customer or property owner has installed a private fire service for the purpose of fire service protection. The rates for the bi-monthly fire protection charge are established on the basis of the size of the fire service serving a property and are calculated to recover the costs associated with fire service capacity in the water distribution system. The current bi-monthly fire protection charges for private fire services are shown in Table 6-3.

Table 6-3: Current Bi-Monthly Private Fire Protection Charges

Private Fire Connection Size (Inches)	Current Rates
1"	\$15.85
2"	\$24.46
3"	\$44.05
4"	\$77.83
6"	\$199.05
8"	\$408.15
10"	\$722.67

6.2. Proposed Bi-Monthly Service Charges

Utilities invest in, and continuously maintain facilities to provide capacity to meet all levels of water consumption, including peak demand and fire protection. These costs must be recovered regardless of the amount of water used during a given period. Thus, peaking costs, along with base delivery costs and fixed water system costs to meet average demand, are generally considered as fixed water system costs.

To balance between affordability and revenue stability, it is a common practice that a portion of the peaking costs are recovered in the monthly service charge, along with customer service-related costs and meter-related costs.

The District has chosen to recover 55 percent of peaking costs from the variable rate (commodity rate) along with 100 percent of the supply and base delivery costs.

There are two components that comprise the service charge: 1) Meter capacity costs, 2) Meter servicing costs and 3) Customer service costs. The service charge recognizes the fact that even when a customer does not use any water, the District incurs fixed costs in connection with operating and maintaining the system for each connection at all times.

6.2.1. METER SERVICES COMPONENT

The meter services component collects servicing-related costs as well as a portion of peaking costs. Larger meters are more expensive to maintain and replace and have the potential to demand more capacity, or, said differently, exert greater peaking flows compared to smaller meters.

The potential capacity demanded is proportional to the potential flow through each meter size as established by the American Water Works Association (AWWA) hydraulic capacity ratios. For example, the potential flow through a 4" meter is 21 times that of a 3/4" meter and, therefore, the meter capacity component of the service charge is 21 times that of the 3/4" meter.

Allocating a portion of capacity costs by meter size (with the remainder allocated to the peaking component of the commodity rates) is a common way to provide greater revenue stability, especially in light of decreasing water sales revenues during a drought, from permanent conservation and reduced demand, or water shortage.

In order to create parity across the various meter sizes, each meter size is assigned a factor relative to a 3/4" meter, which has a value of 1.00. This establishes the "base" meter size.

A given meter size's ratio of hydraulic capacity relative to the base (that of a 3/4" meter) determines the *meter equivalency*. Summation of all meter equivalencies for a given size yields the total equivalent meters.

For this study, Raftelis calculated the capacity ratios of each meter size using standard AWWA hydraulic capacity ratios which are estimated to closely match the meters installed in the District. Table 6-4 shows total water meter equivalencies used for this Study. The total equivalent meters calculation is completed by multiplying the count of meters of a specific size by their respective capacity ratio. The total number of equivalent meters within the District is calculated to be 9,659.

Table 6-4: Meter Equivalencies Calculation

Meter Size (Inches)	Meter Count	Capacity Ratio (3/4" Base)	Equivalent Meters
3/4"	6,974	1.00	6,974
1"	877	1.67	1,461
1 1/2"	150	3.33	502
2"	66	5.33	350
3"	28	11.67	330
4"	2	21.00	42
Total	8,097		9,659

Table 6-5 shows the calculation of the meter service component. The meter capacity component of the bi-monthly service charge is calculated by dividing the total meter costs (inclusive of meter servicing costs, fire protection costs, and a portion of peaking costs) from Table 5-13 by the total number of equivalent meters in Table 6-4, and dividing by six billing periods. The cost is calculated as \$38.86 per equivalent meter.

Table 6-5: Bi-Monthly Meter Service Component Calculation

Meter Service Component	FYE 2021
Meter Service Costs	\$2,252,348
Equivalent Meters	9,659
Bi-monthly Cost per Equivalent Meter	\$38.86

6.2.2. BILLING AND CUSTOMER SERVICE COMPONENT

The customer component recovers costs associated with meter reading, customer billing and collection, responding to customer's water quality questions and service calls, and communication with customers through the website and mailers. These costs are uniform for all meter sizes as it costs the same to bill a small meter as it does a large meter.

Table 6-6 shows the customer service component calculation. To calculate the customer component, the total billing and customer costs from Table 5-13 are divided by the total annual bills (total number of accounts multiplied by six billing periods) prepared by the District to determine the bi-monthly customer service charge component of \$15.19 (rounded to nearest whole penny).

Table 6-6: Bi-Monthly Customer Component Calculation

Customer Service Component	FYE 2021
Customer Costs	\$747,728
Annual Bills	49,225
Bi-monthly Customer Component	\$15.19

Table 6-7 shows the calculation of the rates for the bi-monthly service charges for FYE 2021 based on the updated cost of service. The FYE 2021 rates are the sum of the meter services component and the customer component as calculated above.

The customer component is uniform for all meter sizes. The meter service component for each meter size is the cost per equivalent meter calculated in Table 6-5 multiplied by the respective meter capacity ratio in Table 6-4. The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 COS rates by the revenue adjustment shown in Table 4-13.

The comparison between the proposed FYE 2022 rates and existing rates are shown in Table 6-7. The 3/4" meter experiences an increase of \$4.29 relative to the current charge, which includes the 8 percent revenue adjustment.

Table 6-7: Calculation of Bi-Monthly Service Charges (\$/Meter Size)

Meter Size (Inches)	Meter Service Component	Customer Service Component	FYE 2021 COS	Proposed FYE 2022	Current Charge	Difference (\$)	Difference (%)
3/4"	\$38.86	\$15.19	\$54.06	\$58.39	\$54.10	\$4.29	8%
1"	\$64.77	\$15.19	\$79.97	\$86.37	\$80.69	\$5.68	7%
1 1/2"	\$129.54	\$15.19	\$144.74	\$156.32	\$147.19	\$9.13	6%
2"	\$207.27	\$15.19	\$222.47	\$240.27	\$227.01	\$13.26	6%
3"	\$453.40	\$15.19	\$468.60	\$506.09	\$479.72	\$26.37	5%
4"	\$816.13	\$15.19	\$831.32	\$897.83	\$852.17	\$45.66	5%

Table 6-8 shows the proposed bi-monthly service charges for the five-year Study period. The service charges are increased "across the board" in subsequent years by multiplying the FYE 2021 COS charges by the revenue adjustments shown in Table 4-13. All rates are rounded up to the nearest penny to ensure adequate cost recovery.

Table 6-8: Proposed Bi-Monthly Service Charges (\$/Meter Size)

Meter Size (Inches)	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
3/4"	\$54.10	\$58.39	\$63.07	\$68.12	\$72.89	\$78.00
1"	\$80.69	\$86.37	\$93.28	\$100.75	\$107.81	\$115.36
1 1/2"	\$147.19	\$156.32	\$168.83	\$182.34	\$195.11	\$208.77
2"	\$227.01	\$240.27	\$259.50	\$280.26	\$299.88	\$320.88
3"	\$479.72	\$506.09	\$546.58	\$590.31	\$631.64	\$675.86
4"	\$852.17	\$897.83	\$969.66	\$1,047.24	\$1,120.55	\$1,198.99

6.3. Proposed Private Fire Line Charges

Total fire protection costs are allocated to private and public fire protection in proportion to the potential demand of each. The total private fire costs are determined in Table 5-13. This becomes the numerator for the service cost component to determine the cost per equivalent fire connection.

Table 6-9 shows the calculation of equivalent fire connections. Similar to meter capacities used to calculate the water service charges, private fire uses the size of the fire service connection and a fire flow demand ratio¹¹ to determine total equivalent fire connection units. The total equivalent fire connections are 7,081 using the 1" connection as the base.

Table 6-9: Fire Service Equivalencies Calculation

Private Fire Connection Size (Inches)	Private Fire Service Count	Demand Ratio	Equivalent Fire Connections
1"	1	1.00	1
2"	8	6.19	50
3"	2	17.98	36
4"	70	38.32	2,670
6"	18	111.31	2,024
8"	6	237.21	1,437
10"	2	426.58	862
Total	107		7,081

Table 6-10 shows the calculation of the fire service component. Dividing the total private fire costs by total equivalent fire service connections gives the bi-monthly cost per equivalent fire connection of \$1.61.

Table 6-10: Bi-Monthly Fire Service Component Calculation

Private Fire Service Component	FYE 2021
Private Fire Costs	\$68,276
Equivalent Connections	7,081
Bi-monthly Cost per Equivalent Connection	\$1.61

Table 6-11 shows the derivation of the bi-monthly private fire protection charges. The cost per equivalent line from Table 6-10 is multiplied by the respective fire service demand ratio from Table 6-9 to obtain the private fire service component. Since all fire service accounts receive a bi-monthly bill, each line receives the billing and customer service component, same as the bi-monthly service charge for metered water service.

The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 rates by the revenue adjustment shown in Table 4-13. The comparison between the proposed FYE 2022 rates and existing rates are shown in Table 6-11. The 1" connection increases by \$2.30 relative to the current charge, which includes the 8 percent revenue adjustment.

¹¹ The industry standard uses the capacity of a conduit as diameter raised to the 2.63 power to determine the demand ratio.

Table 6-11: Calculation of Bi-Monthly Private Fire Protection Charges (\$/Connection Size)

Private Fire Connection Size (Inches)	Private Fire Service Component	Customer Service Component	FYE 2021 COS	Proposed FYE 2022	Current Charge	Difference (\$)	Difference (%)
1"	\$1.61	\$15.19	\$16.80	\$18.15	\$15.85	\$2.30	15%
2"	\$9.95	\$15.19	\$25.14	\$27.16	\$24.46	\$2.70	11%
3"	\$28.90	\$15.19	\$44.09	\$47.62	\$44.05	\$3.57	8%
4"	\$61.58	\$15.19	\$76.78	\$82.93	\$77.83	\$5.10	7%
6"	\$178.89	\$15.19	\$194.08	\$209.61	\$199.05	\$10.56	5%
8"	\$381.22	\$15.19	\$396.41	\$428.13	\$408.15	\$19.98	5%
10"	\$685.56	\$15.19	\$700.76	\$756.83	\$722.67	\$34.16	5%

Table 6-12 shows proposed private fire protection charges for the Study period. The charges are increased “across the board” in subsequent years by multiplying the FYE 2021 COS charges by the revenue adjustments shown in Table 4-13. All rates are rounded up to the nearest penny.

Table 6-12: Proposed Rates for the Monthly Private Fire Protection Charges (\$/Connection Size)

Private Fire Connection Size (Inches)	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
1"	\$15.85	\$18.15	\$19.61	\$21.18	\$22.67	\$24.26
2"	\$24.46	\$27.16	\$29.34	\$31.69	\$33.91	\$36.29
3"	\$44.05	\$47.62	\$51.43	\$55.55	\$59.44	\$63.61
4"	\$77.83	\$82.93	\$89.57	\$96.74	\$103.52	\$110.77
6"	\$199.05	\$209.61	\$226.38	\$244.50	\$261.62	\$279.94
8"	\$408.15	\$428.13	\$462.39	\$499.39	\$534.35	\$571.76
10"	\$722.67	\$756.83	\$817.38	\$882.78	\$944.58	\$1,010.71

6.4. Proposed Commodity Rates

In the previous rate study completed by Raftelis in July 2016, we set up a three-tier rate structure for single family residences. The first tier of 10 kgal per bi-monthly billing period was based upon indoor use at the State standard of 55 gpd. The second tier of 26 kgal was based on average summer use and usage in excess of 26 kgal per billing period was defined as the third tier. Usage characteristics have remained fairly consistent and we do not recommend any changes to the single family rate structure. This also helps minimize impacts to customers. Approximately one third of the customers use only Tier 1 water and total use in Tier 1 represents about 50 percent of the single family use. About 20 percent of the single family customers fall into the third tier and represents 15 percent of the single family use. These tiers fall within the parameters of good rate design. Irrigation usage is more discretionary and a tiered structure sends a signal for conservation. Irrigation use represents just over four percent of the total water use in the District and therefore we do not recommend any changes to the current irrigation tiers.

Raftelis is proposing to retain the current three tiered rate structure for SFR, two tiered structure for Irrigation customers and uniform commodity rates for the MFR/Commercial class. SFR customers are more homogenous in their usage and have higher peaking factors because of their irrigation demands which are not considered to be essential and are therefore considered for tiered rates. MFR/Commercial customers tend to be much less

homogenous and their individual water needs vary significantly depending on their size. Such customers do not place peak demand on the system to the same extent as single-family residential customers. Generally speaking, Commercial customers have incentive to reduce costs as businesses and therefore not waste water. Because their individual needs can vary significantly from user to user, they are not ideally suited for tiered rates.

6.4.1. UNIT COST COMPONENT DEFINITIONS

The Commodity rates for each class and tier are derived by summation of the unit rates (\$/kgal) for:

1. Supply
2. Base (Delivery)
3. Peaking
4. Conservation
5. Revenue Offsets

Supply: Costs related to the purchase and production of water to meet customer demand. The District maintains four sources of supply (detailed in upcoming Sections) with disparate costs. These variable supply costs form the foundation of the rate components for each tier within the inclining tier rate structure.

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

Peaking: Costs incurred to meet customer peak demands in excess of base use (or average daily demand). Total peaking costs are composed of maximum day and maximum hour demands. The peaking costs are distributed to each tier and class using peaking factors derived from customer use data.

Conservation: Costs which cover water conservation and efficiency programs and efforts. Conservation costs are allocated based on water use in each class. Further, these programs are targeted to high volume water users. Therefore, conservation costs in the SFR class are allocated to Tier 3 SFR customers, and in the Irrigation class to Tier 2 Irrigation customers. Since there are no tiers in the MFR/Commercial class, all units of water in that class are assigned conservation costs.

Allocation of conservation costs to upper tiers helps provide a strong price signal for conservation, consistent with Article X Section 2 of the State of California Constitution, and proportionately allocates, on a parcel basis, such costs to those customers whose greater demand create the need for conservation and efficiency programs and efforts.

Revenue Offsets: Discretionary non-rate revenues used by the District to mitigate customer impacts. They are allocated on the basis of usage and applied to the second tier to promote affordability for the SFR class.

Revenue offsets consist of interest earnings, other operating income from rental property, and miscellaneous non-operating revenues. These funds allow flexibility in the rate design process to achieve policy objectives while maintaining cost of service principles and compliance with Proposition 218.

6.4.1.1. Variable Supply Unit Cost Rate Component

The variable supply cost is the cost to supply and deliver water from various sources. Table 6-13 shows the four sources of supply available to the District to meet annual water demand.

The four sources are: Verdugo Basin groundwater, GWP groundwater, Tier 1 imported water from FMWD, and Tier 2 water from FMWD.

The water supply cost components in Table 6-13 are based on FYE 2021 water supply costs from the respective sources and were provided by District staff. The total cost is the sum of the water unit cost and additional supply costs.

The additional supply cost represents the difference in production or purchase costs (the price paid) and the total costs allocated to supply in the COS. The amount (in \$/AF) is spread across all units and all sources equally.

Table 6-13: Water Supply Costs

Source of Supply	Production / Purchase (AF)	Production / Purchase (kgal)	Water Unit Cost (\$/AF)	Additional Supply Costs (\$/AF)	Total Cost (\$/AF)
Verdugo Basin	1,920	625,634	\$185	\$413	\$598
GWP	240	78,204	\$579	\$413	\$992
FMWD Tier 1	1,654	538,866	\$1,734	\$413	\$2,147

Table 6-14 shows the supply from each source and the unit cost in \$/kgal from each source of supply. The unit cost in \$/kgal after loss accounts for system water loss of 6.4 percent to determine the unit cost of water available to meet demand. The unit water supply costs, and available water from each source are used in the unit cost calculation for the commodity rate.

Table 6-14: Water Supply Costs Calculation (\$/kgal)

	Verdugo Basin	GWP	FMWD Tier 1
Supply to Meet Demand (kgal)	625,634	78,204	538,866
Cost (\$/AF)	\$598	\$992	\$2,147
Unit Cost (\$/kgal)	\$1.83	\$3.04	\$6.59
Unit Cost (\$/kgal) after loss	\$1.96	\$3.25	\$7.04

Table 6-15 shows estimated total demand in FYE 2021.

Table 6-15: Projected Usage in FYE 2021 (Table 4-6)

Customer Class	FYE 2021
SFR	
Tier 1	373,035
Tier 2	278,515
Tier 3	122,547
Multi-Family/Commercial	340,851
Irrigation	
Tier 1	16,336
Tier 2	31,888
Total Water Sales (kgal)	1,163,172

Given the water available from each source (Table 6-14) and the estimated demand from each class, the estimated water available to meet demand from each source is shown in Table 6-16. The supply is allocated in proportion to the overall demand. The lowest cost water is provided to the lowest tiers first. Note that all customers benefit from this allocation as customers in higher tiers receive the benefit of the lower cost in the lower tiers.

Table 6-16: Water Source Allocation to Meet Class Demand

Customer Class	Annual Usage	Verdugo Basin	GWP	FMWD Tier 1
SFR				
Tier 1	373,083	373,083	0	0
Tier 2	278,482	16,633	48,714	213,134
Tier 3	122,533	0	0	122,533
MFR/Commercial	340,851	171,600	21,450	147,801
Irrigation				
Tier 1	16,336	16,336	0	0
Tier 2	31,888	7,942	3,035	20,911
Total	1,163,172	585,593	73,199	504,379

The unit rates for variable supply for the inclining tier rate structure are derived in Table 6-17. Total costs are determined as the sum-products of the unit costs of supply from Table 6-14 and the water required in each source from Table 6-16.

Note that Tier 2 SFR, MFR/Commercial, and Irrigation Tier 2 represent blended rates from two or more sources. Also note that the average unit cost is consistent for all user classes at \$4.24/kgal. Unit costs are rounded up to the nearest penny.

Table 6-17: Variable Supply Unit Rate (\$/kgal)

Customer Class	Annual Usage	Verdugo Basin	GWP	FMWD Tier 1	Unit Cost (\$/kgal)
<i>Unit Cost of Supply</i>		\$1.96	\$3.25	\$7.04	
SFR					
Tier 1	373,083	373,083	0	0	\$1.96
Tier 2	278,482	16,633	48,714	213,134	\$6.07
Tier 3	122,533	0	0	122,533	\$7.04
Total	774,097	389,716	48,714	335,667	\$4.24
MFR/Commercial	340,851	171,600	21,450	147,801	\$4.24
Irrigation					
Tier 1	16,336	16,336	0	0	\$1.96
Tier 2	31,888	7,942	3,035	20,911	\$5.41
Total	48,223	24,278	3,035	20,911	\$4.24

6.4.1.2. Base Delivery Rate Component

Base Delivery costs are the costs to treat and deliver water under average daily demand conditions. By dividing total base delivery costs from Table 5-13 by estimated annual usage we identify the cost to provide water delivery under average conditions.

The calculated delivery unit cost is presented in Table 6-18. Since delivery recovers costs to meet average daily demands, the delivery cost is the same for all classes and tiers.

Table 6-18: Delivery Unit Cost Calculation (\$/kgal)

Base Delivery Component	FYE 2021
Delivery Costs	\$2,089,617
Total Annual Usage (kgal)	1,163,172
Base Delivery Unit Cost (\$/kgal)	\$1.80

6.4.1.3. Peaking Rate Component

Peaking costs represent the cost of providing Max Day and Max Hour capacity to each customer class based on the peaking characteristics of each (shown in Table 5-13). Table 6-19 combines the Max Day and Max Hour costs in Table 5-13 into Peaking Costs. These costs are divided by total annual use by class and tier (from Table 4-6) to arrive at the Peaking unit cost for each.

Table 6-19: Peaking Unit Cost Calculation by Class and Tier (\$/kgal)

Customer Class	Annual Usage	Peaking Costs	Peaking Unit Cost (\$/kgal)
SFR			
Tier 1	373,083	\$356,457	\$0.96
Tier 2	278,482	\$517,646	\$1.86
Tier 3	122,533	\$419,505	\$3.42
MFR/Commercial	340,851	\$453,261	\$1.33
Irrigation			
Tier 1	16,336	\$20,058	\$1.23
Tier 2	31,888	\$66,329	\$2.08

6.4.1.4. Conservation Unit Cost

Conservation costs are only allocated to Tier 3 SFR, Tier 2 Irrigation, and MFR/Commercial customers. Table 6-20 shows the calculation for the unit cost for conservation. Note that the total conservation costs are equal to those in Table 5-13.

Table 6-20: Conservation Unit Cost Calculation (\$/kgal)

Customer Class	Annual Usage	Conservation Allocation %	Conservation Factor	Conservation Costs	Unit Rate (\$/kgal)
SFR					
Tier 1	373,083	0%	0%	\$0	\$0.00
Tier 2	278,482	0%	0%	\$0	\$0.00
Tier 3	122,533	100%	25%	\$15,896	\$0.13
MFR/Commercial	340,851	100%	69%	\$44,219	\$0.13
Irrigation					
Tier 1	16,336	0%	0%	\$0	\$0.00
Tier 2	31,888	100%	6%	\$4,137	\$0.13
Total	1,163,172		100%	\$64,253	

6.4.1.5. Revenue Offset Unit Cost

The revenue offset component is determined in a similar manner as the conservation component. Revenue offsets are applied to Tier 2 SFR use to mitigate impacts. It is Board policy to not apply revenue offsets to Irrigation customers. Table 6-21 shows the revenue offset unit cost calculation. Note that the total revenue offset costs are equal to those in Table 5-13.

Table 6-21: Revenue Offset Unit Cost Calculation (\$/kgal)

Customer Class	Annual Usage	Revenue Offset Allocation %	Revenue Offset Factor	Revenue Offset Costs	Unit Rate (\$/kgal)
SFR					
Tier 1	373,083	0%	0%	\$0	\$0.00
Tier 2	278,482	100%	100%	(\$263,000)	(\$0.94)
Tier 3	122,533	0%	0%	\$0	\$0.00
MFR/Commercial	340,851	0%	0%	\$0	\$0.00
Irrigation					
Tier 1	16,336	0%	0%	\$0	\$0.00
Tier 2	31,888	0%	0%	\$0	\$0.00
Total	1,163,172		100%	(\$263,000)	

6.4.1.6. Final Commodity Rate Derivation

To determine the rates for the commodity charge, the components described above are added together. The resulting summation constitutes the final rates. The cost-of-service base rates are shown in bold in Table 6-22 below. The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 cost of service rates by the revenue adjustment shown in Table 4-13. The comparison between the proposed FYE 2022 rates and existing rates are shown in Table 6-22. All rates are rounded up to the nearest cent.

Table 6-22: Calculation of the Commodity Charge (\$/kgal)

Customer Class	Tier Definition	Supply	Base Delivery	Peaking	Conservation	Revenue Offsets	FYE 2021 COS	Proposed FYE 2022	Current Charge	Difference (\$)	Difference (%)
SFR											
Tier 1	0-10	\$1.96	\$1.80	\$0.96	\$0.00	\$0.00	\$4.72	\$5.10	\$5.17	(\$0.07)	-1%
Tier 2	11-26	\$6.07	\$1.80	\$1.86	\$0.00	(\$0.94)	\$8.79	\$9.50	\$8.14	\$1.36	17%
Tier 3	27+	\$7.04	\$1.80	\$3.42	\$0.13	\$0.00	\$12.39	\$13.39	\$12.29	\$1.10	9%
MFR/Commercial	Uniform	\$4.24	\$1.80	\$1.33	\$0.13	\$0.00	\$7.50	\$8.10	\$7.33	\$0.77	11%
Irrigation											
Tier 1	0-80	\$1.96	\$1.80	\$1.23	\$0.00	\$0.00	\$4.99	\$5.39	\$5.66	(\$0.27)	-5%
Tier 2	81+	\$5.41	\$1.80	\$2.08	\$0.13	\$0.00	\$9.42	\$10.18	\$10.89	(\$0.71)	-7%

Table 6-23 shows proposed water commodity rates for the Study period. The commodity charge is increased “across the board” in subsequent years – that is, relative to existing rates – by the financial plan. All rates are rounded up to the nearest penny.

Table 6-23: Proposed Commodity Rates (\$/kgal)

Customer Class	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
SFR						
Tier 1	\$5.17	\$5.10	\$5.51	\$5.96	\$6.38	\$6.83
Tier 2	\$8.14	\$9.50	\$10.26	\$11.09	\$11.87	\$12.71
Tier 3	\$12.29	\$13.39	\$14.47	\$15.63	\$16.73	\$17.91
Multi-Family/Commercial	\$7.33	\$8.10	\$8.75	\$9.45	\$10.12	\$10.83
Irrigation						
Tier 1	\$5.66	\$5.39	\$5.83	\$6.30	\$6.75	\$7.23
Tier 2	\$10.89	\$10.18	\$11.00	\$11.88	\$12.72	\$13.62

6.5. Customer Impacts

The rate model calculates water customer impacts for all classes and meter sizes. Customer impacts from the proposed new rates can be seen below in Figure 6-1. A SFR customer with a 3/4" meter using the District-wide annual bi-monthly average of 18 kgal will experience a \$14.47 increase in their bi-monthly bill. This is due to both to an increase in the bi-monthly service charge as well as an increase in the Tier 2 and Tier 3 rates which is not fully offset by the decrease in the Tier 1 rate. The usage levels shown include the average winter use (15 kgal), average annual use (18 kgal), and average summer use (25 kgal).

Figure 6-1: Bill Impacts - Single Family Residential with 3/4" Meter

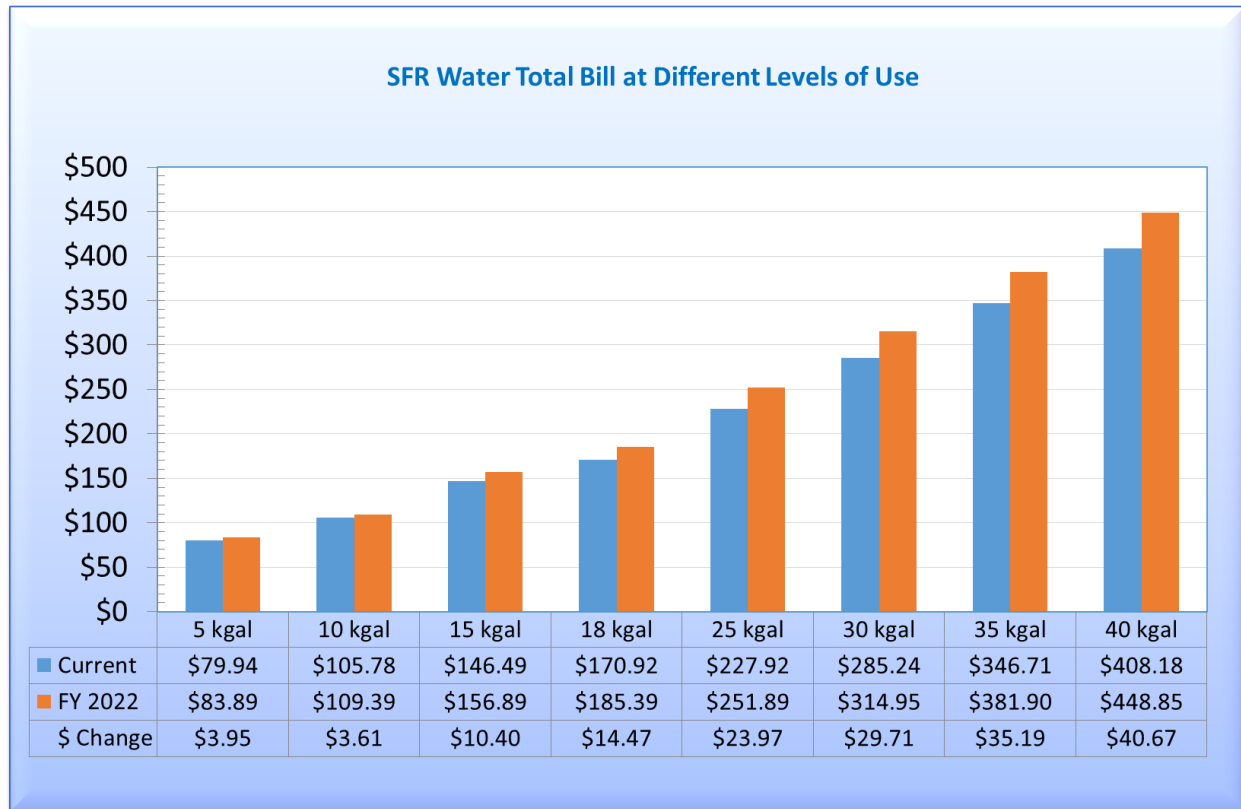


Figure 6-2 shows customer impacts for a MFR customer with a 2" meter. At the 50th percentile of use (50 kgal) a customer experiences a \$52 increase in their bi-monthly bill, or 9 percent.

Figure 6-2: Bill Impacts – Multi-Family Residential with 2” Meter

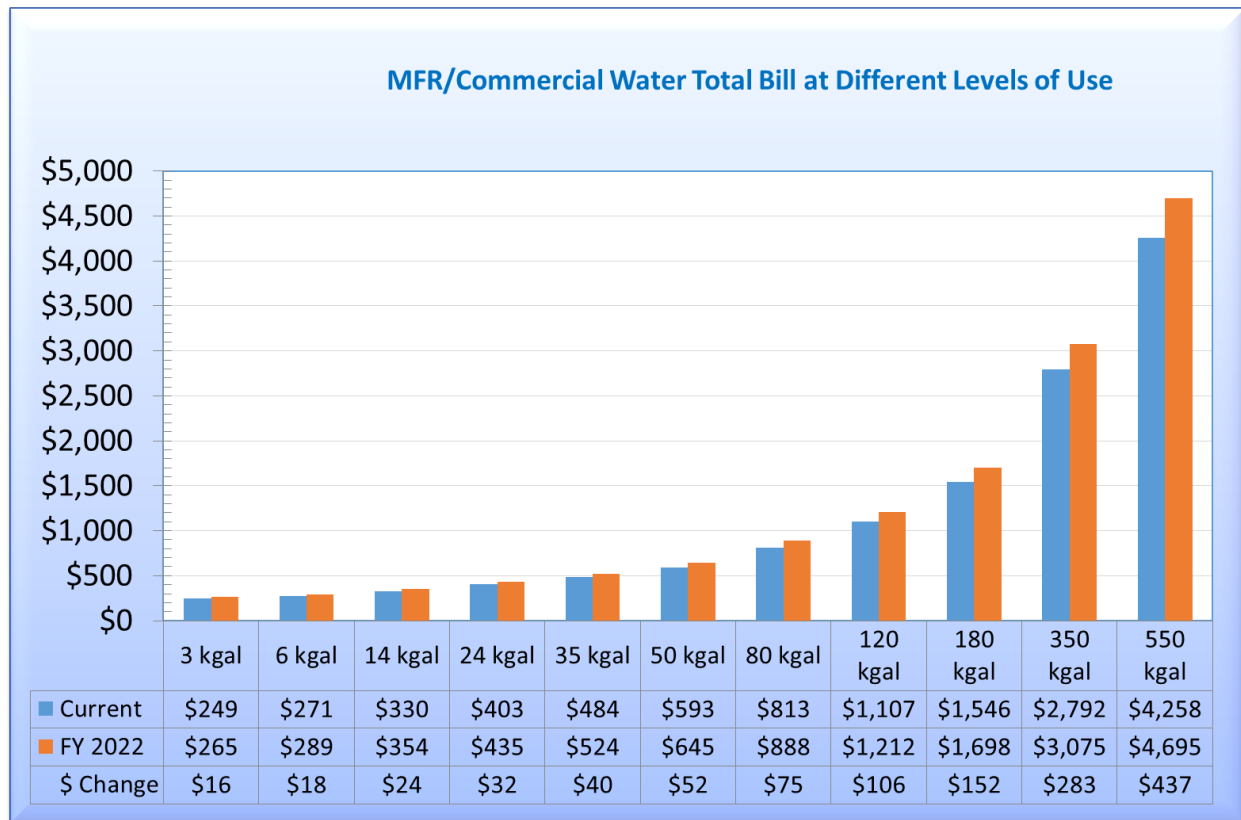
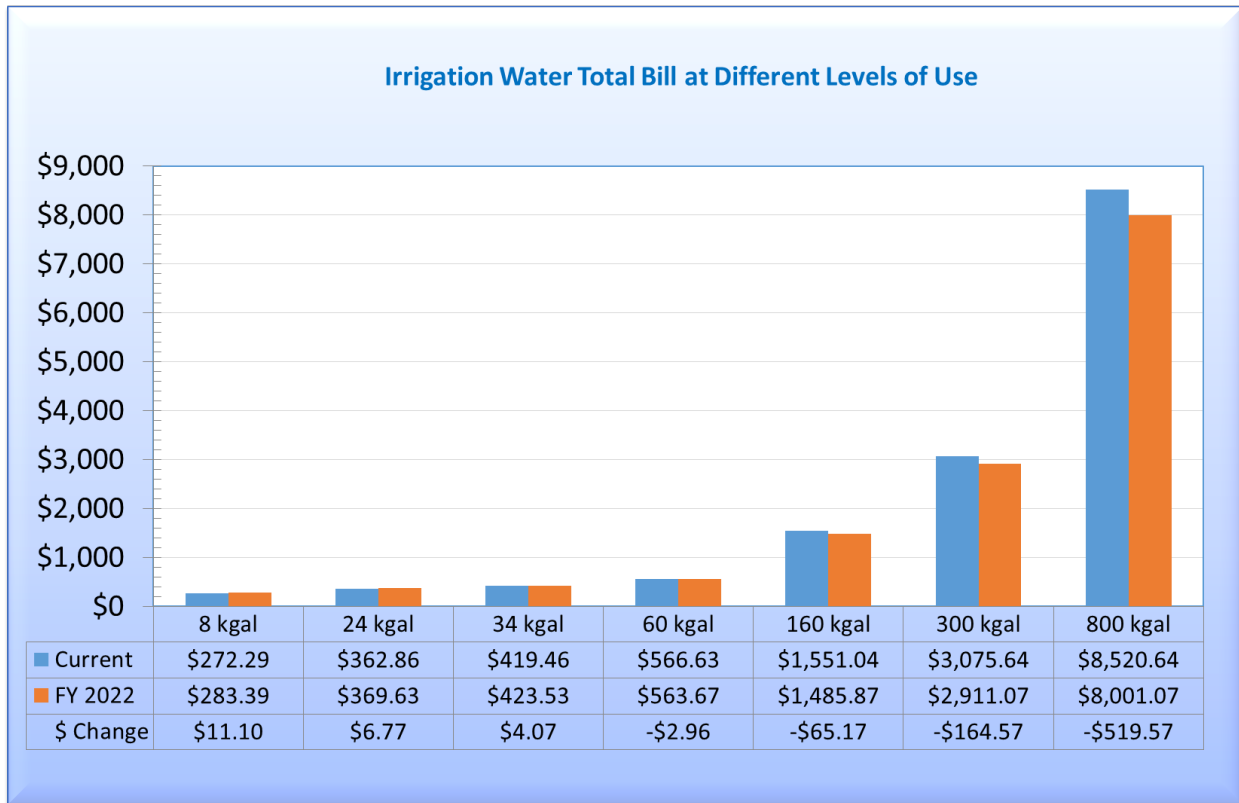


Figure 6-3 shows customer impacts for an Irrigation customer with a 2” meter. At the 50th percentile of use (60 kgal) a customer experiences a \$2.96 decrease in their bi-monthly bill, or 1 percent. The decrease is due to the decrease in both the Tier 1 and Tier 2 commodity rates. The figure includes the 25th, 50th, and 75th percentile of use in the class of 24, 60, and 300 kgal, respectively.

Figure 6-3: Bill Impacts – Irrigation Customer with 2” Meter



7. Wastewater Utility Financial Plan

This section describes the wastewater utility's customer account and wastewater flow data and corresponding financial plan. To develop the financial plan, Raftelis projects annual expenses and revenues; capital expenditures, models reserve balances; and calculates debt service coverage ratios to estimate the amount of additional rate revenue needed in each fiscal year for prudent fiscal management.

This section of the Study provides a discussion of O&M expenses, the capital improvement plan, reserve funding, projected revenue under existing rates and the revenue adjustments required to ensure the fiscal sustainability and solvency of the wastewater utility.

7.1. Wastewater Revenue Requirements

A review of a utility's revenue requirements is a key first step in the rate study process. The review involves an analysis of annual operating revenues under current rates, operation and maintenance (O&M) expenses, capital expenditures, and reserve requirements.

7.1.1. REVENUES FROM CURRENT WASTEWATER RATES

The current rates were last adjusted in September of 2019. The District's wastewater service charges vary by customer class. Single Family Residential (SFR) and Multi-Family Residential (MFR) customers pay a fixed bi-monthly charge per dwelling unit (DU) and a variable volumetric wastewater flow charge component based on the average winter water use from the previous year. Commercial customers are billed on the actual water use but subject to a minimum charge to cover fixed costs. Schools are charged on the number of students based on the average daily attendance¹²). Existing wastewater rates include the District's policy of a low water use discount of 10 percent on accounts that use less than 12 units of water in any bi-monthly period funded from general fund revenues. Current wastewater rates are shown in Table 7-1 and Table 7-2.

Table 7-1: Current Bi-Monthly Wastewater Service Charges (\$/DU)

Customer Class	Unit	Current Rates
Single Family	DU	\$47.79
Multi Family	DU	\$31.25
Commercial/Institutional	Account	\$31.25

¹² The school variable rates are based on average daily attendance (ADA). The charge is based upon 100 ADA as reported by Glendale Unified School District.

Table 7-2: Current Wastewater Use Charges (\$/kgal)

Customer Class	Unit	Current Rates
Single Family	kgal	\$1.93
Multi Family	kgal	\$2.15
Commercial/Institutional	kgal	\$5.10
Primary School/Elementary	100 ADA	\$84.86
Middle School	100 ADA	\$169.73
Secondary School/Middle School	100 ADA	\$254.59

Table 7-3 shows the projected number of wastewater accounts subject to the service charge. The number of accounts is escalated each year based on the growth assumptions identified in Table 3-7.

Table 7-3: Projected Accounts by Customer Class

Customer Class	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Single Family (DUs)	5,293	5,346	5,399	5,453	5,508	5,563
Multi Family (DUs)	2,670	2,697	2,724	2,751	2,778	2,806
Commercial/Institutional (Accounts)	176	177	179	181	183	185

Wastewater flow projections through FYE 2026 are shown in Table 7-4. The wastewater flows are escalated each year based on the growth assumptions identified in Table 3-7 using FYE 2021 as the base year.

Table 7-4: Projected Wastewater Flows

Customer Class	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Single Family (kgal)	413,022	417,152	421,324	425,537	429,792	434,090
Multi Family (kgal)	132,660	133,987	135,326	136,680	138,047	139,427
Commercial/Institutional (kgal)	25,325	25,578	25,834	26,092	26,353	26,617
Primary School/Elementary (100 ADA)	18	19	19	19	19	19
Secondary School/Middle School (100 ADA)	12	12	12	12	12	12
Secondary School/High School (100 ADA)	26	26	26	26	27	27

Table 7-5 shows the rate revenue generated in each year of the Study with projected accounts and wastewater flows at current rates. Note, revenues for FYE 2022 and beyond use current rates from Table 7-1 and Table 7-2.

The overall adequacy of wastewater revenues is measured by comparing the projected annual revenue requirement in FYE 2021 to be met from rates with projected revenues under the existing rates. For FYE 2021 the total revenues from rates are \$3,321,867.

Table 7-5: Projected Wastewater Rate Revenues (No Revenue Adjustments)

Revenue Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Service Charges	\$2,050,965	\$2,071,473	\$2,092,185	\$2,113,105	\$2,134,235	\$2,155,575
Usage Charges	\$1,270,903	\$1,283,612	\$1,296,448	\$1,309,412	\$1,322,506	\$1,335,731
Total Rate Revenue	\$3,321,867	\$3,355,084	\$3,388,633	\$3,422,518	\$3,456,741	\$3,491,306

The District also derives revenues from other non-rate sources. These revenues consist of other operating and non-operating revenues. These revenues are summarized in Table 7-6.

Table 7-6: Projected Non-Rate Revenues

Revenue Source	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Other Operating Revenues	\$36,500	\$31,500	\$31,815	\$32,133	\$32,454	\$32,779
Non-Operating Revenues	\$500	\$63,814	\$42,262	\$18,831	\$0	\$0
Total Non-Rate Revenue	\$37,000	\$95,314	\$74,077	\$50,965	\$32,454	\$32,779

7.1.2. OPERATING AND MAINTENANCE (O&M) EXPENSES

Total projected O&M expenses are shown in Table 7-7. These expenses are summarized by department. Operating expenses use the District's budgeted FYE 2021 values and project future expenses using the inflationary assumptions from Table 3-6.

Table 7-7: Projected Wastewater O&M Expenses

O&M Expenses	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Treatment and Disposal Charges	\$1,849,900	\$1,655,700	\$1,873,500	\$1,654,200	\$1,824,900	\$2,040,700
Labor	\$960,598	\$989,416	\$1,019,098	\$1,049,671	\$1,081,162	\$1,113,596
Compensation	\$793,534	\$833,210	\$874,871	\$918,614	\$964,545	\$1,012,772
Plant Operating	\$79,011	\$80,763	\$83,529	\$86,393	\$89,358	\$92,428
Collection System	\$116,222	\$118,573	\$122,901	\$127,393	\$132,056	\$136,894
General and Administrative	\$341,607	\$352,015	\$362,743	\$373,801	\$385,199	\$396,949
Total O&M Expenditures	\$4,140,872	\$4,029,677	\$4,336,642	\$4,210,072	\$4,477,219	\$4,793,340

7.1.3. PROJECTED CAPITAL IMPROVEMENT PLAN

The District has projected \$1.5M in capital expenditures during the Study period (FYE 2021 to FYE 2026) for the wastewater utility as shown in Table 7-8. The majority of District expenditures in each year are attributed to collection systems repair and replacement.

In addition to District infrastructure repair and replacement, the District is responsible for a share of the City of Los Angeles Bureau of Sanitation (LA San) capital costs. Wastewater generated in the District's service area is treated at LA San's Glendale facility. LA San provides conveyance, treatment, and disposal of wastewater and the District is responsible for their proportional share of the infrastructure and facilities that are used. The District will fund all capital improvements and LA San capital charges through rate revenues.

Table 7-8: Projected Wastewater Capital Improvement Plan

Capital Projects	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Collections Systems	\$75,000	\$150,000	\$156,000	\$162,240	\$168,730	\$175,479
Interceptor System	\$5,000	\$5,000	\$5,200	\$5,408	\$5,624	\$5,849
Lift Station	\$75,000	\$0	\$0	\$0	\$0	\$0
Technology (Sewer Projects Only)	\$5,000	\$5,000	\$5,200	\$5,408	\$5,624	\$5,849
Facilities & Planning	\$10,000	\$10,000	\$10,400	\$10,816	\$11,249	\$11,699
Misc. Sewer Projects	\$5,000	\$5,000	\$5,200	\$5,408	\$5,624	\$5,849
Capital Outlay	\$64,500	\$64,500	\$62,660	\$61,651	\$58,493	\$60,833
Total Rate Funded Capital Projects	\$239,500	\$239,500	\$244,660	\$250,931	\$255,344	\$265,558

7.1.4. DEBT SERVICE

The wastewater utility has no outstanding long-term debt obligations.

7.2. Existing Wastewater Financial Plan – No Revenue Adjustments

Table 7-9 displays the proforma of the District’s wastewater utility under current rates over the Study period. The proforma incorporates revenues and expenses to show the overall position of the District. All projections shown in the table are based upon the District’s current rate structure and do not include rate adjustments. The proforma incorporates the wastewater enterprise data shown in the preceding tables of this section.

Under the “status-quo” scenario, revenues generated from rates and other miscellaneous revenues are not adequate to meet expenses as shown by the Net Cash Flow line.

Table 7-9: Existing Wastewater Financial Plan with Current Rates

Existing Financial Plan	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues						
Revenues from Existing Rates	\$3,321,867	\$3,355,084	\$3,388,633	\$3,422,518	\$3,456,741	\$3,491,306
Total Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
Non-Rate Revenues	\$37,000	\$95,314	\$74,077	\$50,965	\$32,454	\$32,779
Total Revenue	\$3,358,867	\$3,450,399	\$3,462,710	\$3,473,482	\$3,489,195	\$3,524,086
Expenses						
Operating Expenses	\$4,140,872	\$4,029,677	\$4,336,642	\$4,210,072	\$4,477,219	\$4,793,340
Rate Funded CIP	\$239,500	\$239,500	\$244,660	\$250,931	\$255,344	\$265,558
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$4,380,372	\$4,269,177	\$4,581,302	\$4,461,004	\$4,732,563	\$5,058,898
Net Cash Flow	(\$1,021,504)	(\$818,778)	(\$1,118,592)	(\$987,521)	(\$1,243,368)	(\$1,534,812)
Beginning Balance	\$4,299,000	\$3,277,496	\$2,458,718	\$1,340,125	\$352,604	(\$890,764)
Ending Balance	\$3,277,496	\$2,458,718	\$1,340,125	\$352,604	(\$890,764)	(\$2,425,576)
<i>Target Balance</i>	<i>\$2,403,210</i>	<i>\$2,432,265</i>	<i>\$2,462,944</i>	<i>\$2,494,598</i>	<i>\$2,527,265</i>	<i>\$2,560,987</i>
Calculated Debt Coverage	N/A	N/A	N/A	N/A	N/A	N/A
Required Debt Coverage	125%	125%	125%	125%	125%	125%

7.3. Proposed Wastewater Financial Plan

Based on discussions with the District regarding its expected revenue requirements over the Study period, Raftelis proposes that the District adopt the revenue adjustment schedule found in Table 7-10. The FYE 2022 revenue adjustment is proposed to be implemented October 1, 2021, with all subsequent adjustments occurring on July 1 of each fiscal year.

Although Table 7-10 shows anticipated revenue adjustments for FYE 2022 through 2026, the District will review and confirm the required revenue adjustments on an annual basis. The rates presented in Section 9 are based on the proposed Financial Plan below.

Revenue adjustments represent the average increase in rates for the utility as a whole. Actual percentage increases (or decreases) in rates are dependent upon the cost-of-service analysis and are unique to each customer class. The proposed revenue adjustments help ensure adequate revenue to fund operating expenses, achieve reserve policy targets, fund the long-term capital program, and generate rate stability over the long term.

Table 7-10: Proposed Wastewater Revenue Adjustments

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Effective Month	October	July	July	July	July
Revenue Adjustment	8%	8%	8%	7%	7%

Table 7-11 shows the proforma for the wastewater utility with additional revenues from the revenue adjustments in the proposed financial plan. The proposed revenue adjustments will not meet all expense requirements during the Study period, and additional adjustments will be required in later years.

Table 7-11: Proposed Wastewater Financial Plan

Proposed Financial Plan	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues						
Revenues from Existing Rates	\$3,321,867	\$3,355,084	\$3,388,633	\$3,422,518	\$3,456,741	\$3,491,306
Total Revenue Adjustments	\$0	\$201,305	\$563,869	\$888,869	\$1,202,572	\$1,544,010
Non-Rate Revenues	\$37,000	\$97,579	\$85,000	\$78,477	\$78,061	\$79,056
Total Revenue	\$3,358,867	\$3,653,968	\$4,037,502	\$4,389,864	\$4,737,374	\$5,114,373
Expenses						
Operating Expenses	\$4,140,872	\$4,029,677	\$4,336,642	\$4,210,072	\$4,477,219	\$4,793,340
Rate Funded CIP	\$239,500	\$239,500	\$244,660	\$250,931	\$255,344	\$265,558
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$4,380,372	\$4,269,177	\$4,581,302	\$4,461,004	\$4,732,563	\$5,058,898
Net Cash Flow	(\$1,021,504)	(\$615,208)	(\$543,800)	(\$71,140)	\$4,811	\$55,475
Beginning Balance	\$4,299,000	\$3,277,496	\$2,662,287	\$2,118,488	\$2,047,348	\$2,052,159
Ending Balance	\$3,277,496	\$2,662,287	\$2,118,488	\$2,047,348	\$2,052,159	\$2,107,634
<i>Target Balance</i>	<i>\$2,403,210</i>	<i>\$2,482,592</i>	<i>\$2,603,911</i>	<i>\$2,716,815</i>	<i>\$2,827,908</i>	<i>\$2,946,989</i>
Calculated Debt Coverage	N/A	N/A	N/A	N/A	N/A	N/A
Required Debt Coverage	125%	125%	125%	125%	125%	125%

Figure 7-1 through Figure 7-4 display the FYE 2021 through FYE 2026 proposed financial plan in graphical format. Figure 7-1 shows the proposed revenue adjustments- in percentage terms- as blue bars.

Figure 7-1: Proposed Revenue Adjustments

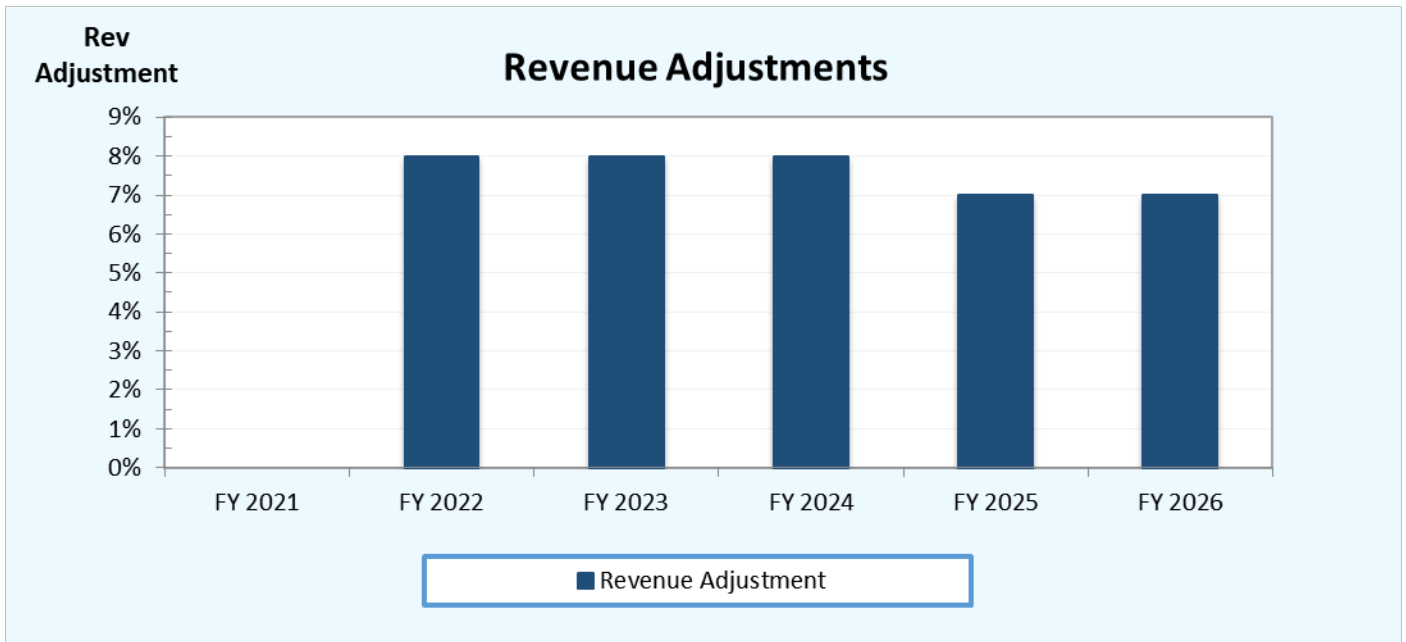


Figure 7-2 illustrates the Operating Financial Plan in a graphical format. It compares existing and proposed revenues with projected expenses. The expenses represent O&M expenses, capitalized expenses, and reserve funding. Total revenues at existing and proposed rates are shown by the horizontal black and blue lines, respectively.

Figure 7-2: Proposed Operating Financial Plan

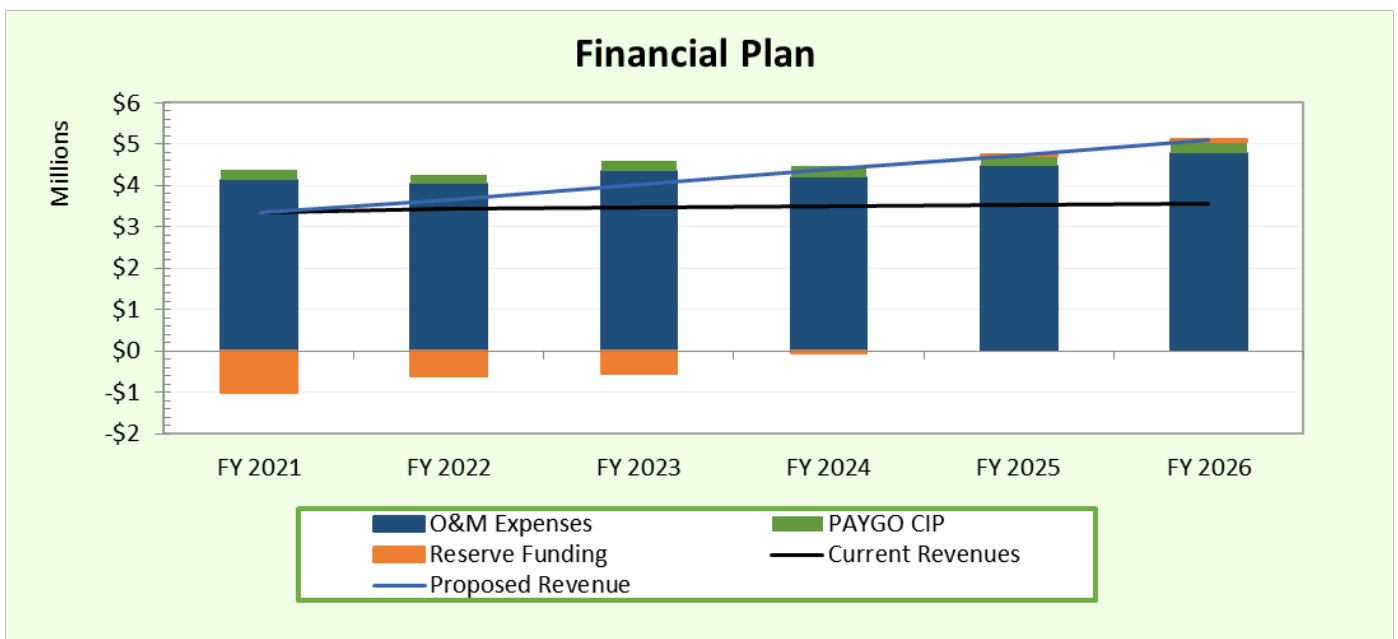


Figure 7-3 shows the wastewater utility's ending balance by fiscal year. The orange bars indicate the ending balance, while the green line indicates the target balance. While the reserves are shown below targets during most of the five-year Study period, in later years they will be supplemented and meet the target.

Figure 7-3: Proposed Ending Fund Balances

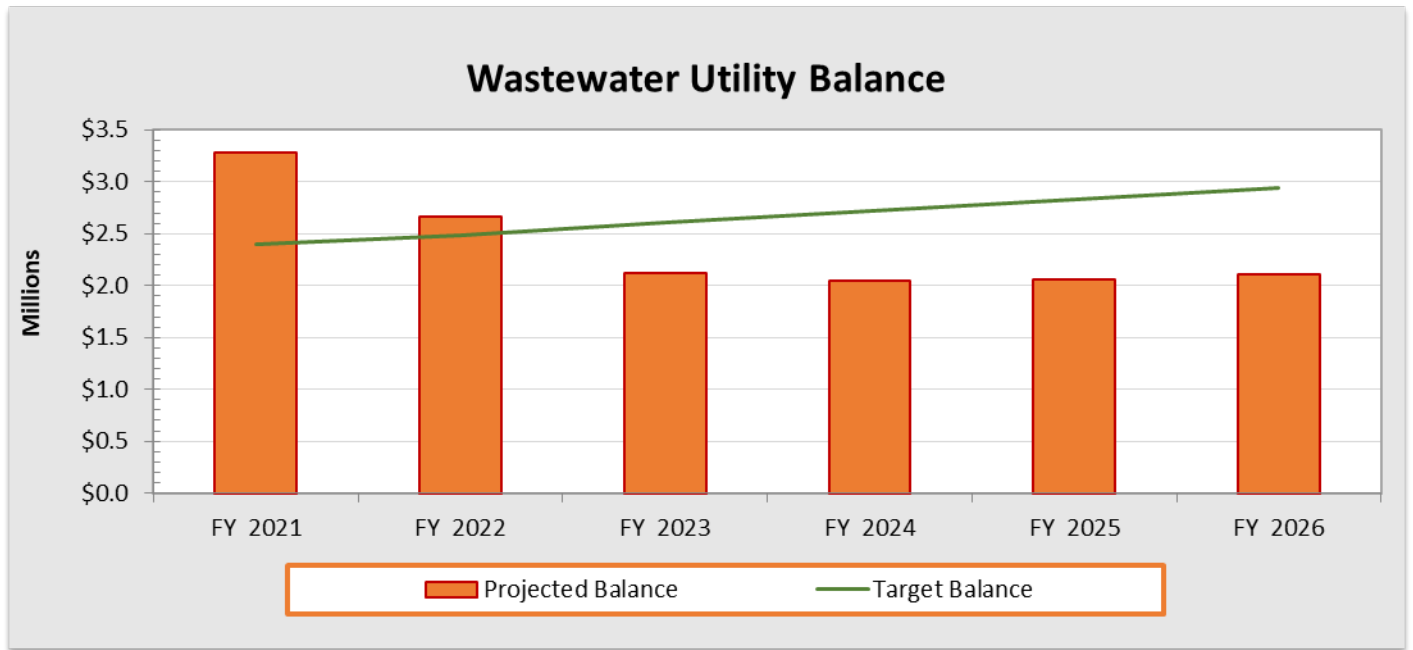
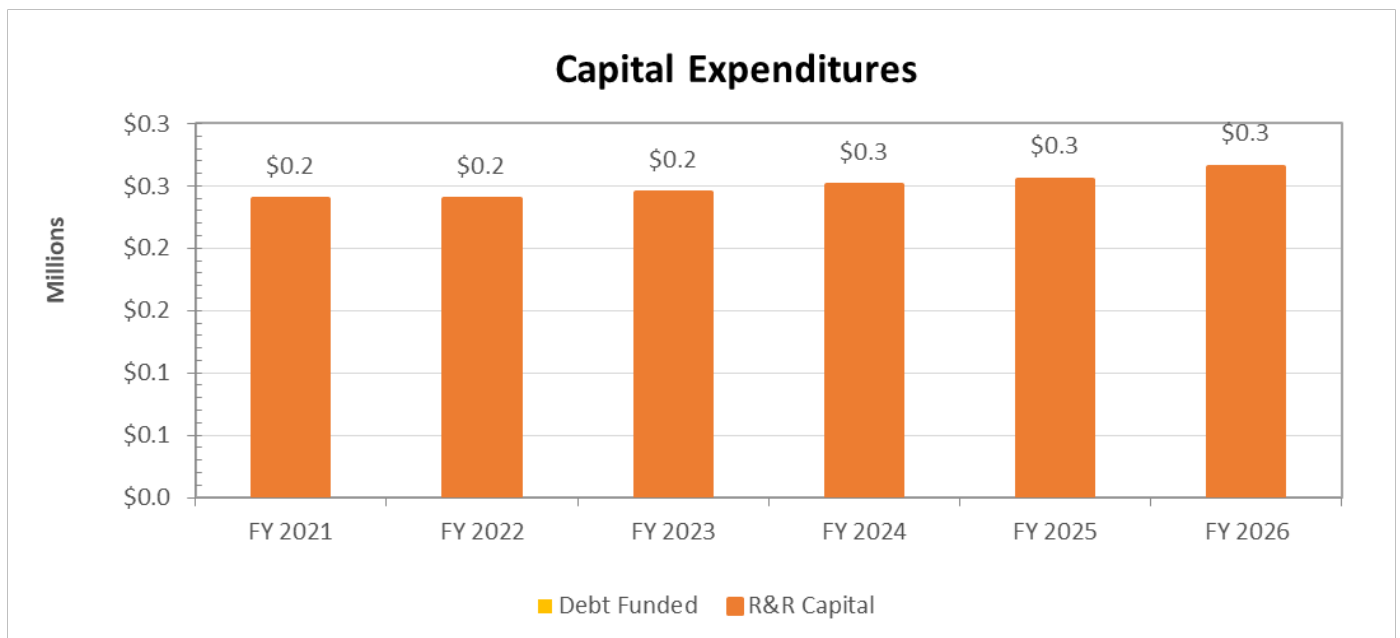


Figure 7-4 shows the total CIP of the wastewater utility and the corresponding expenditure type. All capital is rate funded.

Figure 7-4: Proposed Capital Improvement Program Funding



8. Wastewater Cost of Service Analysis

This section of the Report discusses the allocation of O&M expenses and capital costs to the appropriate parameters consistent with industry standards, the determination of unit costs, and calculation of costs by customer class for the wastewater utility.

8.1. Methodology

To allocate the cost of service among the different customer classes, costs first need to be allocated to the appropriate wastewater parameters. The following sections describe the allocation of the operating and capital costs of service to the appropriate parameters of the wastewater system.

The total cost of wastewater service is analyzed by system function in order to equitably distribute costs of service to the various classes of customers. For this analysis, wastewater utility costs of service are developed consistent with the guidelines for allocating costs detailed in the Water Environment Federation (WEF) Manual of Practice No. 27, Financing and Charges for Wastewater Systems, 2018.

A cost-of-service analysis distributes a utility's revenue requirements (costs) to each customer class. After determining a utility's revenue requirements, the next step is to functionalize its O&M costs based on the District's O&M classification:

1. Treatment – include the costs of treatment and disposal of wastewater flows.
2. Collection – includes the costs of operating and maintaining the collection system.
3. General – costs not attributable to treatment or collection. These can be customer and administrative costs and are reallocated to treatment and collection based on the relative share of the total for each.

The functionalization of costs allows us to better allocate the functionalized costs to the **cost causation components**. Based on the standard industry methodology, which assigns costs based on design of the wastewater system, the cost causation components include:

1. **Flow** refers to the volume of wastewater carried through the wastewater collection system.
2. **BOD** (Biochemical Oxygen Demand) refers to the level of organic material present in wastewater and comes predominantly from food waste as well as other wastes generated by households and businesses.
3. **TSS** (Total Suspended Solids) refers to the particle constituents within wastewater flows which are able to be filtered out through the treatment process.
4. **General** refers to costs incurred in operating and maintaining the wastewater collection system not otherwise recovered in the other functionalized cost components.

The collection system is designed for flow and the treatment system is designed for flow, BOD, and TSS. General costs include administration, billing, and customer service.

8.2. Allocation of Expenses to Cost Causation Components

After functionalizing expenses, the next step is to allocate the functionalized expenses to cost causation components. To do so, costs are identified related to collecting and treating wastewater and administering the wastewater system (as well as providing customer service to account holders).

Treatment costs are allocated to flow, to BOD, and to TSS¹³. Collection system costs are allocated 100 percent to the flow cost causation component, and general costs are allocated 100 percent to the general component. Table 8-1 shows the cost allocations. Allocation of treatment costs is based on data provided by LA San.

Table 8-1: Allocation of Functionalized O&M Expenses to Cost Causation Components

Function	Flow	BOD	TSS	General	Total
Treatment	35%	37%	28%		100%
Collection	100%				100%
General				100%	100%

Table 8-2 shows the total resulting cost causation component allocation for O&M expenses. This resulting allocation is used to allocate the District's operating costs to the cost causation components. Capital costs for the collection system are allocated entirely to flow.

Table 8-2: O&M Allocation

Function	O&M Expenses by Function (\$)	Flow	BOD	TSS	General
Treatment	\$1,849,900	\$648,205	\$683,353	\$518,157	\$0
Collection	\$2,290,972	\$2,290,972	\$0	\$0	\$0
General	\$0	\$0	\$0	\$0	\$0
Total O&M	\$4,140,872	\$2,939,177	\$683,353	\$518,157	\$0
<i>% O&M</i>	<i>100%</i>	<i>71%</i>	<i>17%</i>	<i>13%</i>	<i>0%</i>

8.3. Revenue Requirement

Table 8-3 shows the revenue requirement derivation with the total revenue required from rates. The totals shown in the "Operating" and "Capital" columns are the total O&M and capital revenue requirements, respectively, that are allocated to the cost components using the allocation percentages shown in Table 8-1.

Raftelis calculated the revenue requirement using FYE 2021 expenses, which include O&M expenses and rate funded capital expenses. To arrive at the rate revenue requirement, revenue offsets for non-rate revenues from other sources are subtracted; additionally, adjustments are made for annual cash balances which fund reserves. The adjustments are subtracted to arrive at the total revenue requirement from rates. This is the amount that the rates are designed to collect.

¹³ Allocations to each component based on LA Bureau of Sanitation's allocation breakdown.

Table 8-3: Revenue Required from Wastewater Rates (FYE 2021)

	Operating	Capital	Total
Revenue Requirements			
Treatment and Disposal Charges	\$1,849,900		\$1,849,900
Labor	\$960,598		\$960,598
Compensation	\$793,534		\$793,534
Plant Operating	\$79,011		\$79,011
Collection System	\$116,222		\$116,222
General and Administrative Expenses	\$341,607		\$341,607
Rate Funded CIP		\$239,500	\$239,500
Total Revenue Requirements	\$4,140,872	\$239,500	\$4,380,372
Less: Revenue from Other Sources			
Other Operating Revenues	\$36,500		\$36,500
Non-Operating Revenues (Interest Income)	\$500		\$500
Sewer Service Discount	\$0		\$0
Total Revenue from Other Sources	\$37,000	\$0	\$37,000
Less: Adjustments			
Transfer from (to) Reserves		\$1,021,504	\$1,021,504
Adjustments to Annualize Rate Increase		\$0	\$0
Total Adjustments	\$0	\$1,021,504	\$1,021,504
Cost to be Recovered from Rates	\$4,103,872	(\$782,004)	\$3,321,867

8.4. User Characteristics

The end goal is to proportionately distribute the revenue requirements to each user class. First, a cost allocation basis must be determined. To do so, wastewater generation for each user class is estimated. Single family customers have irrigation usage which needs to be considered to determine the amount of wastewater that they generate. Raftelis and District staff has estimated that on average, 90 percent of the winter water used by single family customers is returned to the sewer. 90 percent is also used for Commercial users. The return rate for MFR is 100 percent of their winter usage because this class generally has dedicated landscape meters, with water used indoors. Schools' water and wastewater flow is estimated based on the average daily attendance and type of school. The estimated water use for elementary, middle and high school students is 5, 10, 15 gpd per student based on data from the California State Water Resources Control Board. The water use and wastewater flows are shown in Table 8-4.

Table 8-4: Estimated Wastewater Generation

Customer Class	Estimated Water Use (kgal)	Estimated Return Factor	Estimated WW Flows (kgal)	% of WW Flows
Single Family - Winter	477,036	90%	429,332	72.75%
Multi-Family - Winter	127,518	100%	127,518	21.61%
Commercial - Annual	25,074	90%	22,567	3.82%
School	10,724	100%	10,724	1.82%
Total	640,352		590,141	100%

The total revenue requirement from Table 8-3 is allocated according to the percentage attributable to each class to determine the total cost to be recovered from each user class as shown in Table 8-5. It should be noted that customers in the commercial class may have different strengths; however, they contribute a very small amount of the total flow. Therefore, for simplicity, all customers are charged only on the basis of their wastewater flow. Percentage of WW flows are rounded to two decimal places.

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

Customer Class	Total Revenue Requirement	% of WW Flows	Class Total (\$)
Single Family	\$3,321,867	72.75%	\$2,416,684
Multi-Family	\$3,321,867	21.61%	\$717,791
Commercial	\$3,321,867	3.82%	\$127,026
School	\$3,321,867	1.82%	\$60,367

8.5. Fixed Vs. Variable Cost Recovery

Following cost of service principles, it is appropriate that fixed costs should be collected from fixed charges and variable costs should be collected from variable charges.

Therefore, the District's distribution of fixed and variable costs for FYE 2021 was used as the proxy to determine the revenue split between fixed and variable revenue recovery from residential users.

Raftelis determined that all District costs for operating and maintaining the wastewater collection system are fixed. Charges for LA San are treated as 100 percent variable.

The split of fixed and variable costs is therefore the ratio of the District's costs and LA San costs relative to total operating and capital costs. Using the O&M expenses, capitalized expenses, and capital project expenditures for FYE 2021 the split is 61 percent fixed and 39 percent variable.

9. Wastewater Rate Design and Derivation

9.1. Existing Rate Structure and Rates

The District's existing rate structure varies by customer class, but generally consists of a fixed bi-monthly service charge and a variable volumetric charge. Single Family Residential (SFR) and Multi-Family Residential (MFR) customers pay a fixed bi-monthly charge per dwelling unit (DU) and a volumetric wastewater flow charge component based on the average winter water use from the previous year. Commercial customers pay a variable volumetric wastewater flow charge component based on the amount of water used, with a minimum charge that is allocated to fixed costs. Schools pay a variable volumetric wastewater flow charge component based on the amount of water used.¹⁴ Accounts eligible and enrolled in the District's low water use program (less than 12 kgal per billing period) receive a 10 percent discount. The discount is paid for by District general funds. Current wastewater rates are shown in Table 9-1 and Table 9-2.

Table 9-1: Current Bi-Monthly Wastewater Service Charges (\$/DU)

Customer Class	Unit	Current Rates
Single Family	DU	\$47.79
Multi Family	DU	\$31.25
Commercial/Institutional	Account	\$31.25

Table 9-2: Current Wastewater Use Charges based on Water Use (\$/kgal)

Customer Class	Unit	Current Rates
Single Family	kgal	\$1.93
Multi Family	kgal	\$2.15
Commercial/Institutional	kgal	\$5.10
Primary School/Elementary	100 ADA	\$84.86
Middle School	100 ADA	\$169.73
Secondary School/Middle School	100 ADA	\$254.59

9.2. Rate Calculation & Proposed Rates

The proposed wastewater rate structure recovers revenue from fixed and variable charges, dependent on customer class and water use.

¹⁴ The school variable rates are based on average daily attendance (ADA). The charge is based upon 100 ADA as reported by Glendale Unified School District.

First, a fixed charge recovers the District's fixed costs from single family and multi-family residential customers generating revenue stability for the utility. Note that commercial customers are subject to the same minimum fixed charge as multi-family customers to ensure recovery of the fixed costs. Schools have no fixed charges.

The variable charge recovers variable costs and is charged based upon a customer's winter water use for single family and multi-family residential users and total water use for commercial users.

The fixed charge component recovers the fixed costs of operating the wastewater collection system and to withstand variability in water use. The variable charge component gives customers a degree of control over their wastewater bill. The fixed and variable charges are explained in additional detail below.

9.2.1. PROPOSED WASTEWATER SERVICE CHARGES (FIXED)

One of the characteristics of wastewater collection utilities is that most of the costs associated with the service are fixed. While the wastewater collection systems are designed to handle flows, they are generally oversized to accommodate ease of cleaning.

For purposes of allocation among customer classes, it is appropriate to allocate costs to the classes proportional to flow. However, since the majority of the costs are fixed, levying a fixed charge and a variable charge reflects the costs of providing service.

Table 9-3 shows the derivation of the proposed fixed charge. The fixed charge recovers all fixed costs as identified as fixed in Section 8.5. Residential costs are divided by the total number of dwelling units (DU) and billing periods (6) and multiplied by the fixed cost recovery percentage to determine the monthly fixed charge. The charge is rounded up to the nearest penny.

Non-residential customers are charged based on their water use. However, to ensure adequate recovery of the fixed costs, they are subject to a minimum fixed charge equal to the MFR fixed charge per billing period. That is, non-residential wastewater users will never pay less than the MFR fixed charge irrespective of water use.

The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 rates by the revenue adjustment shown in Table 7-10. All charges are rounded up to the nearest penny.

Table 9-3: Derivation of Bi-Monthly Fixed Service Charges (\$/DU or \$/account)

Customer Class	Cost of Service	Dwelling Units	Billing Periods	Fixed Cost		Proposed FYE 2022
				Recovery (%)	FYE 2021 COS	
Single Family	\$2,416,684	5,293	6	61%	\$46.50	\$50.23
Multi-Family	\$717,791	2,670	6	61%	\$27.38	\$29.58
Commercial *	\$127,026	N/A	6		\$27.38	\$29.58

* Commercial is subject to minimum charge

9.2.2. PROPOSED WASTEWATER USAGE CHARGES (VARIABLE)

Table 9-4 and Table 9-5 show the derivation of the wastewater usage charges. The variable charge recovers costs identified as variable in Section 8.5. Both residential and non-residential customers pay the variable charge on their water use. The variable charge is assessed on prior year winter water use for single family and multi-family residential customers and total water use for commercial customers.

SFR use is capped at 20 kgal per billing period and the MFR cap is 15 kgal per dwelling unit to recognize that usage above those caps may be irrigation usage. Costs for each class are divided by estimated FYE 2021 wastewater flows and multiplied by the variable cost recovery percentage to determine a rate per unit of water. Rates for Commercial are calculated as the total cost of service and divided by the estimated wastewater flow.

The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 COS rates by the revenue adjustment shown in Table 7-10. All rates are rounded up to the nearest whole penny.

Table 9-4: Derivation of Variable Usage Charges (\$/kgal)

Customer Class	Cost of Service	Variable Cost Recovery (%)	Wastewater Flow (kgal)	FYE 2021 COS, \$/kgal of wastewater	Estimated Water Use (kgal)	FYE 2021 COS, \$/kgal of water	Proposed FYE 2022
Single Family	\$2,416,684	39%	429,332	\$2.19	477,036	\$1.97	\$2.13
Multi-Family	\$717,791	39%	127,518	\$2.19	127,518	\$2.19	\$2.37
Commercial	\$127,026	100%	22,567	\$5.63	25,074	\$5.07	\$5.48
School	\$60,367	100%	10,724	\$5.63	10,724	\$5.63	See Table 9-5

School users are charged based upon increments of 100 students of the average daily attendance (ADA). Glendale Unified School District provides the ADA figures to the District each October. Table 9-5 shows the derivation of school usage charges per 100 ADA. Based on industry standards, primary schools are assumed to use 5 gallons per day (gpd) per student, middle schools are assumed to use 10 gpd, and high schools 15 gpd. For calculating the gallons per student, the school year is assumed to be 180 days. Note that the total annual water use, the cost to serve all schools, and the variable charge (\$/kgal) are the same as in Table 9-4.

The proposed FYE 2022 rates are calculated by multiplying the FYE 2021 rates by the revenue adjustment shown in Table 7-10. All rates are rounded up to the nearest whole penny.

Table 9-5: Derivation of School Usage Charges (\$/100 ADA)

Schools	GPD / Student	ADA	Annual Water Use (kgal)	% of Use	Cost of Service	Variable Rate (\$/kgal)	kgal / year / student	\$ / student / bill	FYE 2021 COS	Proposed FYE 2022
Elementary/Pre-K	5	1,849	1,664	16%	\$9,367	\$5.63	0.90	\$0.84	\$84.45	\$91.21
Middle School	10	1,183	2,129	20%	\$11,986	\$5.63	1.80	\$1.69	\$168.90	\$182.42
High School	15	2,567	6,931	65%	\$39,014	\$5.63	2.70	\$2.53	\$253.35	\$273.62
Total		5,599	10,724	100%	\$60,367					

Table 9-6 and Table 9-7 show the proposed wastewater service charges and wastewater usage charges for the Study period. Both charges are increased “across the board” in subsequent years – that is, relative to the calculated FYE 2021 rates – by the selected financial plan. All rates are rounded up to the nearest penny.

Table 9-6: Proposed Bi-Monthly Wastewater Service Charges (\$/DU or \$/account)

Customer Class	Unit	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
Single Family	DU	\$47.79	\$50.23	\$54.25	\$58.59	\$62.70	\$67.09
Multi Family	DU	\$31.25	\$29.58	\$31.95	\$34.51	\$36.93	\$39.52
Commercial/Institutional (minimum charge)	Account	\$31.25	\$29.58	\$31.95	\$34.51	\$36.93	\$39.52

Table 9-7: Proposed Wastewater Use Rates (\$/kgal of water)

Customer Class	Unit	Current Rates	Proposed October 2021	Proposed July 2022	Proposed July 2023	Proposed July 2024	Proposed July 2025
Single Family, winter water use	kgal	\$1.93	\$2.13	\$2.31	\$2.50	\$2.68	\$2.87
Multi Family, winter water use	kgal	\$2.15	\$2.37	\$2.56	\$2.77	\$2.97	\$3.18
Commercial/Institutional, actual water use	kgal	\$5.10	\$5.48	\$5.92	\$6.40	\$6.85	\$7.33
Primary School/Elementary	100 ADA	\$84.86	\$91.21	\$98.51	\$106.40	\$113.85	\$121.82
Middle School	100 ADA	\$169.73	\$182.42	\$197.02	\$212.79	\$227.69	\$243.63
Secondary School/Middle School	100 ADA	\$254.59	\$273.62	\$295.51	\$319.16	\$341.51	\$365.42

9.3. Customer Impacts

Figure 9-1 shows the impacts across the SFR customer class. The figure shows the current and proposed bills for low, average, and high-volume users. Under the proposed rates, water usage subject to the variable charge is capped at 20 kgal per billing period. The figure also displays the change in bill in dollar and percentage terms. Due to rounding in the calculations, some values may not add to the penny.

Figure 9-1: Bill Impacts - Single Family Residential

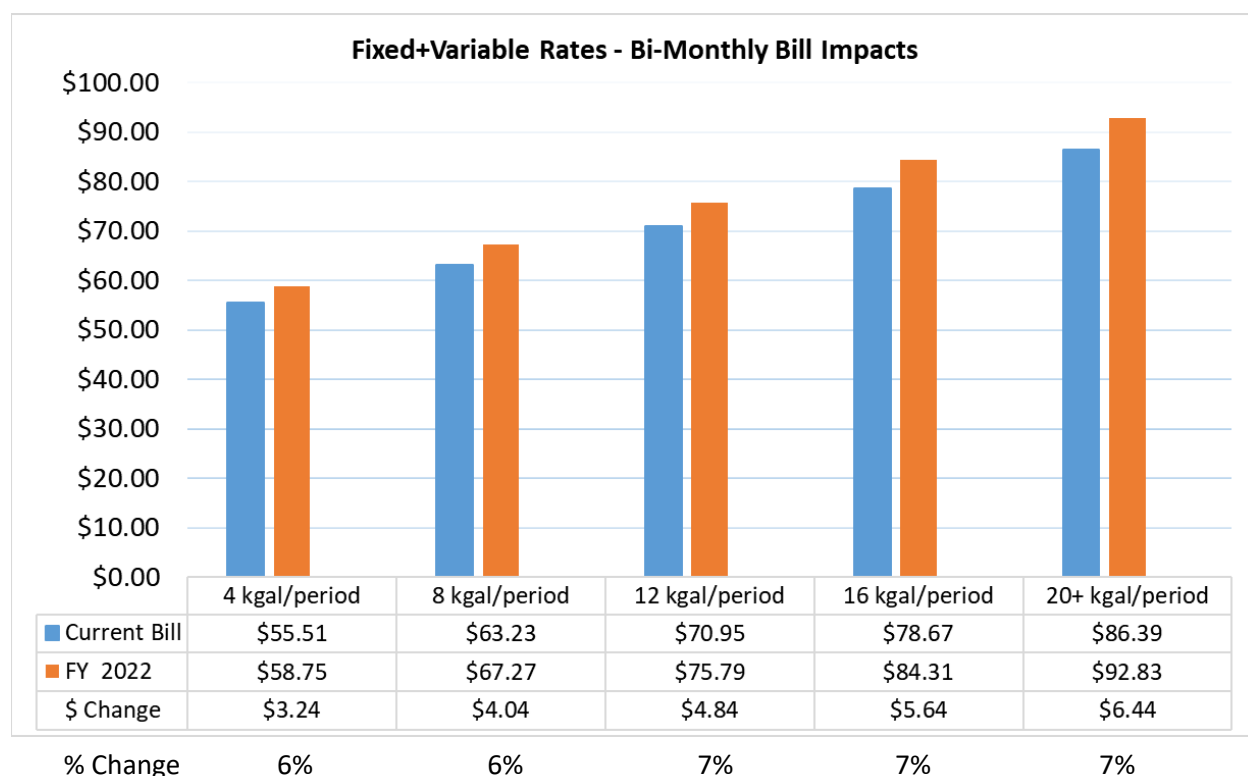


Figure 9-2 conveys the same information for MFR customers. MFR customers use less water on average and so their maximum billable usage is 15 kgal per billing period. An average user at approximately 8 kgal sees a negligible increase in their bill due to a reduction in the fixed charge.

Figure 9-2: Bill Impacts – Multi-Family Residential

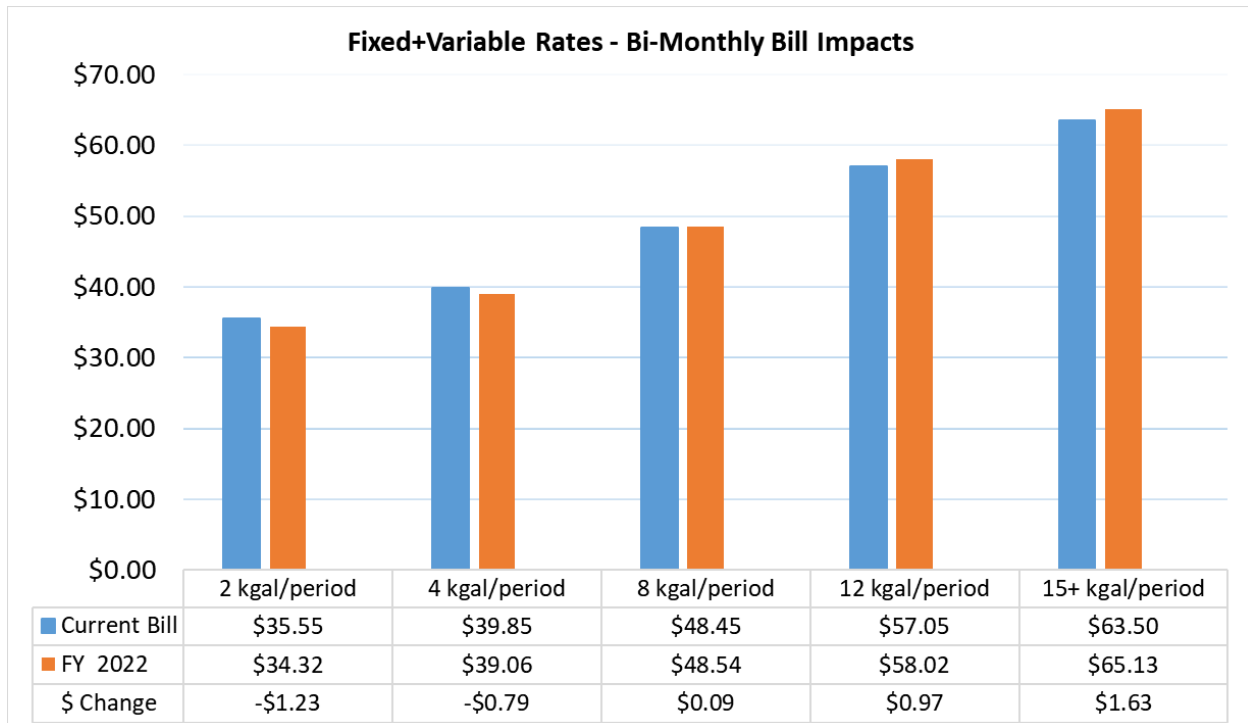
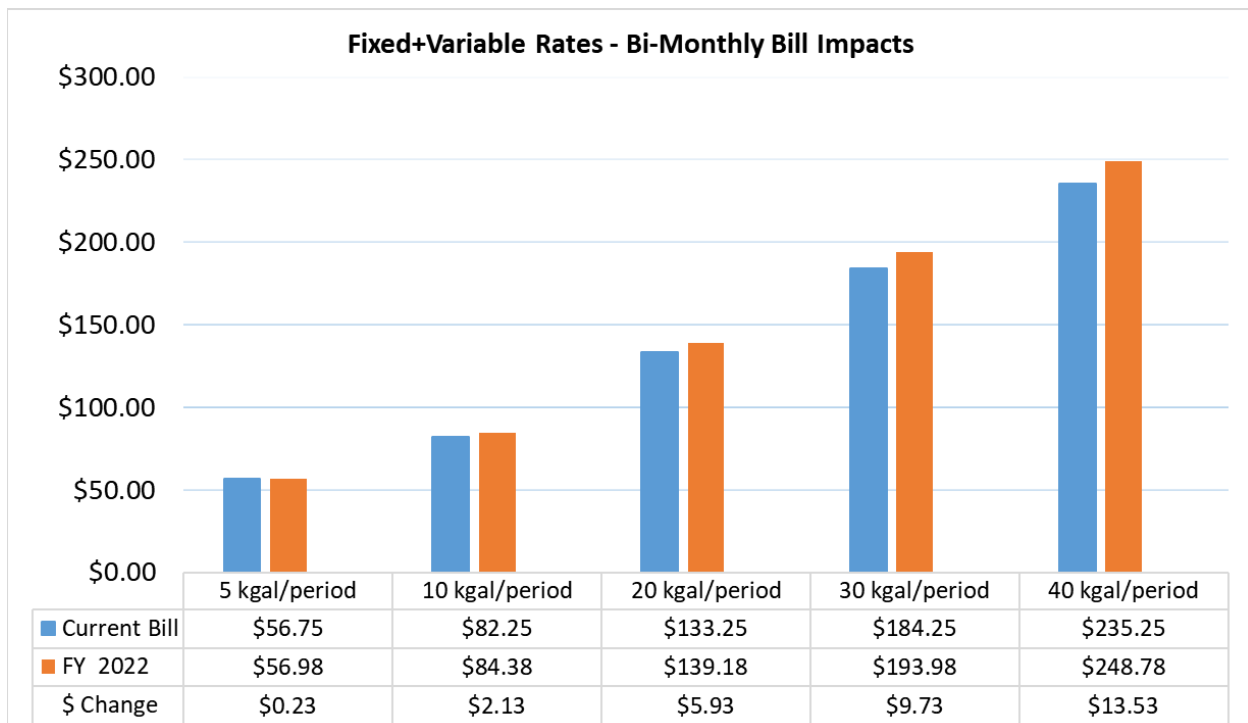


Figure 9-3 shows bill impacts for commercial customers. Commercial customers see small increases in their bills. The proposed rates maintain the current structure for commercial customers with a variable rate and a minimum charge equal to the fixed charge paid by a MFR customer. There is no cap on water use for commercial customers.

Figure 9-3: Bill Impacts – Commercial



CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 2
July 27, 2021

To: Honorable President and Members of the Board of Directors
From: Christy Colby – Regulatory and Public Affairs Manager
Subject: **Proposition 218 Notice**

ACTION ITEM:

Consideration and motion to approve the Proposition 218 Notice for mailing

BACKGROUND:

Proposition 218 requires that the District hold a public hearing for the creation or increase of any rates and fees (“property-related fees.”). As part of those regulations, the District is required to provide written notice by mail of the proposed fees or charges.

The Prop 218 notice has been presented at various meetings, the last of which was a Special Board Meeting held on July 20, 2021. The attached notice incorporates all comments received by staff and it would be sent ahead of a public hearing scheduled for September 21, 2021.

RECOMMENDATION

It is Staff’s recommendation that the Board approve the Prop 218 notice for mailing.

Prepared and Submitted by:



Christy J. Colby
Regulatory and Public Affairs Manager

Attachment(s):

1. Proposition 218 Notice



PUBLIC NOTICE OF PROPOSED INCREASE IN WATER AND WASTEWATER RATES AND CHARGES

Public Hearing to be held on Tuesday, September 21, 2021, at 6:00 p.m.

This meeting will be by Teleconference Only – Details on last page

Crescenta Valley Water District (CVWD) is considering a 3-year (multi-year) water and wastewater rate increase

Let's talk about Water Rates and Long-Term Infrastructure Reliability

The CVWD Board of Directors and the community have discussed the Long-Term Infrastructure and Funding Roadmap since early 2020. Through the Roadmap process, participants became acutely aware of a significant issue the District is facing and the estimated cost to address it. With much of our infrastructure built in the 1950s, a considerable portion of it is approaching or has exceeded its life expectancy. The CVWD Board is committed to a long-term plan to address the problem of deferred work on pipelines, wells, reservoirs, and other infrastructure in order to continue providing safe and reliable water to our customers.

Pipelines are the backbone of our infrastructure as they convey water to customers, and pipelines represent the most significant replacement costs. Based on this, the District is implementing a replacement program over the next 20 years that will replace the oldest pipelines as they exceed their life expectancy. This plan needs funding, and the Board has elected to present a three-year rate increase to support a commitment to long-term planning and infrastructure reliability.

Some Quick Water Facts

- 45% of our water pipelines are between 50-80 years old.
- The average age of our pipelines is 46 years old.
- Our oldest pipe in operation was installed in 1933.
- The 20-year Pipeline Replacement program will start at 1.2 miles of pipe replacement and then “ramp-up” each year by a ¼ mile for the next 10 years. After 10 years the rate of replacement will decrease each year until the 20-year program is complete. This approach allows the District to build reserves and use these funds to pay for pipeline replacement rather than using more expensive bond financing.
- If the District kept pipeline replacement at a rate of ½ mile per year, there would be pipes in the ground nearly 200 years, which increases the risk of failure. Emergency pipeline replacement is much more expensive.
- Much of the District’s infrastructure is reaching the end of its useful life—about 80 years—and must be replaced.

A Focus on Long-Term Infrastructure and Financial Planning

Since last year, the District has continued to update and add critical information on this topic, including:

- An analysis of escalation for pipeline replacement costs over the past 20 years
- An analysis of pipeline age
- Future non-pipeline Capital Improvement Projects (CIP) needs such as wells
- The financial cost of bonds and the various risks and benefits of issuing them
- 10-year financial planning scenarios
 - A “level” plan that replaces 2.1 miles of pipe each year for the next 20 years
 - A “ramp-up” plan that begins at 1.2 miles and gradually increases to 2.9 miles over 10 years and then reduces to 1.5 miles at the end of 20 years, then continues at 1.2 miles per year
- Funding CIP through PayGo (pay as you go) or bonds (financing)

Following considerable discussion, the Board elected to present a long-term PayGo plan with the “ramp-up” option for infrastructure replacement and minimize the long-term costs to the District, and the proposed multi-year rate increase supports this long-term plan.

The District has commissioned an independent cost-of-service study completed this fiscal year. A cost-of-service study ensures that costs are recovered equitably by distributing costs among customer classes according to the costs they impose on the water and wastewater systems. A cost-of-service study is completed periodically as a best practice, because cost drivers for each customer class change over time e.g. water usage, sources of water supply, treatment.

**As a public agency, the District cannot earn a profit
from the services it provides.**

**The District must charge no more than the actual costs
associated with providing services to its customers.**

Let's talk about Wastewater and the Cost of Treatment

The wastewater system's primary expense is the cost paid to the City of Los Angeles for treating the wastewater that is collected in the District's service area and sent to Los Angeles' treatment plant. This comprises almost half of all operating costs. The City of Los Angeles' fees have increased by over 60% over the last 2 years. Other major cost drivers include the maintenance of the wastewater collection system and the sewer interceptor line that transports all CVWD's wastewater to the City of Los Angeles' treatment plant in Glendale, California.

Some Quick Wastewater Facts

- 1.5 million gallons per day of wastewater
- 71 miles of sewer pipe
- 1 lift station
- \$1.9 million paid to the City of Los Angeles for wastewater treatment for the 2020/2021 fiscal year

CVWD Regularly Reduces Costs

The District is committed to efficient operations and evaluates every opportunity to reduce expenses. CVWD has significantly reduced operational expenses through savings programs such as implementing cross-training of personnel to meet operational needs. CVWD also regularly renegotiates long-term contracts. CVWD is moving toward a long-term planning horizon, and one of the benefits will be the ability to secure better terms on infrastructure construction contracts which are associated with addressing deferred aging infrastructure. Additionally, the following represent several significant savings efforts:

- Elimination of 6 full-time positions from 33 to 27 representing more than \$800K net savings every year going forward.
- Refinancing of debt represents \$63K savings annually for the next 15 years.

Why Is There a Need for Rate Increases?

A great deal of infrastructure and system operations is involved in delivering safe and reliable water to customers' homes. For example, groundwater is pumped from wells, and for the remaining demand, raw water is delivered through a vast system of infrastructure from Northern California or the Colorado River. This water is purchased at a premium. The water is treated to stringent State and Federal drinking water standards. Power from SoCal Edison and Glendale Water & Power is used to treat and pump the water to reservoirs that feed into a distribution system and into your homes. Maintenance and operations crews respond to service requests and emergencies whether leaks, sink holes, or main breaks. Fire hydrants are maintained to ensure fire protection.

These are the primary cost drivers, and as with any good or service subject to standard inflation, the cost for these drivers increases on average, 3%-5% annually.

As discussed earlier, aging pipes, reservoirs, pumps, wells and other District assets that are 80 years or older need replacement to avoid critical system failures. The District is committed to securing future service reliability and avoiding financial and safety risks associated with critical system failures. In addition to inflation, a component of the rates needs to be set aside to address long-deferred repair and replacement of infrastructure.

WATER BILL IMPACT (IF APPROVED)	WASTEWATER BILL IMPACT (IF APPROVED)
If new rates are approved, a water bill for a typical residence with a 3/4-inch water meter using 18 units of water (18,000 gallons) during a two-month billing period would increase by \$14.47, from \$170.92 to \$185.39.	If new rates are approved, a wastewater bill for a typical residence with a 3/4-inch meter using 10 units of water (10,000 gallons) during a two-month winter billing period would increase by \$4.44, from \$67.09 to \$71.53.

TO ESTIMATE YOUR PROPOSED NEW WATER BILL, GO TO
WWW.CVWD.COM

CVWD provides both Water and Wastewater services in the community.

Not all customers receive both services from the District.

This notice applies to all customers who pay
their water and/or wastewater bills to CVWD.

Effective Date: If approved, the increased rates will become effective on all rates and charges on any bill generated after October 1, 2021 for the first year , July 1, 2022 for the second year, and July 1, 2023 for the third year.

PROPOSED WATER RATE CHANGES

Water Meter Rates and Charges

Meter charges ensure that water is available for use at your tap whenever you need it, much like phone, cable, power or other utilities. Also known as fixed charges, they help pay for costs associated with operating and maintaining CVWD's water treatment and delivery system, and they are based on meter size.

<u>Meter Charges (per bi-monthly period) by size</u>	<u>Current Rate</u>	<u>Proposed Rates</u>		
		<u>10/1/2021</u>	<u>7/1/2022</u>	<u>7/1/2023</u>
¾"	\$54.10	\$58.39	\$63.07	\$68.12
1"	\$80.69	\$86.37	\$93.28	\$100.75
1 ½"	\$147.19	\$156.32	\$168.83	\$182.34
2"	\$227.01	\$240.27	\$259.50	\$280.26
3"	\$479.92	\$506.09	\$546.58	\$590.31
4"	\$852.17	\$897.83	\$969.66	\$1,047.24

* Nearly all Single Family Homes have a ¾" meter.

Fire Protection Charges*

Fire protection charges are for private fire services and provide readiness for fire protection.

<u>Fire Protection Charges (per bi-monthly period) by size</u>	<u>Current Rate</u>	<u>Proposed Rates</u>		
		<u>10/1/2021</u>	<u>7/1/2022</u>	<u>7/1/2023</u>
1"	\$15.85	\$18.15	\$19.61	\$21.18
2"	\$24.46	\$27.16	\$29.34	\$31.69
3"	\$44.05	\$47.62	\$51.43	\$55.55
4"	\$77.83	\$82.93	\$89.57	\$96.74
6"	\$199.05	\$209.61	\$226.38	\$244.50
8"	\$408.15	\$428.13	\$462.39	\$499.39
10"	\$722.67	\$756.83	\$817.38	\$882.78

*Fire protection charges and irrigation rates typically do not apply to Single Family Homes.

Usage Rates And Charges

Usage rates cover costs that vary based on the amount of water delivered, such as imported water and electricity costs. These rates are separated into three tiers for single-family residential customers. The rates are uniform for multi-family, commercial and schools. The rates are separated into two tiers for irrigation customers. All rates are based on bi-monthly usage (1 unit = 1,000 gallons).

<u>Usage Charges (per bi-monthly Period)</u>	<u>Current Rate (per unit)</u>	<u>Proposed Rate Effective</u>		
		<u>10/1/2021</u>	<u>7/1/2022</u>	<u>7/1/2023</u>
Tier 1 (1 to 10 units)	\$5.17	\$5.10	\$5.51	\$5.96
Tier 2 (11 to 26 units)	\$8.14	\$9.50	\$10.26	\$11.09
Tier 3 (27 units and up)	\$12.29	\$13.39	\$14.47	\$15.63
<u>Multi-Family, Commercial and Schools</u>	\$7.33	\$8.10	\$8.75	\$9.45

<u>Irrigation*</u>	<u>Current Rate (per unit)</u>	<u>Proposed Rate Effective</u>		
		<u>10/1/2021</u>	<u>7/1/2022</u>	<u>7/1/2023</u>
Tier 1 (1 to 80 units)	\$5.66	\$5.39	\$5.83	\$6.30
Tier 2 (81 units and above)	\$10.89	\$10.18	\$11.00	\$11.88

Service addresses located within the Glendale annex area pay a \$0.40 tax per two-month bill, collected by CVWD and paid to the City of Glendale.

PROPOSED WASTEWATER RATE CHANGES

SEWER: HOW IS MY WASTEWATER BILL DETERMINED?

The amount of wastewater put into the District's collection system is estimated based on the prior year's winter water usage, when outdoor water is used less. This usage — up to a two-month maximum of 20 units (20,000 gallons) for a single-family residence — is used to determine the bill for the next 12 months. Winter Water Usage consists of the 2-month billing period that falls in the range of January through March, depending on the billing cycle.

<u>Single-Family Residence (per bi-monthly period)</u>	Current Rate	10/1/2021	Proposed Rates	
			7/1/2022	7/1/2023
Service Charge	\$47.79	\$50.23	\$54.25	\$58.59
Usage Rate - maximum of 20 units based on prior-year average winter water use. (New Single Family Residence accounts are assessed based on 8 units until winter water use can be established.)	\$1.93 (Per Unit)	\$2.13 (Per Unit)	\$2.31 (Per Unit)	\$2.50 (Per Unit)
<u>Multi-Family Residence (per bi-monthly period)</u>	Current Rate	10/1/2021	Proposed Rates	
			7/1/2022	7/1/2023
Service Charge per Equivalent Dwelling Unit (EDU)	\$31.25	\$29.58	\$31.95	\$34.51
Usage Rate - maximum of 15 units per EDU based on prior-year average winter water use	\$2.15 (Per Unit)	\$2.37 (Per Unit)	\$2.56 (Per Unit)	\$2.77 (Per Unit)
<u>Commercial / Institutional (per bi-monthly period)</u>	Current Rate	10/1/2021	Proposed Rates	
			7/1/2022	7/1/2023
Minimum Charge per Account	\$31.25	\$29.58	\$31.95	\$34.51
Usage Rate - maximum of 15 units per EDU based on prior-year average water use	\$5.10 (Per Unit)	\$5.48 (Per Unit)	\$5.92 (Per Unit)	\$6.40 (Per Unit)
<u>All Schools (per bi-monthly period)</u> <u>ADA (Average Daily Attendance)</u>	Current Rate	10/1/2021	Proposed Rates	
			7/1/2022	7/1/2023
Elementary School – Usage Rate per 100 ADA	\$84.86	\$91.21	\$98.51	\$106.40
Middle School – Usage Rate per 100 ADA	\$169.73	\$182.42	\$197.02	\$212.79
High School – Usage Rate per 100 ADA	\$254.59	\$273.62	\$295.51	\$319.16

Effective Date: If approved, the increased rates will become effective on all rates and charges on any bill generated after each effective date.

PROTEST LETTERS:

Any CVWD customer or property owner within the CVWD water or wastewater service area may file a written protest of the proposed rate changes by sending a letter or dropping off a letter to: CVWD's main office, 2700 Foothill Boulevard, La Crescenta, CA 91214. A valid protest letter must include your name, a CVWD service address, a statement of protest, and an original signature. Only one written protest per parcel, filed by an owner or tenant, will be counted. For your convenience, there is a protest form available at www.cvwd.com. You may email a copy of your signed protest letter to customerservice@cvwd.com. All protests must be received by September 21, 2021 at 6:00 p.m. Protest letters received prior to September 16, 2021 at noon will be included in the agenda package distributed to the Board of Directors and posted online at www.cvwd.com.

WHEN WILL THE CVWD BOARD OF DIRECTORS CONSIDER ADOPTION OF NEW RATES AND CHARGES?

The Public Hearing will be held on Tuesday, September 21, 2021, at 6:00 p.m. The hearing will be held through teleconference. The District will post this information for the Public Hearing on the website, www.cvwd.com. You may also call CVWD at (818) 248-3925 to obtain more information.

Join the Zoom meeting <https://us02web.zoom.us/j/88187441421>, **Meeting ID: 881 8744 1421** or call (669) 900-6833

The Board of Directors will meet on September 28, 2021, at 7:00 p.m. to consider the proposed rate changes through teleconference. The Board may adopt, reject, or modify the proposed rate structure. The Board cannot legally increase rates and charges more than indicated in this notice.

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting Christy Colby by phone at (818) 248-3925 or in writing at customerservice@cvwd.com. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

QUESTIONS?

This notice and the cost-of-service study are available on the CVWD website, www.cvwd.com, or at the CVWD main office. CVWD staff can assist in answering any questions about your bill between 7:30 a.m. and 4:00 p.m., Monday through Friday. If you have questions or need additional information, please call CVWD at (818) 248-3925 or e-mail customerservice@cvwd.com.

**IMPORTANT PROPOSED RATE
INFORMATION ENCLOSED**

Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, CA 91214

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No.
July 27, 2021

To: Honorable President and Members of the Board of Directors
From: James Lee – Director of Finance and Administration
Subject: **Appeal of a High Water Bill – 5914 Canyonside Rd.**

ACTION ITEM:

Consideration and possible action to grant a request for relief from a high water bill by Janet Tenney at 5914 Canyonside Rd.

BACKGROUND:

Ms. Janet Tenney is the owner of the property located at 5914 Canyonside Road. The property has a series of four leaks since 2015. Ms. Tenney is requesting relief from a high water bill due to the most recent leak, which is significantly greater than past leaks and has also persisted over several billing periods.

On April 20, 2021, Customer Service let Ms. Tenney know in person, over the phone, and by mail about a 2.0 gallons per minute (gpm) leak, which had been determined when staff downloaded the meter based on an unusually high read. She was upset that she had not been informed earlier. Staff explained that a meter download had been performed, and it was the soonest the leak could have been identified since the District does not have automated meter reading. In similar situations, the Board has directed staff to recalculate the bill in question, charging only Tier 2 rates for all usage over the average consumption for that period. Staff has authority to provide one credit up to \$300 during the life of an account and provided Ms. Tenney a credit adjustment to a past leak from October 2019 in the amount of \$227.37 based on this methodology and also provided an amortization plan for the account balance.

Ms. Tenney subsequently received a past due notice and let staff know she was upset that she received it, was not able to contact staff, and could not pay her bill of \$1,834.44. This high balance is associated with the leak identified on April 20. Staff requested that she provide a letter requesting relief along with documentation of the leak being repaired, as is customary. In the letter, she expressed being upset that the District would not repair her leak. Canyonside Road is a private street with a long lateral that begins at an island in the middle of the street and crosses the street to the property. The District does not take responsibility for the customer's side of the meter.

On June 14, 2021, Customer Service read her meter for the June billing, noticed another unusually high read and downloaded the meter again. The meter showed a 2.25 gpm leak. Staff recognized that Ms. Tenney had made all the remediating measures she could and exercised discretion to assist her in locating the leak. Staff arranged to meet the plumber who had invoiced her for the leak repair and her family representative at the property. Maintenance staff located where the leak likely was, informed the plumber where they might consider digging, and determined that the plumber had not performed the repair as shown on the invoice.

Ms. Tenney subsequently had the repair completed, and staff confirmed through a final download on June 23, 2021 that the leak had been repaired. During this time, Ms. Tenney received her June bill in the amount of \$3,747.85. Although an adjustment credit has been provided for this account, an additional consideration is being requested of the Board based on extenuating circumstances.

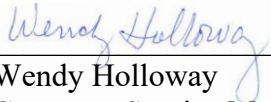
The average consumption for the April and June billing periods for this account is 44 units and 53 units, respectively. Total consumption in Tier 3 was 147 units for the April period and 162 units for the June

period. The extra 309 units would be billed at the Tier 2 rate of \$8.14/unit as opposed to the Tier 3 rate of \$12.29/unit. Staff has prepared a “re-calculated billing”, which shows that the total difference would be \$1,282.35.

RECOMMENDATION

Staff recommends that the Board consider Ms. Tenney’s request for additional relief.

Prepared by:


Wendy Holloway
Customer Service Manager

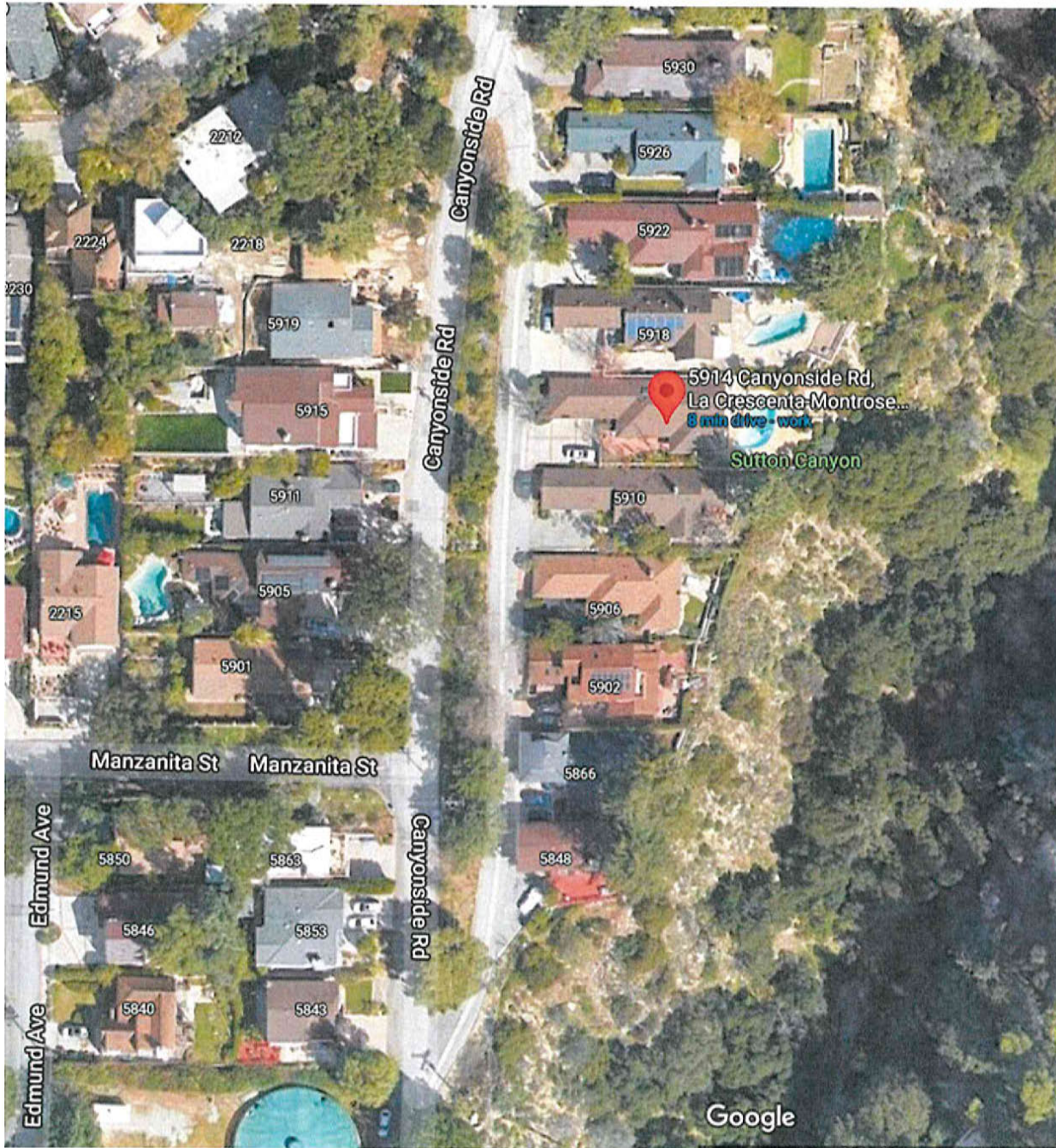
Submitted by:


James Lee
Director of Finance & Administration

Attachment(s):

- 1) Property map
- 2) Usage history
- 3) April 2021 bill, download, and adjusted statement
- 4) June 2021 bill, download, and adjusted statement
- 5) Relief request letter and repair invoice
- 6) Email communication 1
- 7) Email communication 2
- 8) Recent history of service requests

Attachment 1



Attachment 2



USAGE HISTORY

Date: 7/22/21

Current Customer: 028885-000

Meter # 79750656

Name: Janet Tenney

Address: 5914 Canyonside

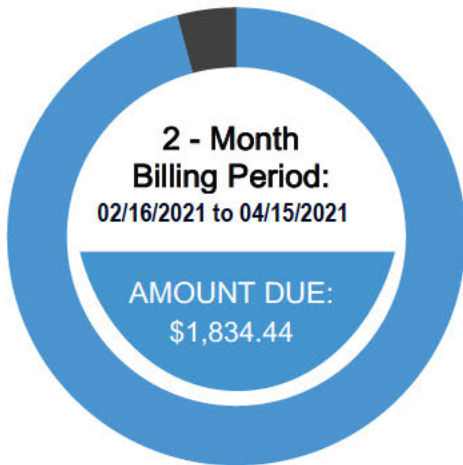
<u>2021</u>		<u>2020</u>		<u>2019</u>		<u>2018</u>		<u>2017</u>	
Jan		Jan		Jan		Jan		Jan	
Feb	20	Feb	108	Feb	44	Feb	53	Feb	34
Mar		Mar		Mar		Mar		Mar	
Apr	173	Apr	44	Apr	40	Apr	49	Apr	41
May		May		May		May		May	
Jun	188	Jun	45	Jun	66	Jun	48	Jun	46
Jul		Jul		Jul		Jul		Jul	
Aug	0	Aug	39	Aug	59	Aug	41	Aug	54
Sept		Sept		Sept		Sept		Sept	
Oct	0	Oct	48	Oct	91	Oct	44	Oct	78
Nov		Nov		Nov		Nov		Nov	
Dec	0	Dec	41	Dec	61	Dec	38	Dec	43



UTILITY SERVICES STATEMENT - TWO - MONTH BILLING PERIOD

CRESCENTA VALLEY WATER DISTRICT • 2700 FOOTHILL BLVD • LA CRESCENTA CA 91214-3590

Customer Name	Account Number	Service Address	Billing Date	Due Date
Janet Tenney	028885-000	5914 Canyonside	04/15/2021	UPON RECEIPT



WATER

\$ 2,042.67



SEWER

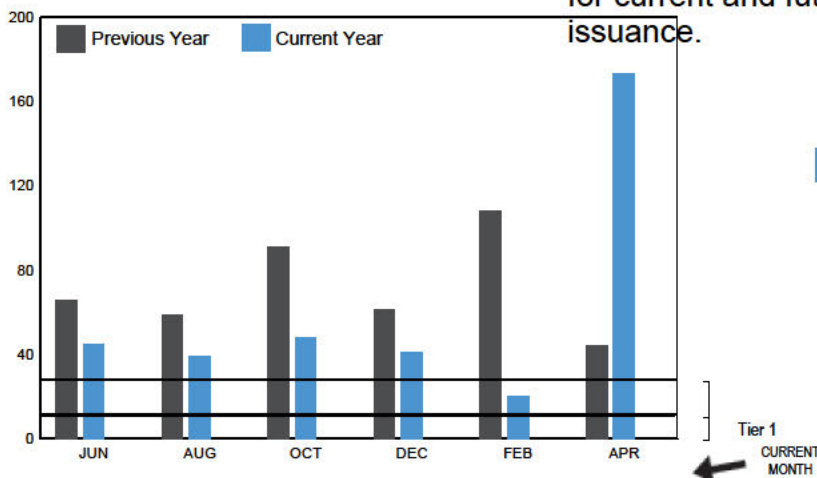
\$ 86.39

Attachment 3

MESSAGE CENTER

The CVWD Board of Directors has voted to cancel water and wastewater rate increases for the 2020/2021 fiscal year. To help mitigate the financial impact to the District in the most economically responsible manner, the District reduced and deferred spending to the extent possible without impacting water quality, reliability, and customer service. Areas of cost savings included permanent workforce reduction, increased operational efficiency, and deferred maintenance. The District was also able to take a step towards greater long-term infrastructure reliability for current and future generations by securing a new bond

USAGE HISTORY



WATER USAGE INFORMATION

METER #: 79750656

METER SIZE: 3/4"

Days of Service	Previous Read	Current Read
~58	1329	1502
Prev Year Usage (Units)	Current Usage (Units)	
44	173	

1 Unit = 1,000 gallons

PAY ONLINE AT: www.cvwd.com



CRESCENTA VALLEY
WATER DISTRICT
2700 FOOTHILL BLVD
LA CRESCENTA CA 91214-3590

ACCOUNT INFORMATION

ACCOUNT NUMBER: 028885-000

SERVICE ADDRESS: 5914 Canyonside

CSQ0426A 487 1 AV 0.398
7000000505 00.0005.0025 487/1



JANET TENNEY
5914 CANYONSIDE
LA CRESCENTA CA 91214-1507

CURRENT CHARGES	PAST DUE BALANCE	AMOUNT DUE
\$2,129.06	\$0.00	\$1,834.44
DUE UPON RECEIPT		AMOUNT PAID

Additional Information on Reverse

Please Make Checks Payable and Remit to



CRESCENTA VALLEY WATER DISTRICT
2700 FOOTHILL BLVD
LA CRESCENTA, CA 91214-3590

Previous Activity

Last Bill:	-\$119.62
Payment:	\$175.00
Adjustments:	\$0.00
Past Due Amount:	\$0.00
Fees and Fines	\$0.00

Billing Detail

WATER



Water Service Charge	54.10
Water Usage Charges	
Tier 1 - 10 x \$5.17 (Basic Usage 0-10 Units)	51.70
Tier 2 - 16 x \$8.14 (Average Usage 11-26 Units)	130.24
Tier 3 - 147 x \$12.29 (High Usage - 27 + Units)	1,806.63
Total Water	\$2,042.67

SEWER



Sewer Service Charge	47.79
Sewer Flow Charge (Winter Water Usage)	38.60

Total Sewer \$86.39

TOTAL AMOUNT DUE: \$1,834.44

A Late fee will be assessed 45 days after the billing date if payment has not been received.

IF ANY OF THE FOLLOWING HAVE CHANGED PLEASE FILL IN BELOW:

Mailing Address _____

Home Phone _____

Work Phone _____

Cell Phone _____

Email Address _____

CRESCENTA VALLEY WATER DISTRICT

2700 FOOT HILL BOULEVARD
LA CRESCENTA, CALIFORNIA 91214

BILLING INQUIRIES: (818) 248-3925
OFFICE HOURS: MON - FRI 8:00 AM - 4:30 PM
24 HR. EMERGENCY #: (818) 248-3925

FOR MORE INFORMATION
VISIT OUR WEB SITE AT
www.cvwd.com

CUSTOMER INFORMATION

METER READINGS

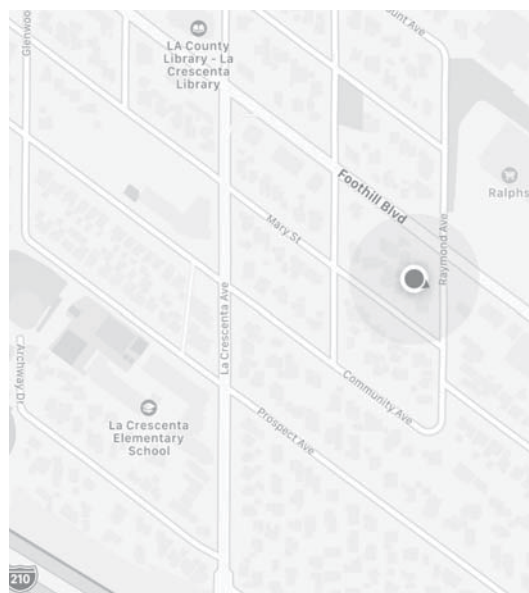
Safe access to the meter helps us provide you with accurate billing. The water meter is the property of Crescenta Valley Water District and within a public easement. Please DO NOT construct anything near, over or around the meter that would interfere with regular access by CVWD employees. All vegetation must be controlled so as not to obstruct or cover the meter box. Hazardous materials (solvent, oil, paint, etc.) may not be placed in the meter box as they may contaminate the water.

WHEN YOU NEED OUR METER TURNED OFF

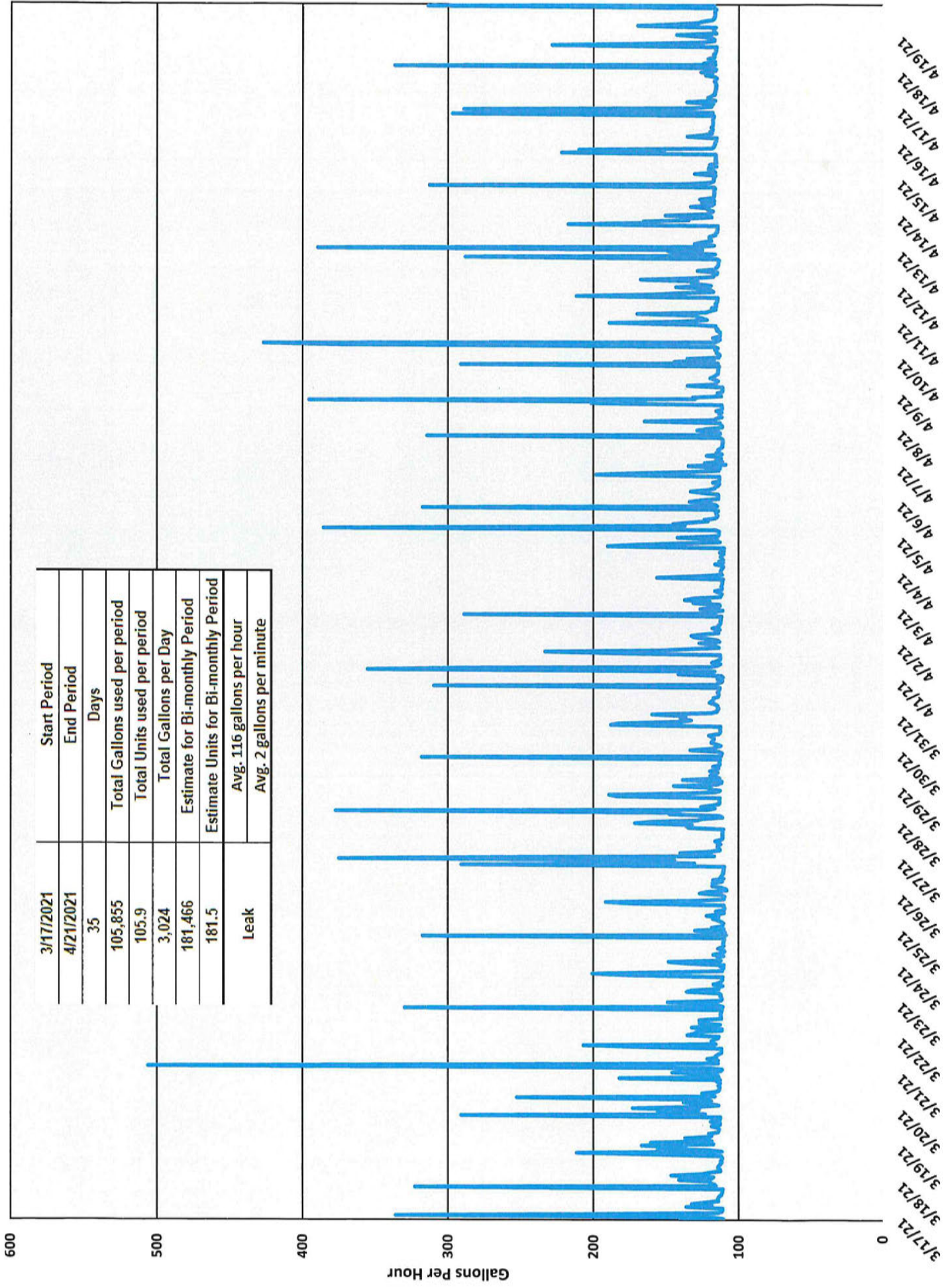
Please call our office anytime you need our meter turned off. This service is available at no charge 24 hours a day, 7 days a week. A Service Representative will be dispatched out to turn the meter off. When you are ready to have the water turned back on, just call our office again. Please DO NOT turn off our meter. Should you attempt to turn off our meter and cause damage, you will be charged any necessary repairs.

CWVD is responsible for the water line in the street and for the water line to our meter. We also maintain the valve, meter box and lid. Any repair past our meter towards the property is the customer's responsibility.

If you have a dispute regarding the billing you may notify the District within 30 days of receipt.



Water Use for 5914 Canyonside from 03/17/21 to 04/20/21



CRESCENTA VALLEY
WATER DISTRICT
2700 FOOTHILL BLVD
LA CRESCENTA, CA 91214-3590

ACCOUNT NUMBER	SERVICE ADDRESS
028885-000	5914 Canyonside
DUE DATE	
	02/16/21 to 04/15/21
TOTAL CHARGES	AMOUNT ENCLOSED
\$1,224.39	\$

Janet Tenney
5914 Canyonside Road
La Crescenta, CA 91214

CRESCENTA VALLEY WATER DISTRICT
2700 FOOTHILL BLVD.
LA CRESCENTA CA 91214-3590

DETACH AND RETURN THIS PORTION WITH YOUR PAYMENT

KEEP THIS PORTION FOR YOUR RECORDS

ADJUSTED STATEMENT

ACCOUNT NUMBER	SERVICE ADDRESS	DUE DATE	BILLING PERIOD
028885-000	5914 Canyonside		02/16/21 to 04/15/21
METER NUMBER	CURRENT READ	PRIOR READ	USAGE
79750656	1502	1329	173

SUMMARY OF CHARGES

Previous Balance	(\$119.62)
Payment	(\$175.00)
Tier 1 - 10 x \$5.17 (Basic Usage 0-10 Units)	\$51.70
Tier 2 - 16 x \$8.14 (Average Usage 11-26 Units)	\$130.24
Tier 3 -147 x \$8.14 (High Usage 27 + Units)	\$1,196.58
Water Service Charge	\$54.10
Sewer Service Charge	\$47.79
Sewer Flow Charge (Winter Water Use)	\$38.60

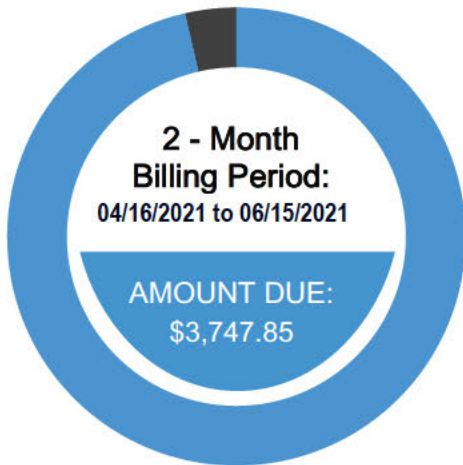
TOTAL DUE **\$1,224.39**



UTILITY SERVICES STATEMENT - TWO - MONTH BILLING PERIOD

CRESCENTA VALLEY WATER DISTRICT • 2700 FOOTHILL BLVD • LA CRESCENTA CA 91214-3590

Customer Name	Account Number	Service Address	Billing Date	Due Date
Janet Tenney	028885-000	5914 Canyonside	06/15/2021	UPON RECEIPT



WATER

\$ 2,227.02



SEWER

\$ 86.39

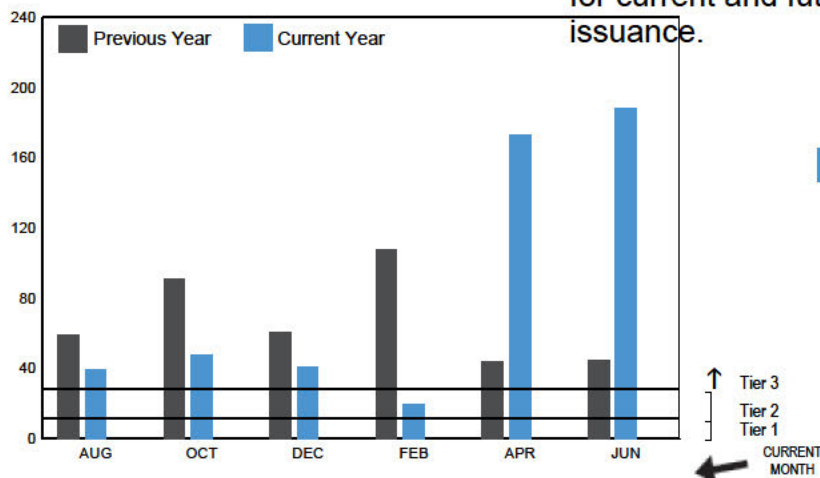
Attachment 4

MESSAGE CENTER

The CVWD Board of Directors has voted to cancel water and wastewater rate increases for the 2020/2021 fiscal year. To help mitigate the financial impact to the District in the most economically responsible manner, the District reduced and deferred spending to the extent possible without impacting water quality, reliability, and customer service. Areas of cost savings included permanent workforce reduction, increased operational efficiency, and deferred maintenance. The District was also able to take a step towards greater long-term infrastructure reliability for current and future generations by securing a new bond

issuance.

USAGE HISTORY



WATER USAGE INFORMATION

METER #: 79750656

METER SIZE: 3/4"

Days of Service	Previous Read	Current Read
~60	1502	1690
	Prev Year Usage (Units)	Current Usage (Units)
	45	188

1 Unit = 1,000 gallons

PAY ONLINE AT: www.cvwd.com



**CRESCENTA VALLEY
WATER DISTRICT**
2700 FOOTHILL BLVD
LA CRESCENTA CA 91214-3590

CURRENT CHARGES	PAST DUE BALANCE	AMOUNT DUE
\$2,313.41	\$1,434.44	\$3,747.85
DUE UPON RECEIPT		AMOUNT PAID

ACCOUNT INFORMATION

ACCOUNT NUMBER: 028885-000

SERVICE ADDRESS: 5914 Canyonside

CSQ0623A 490 1 AV 0.398
7000000508 00.0005.0025 490/1



JANET TENNEY
5914 CANYONSIDE
LA CRESCENTA CA 91214-1507

Additional Information on Reverse

Please Make Checks Payable and Remit to



CRESCENTA VALLEY WATER DISTRICT
2700 FOOTHILL BLVD
LA CRESCENTA, CA 91214-3590

Previous Activity

Last Bill:	\$1,834.44
Payment:	\$400.00
Adjustments:	\$0.00
Past Due Amount:	\$1,434.44
Fees and Fines	\$0.00

Billing Detail

WATER



Water Service Charge	54.10
Water Usage Charges	
Tier 1 - 10 x \$5.17 (Basic Usage 0-10 Units)	51.70
Tier 2 - 16 x \$8.14 (Average Usage 11-26 Units)	130.24
Tier 3 - 162 x \$12.29 (High Usage - 27 + Units)	1,990.98
Total Water	\$2,227.02

SEWER



Sewer Service Charge	47.79
Sewer Flow Charge (Winter Water Usage)	38.60
Total Sewer	\$86.39

TOTAL AMOUNT DUE: **\$3,747.85**

A Late fee will be assessed 45 days after the billing date if payment has not been received.

IF ANY OF THE FOLLOWING HAVE CHANGED PLEASE FILL IN BELOW:

Mailing Address _____

Home Phone _____

Work Phone _____

Cell Phone _____

Email Address _____

CRESCENTA VALLEY WATER DISTRICT

2700 FOOT HILL BOULEVARD
LA CRESCENTA, CALIFORNIA 91214

BILLING INQUIRIES: (818) 248-3925
OFFICE HOURS: MON - FRI 7:30 AM - 4:00 PM
24 HR. EMERGENCY #: (818) 248-3925

FOR MORE INFORMATION
VISIT OUR WEB SITE AT
www.cvwd.com

CUSTOMER INFORMATION

METER READINGS

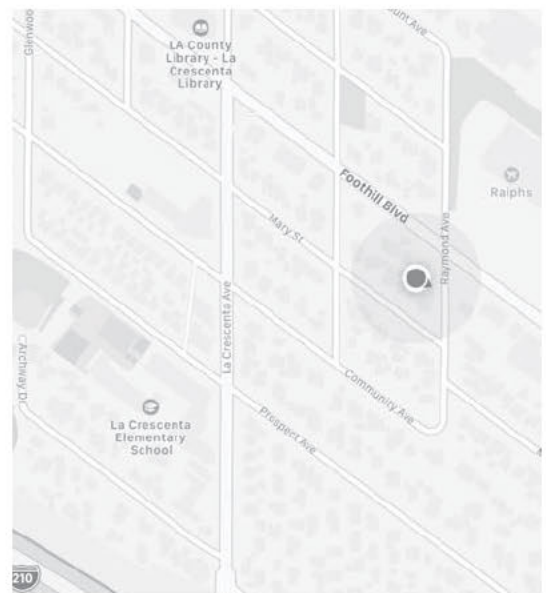
Safe access to the meter helps us provide you with accurate billing. The water meter is the property of Crescenta Valley Water District and within a public easement. Please DO NOT construct anything near, over or around the meter that would interfere with regular access by CVWD employees. All vegetation must be controlled so as not to obstruct or cover the meter box. Hazardous materials (solvent, oil, paint, etc.) may not be placed in the meter box as they may contaminate the water.

WHEN YOU NEED OUR METER TURNED OFF

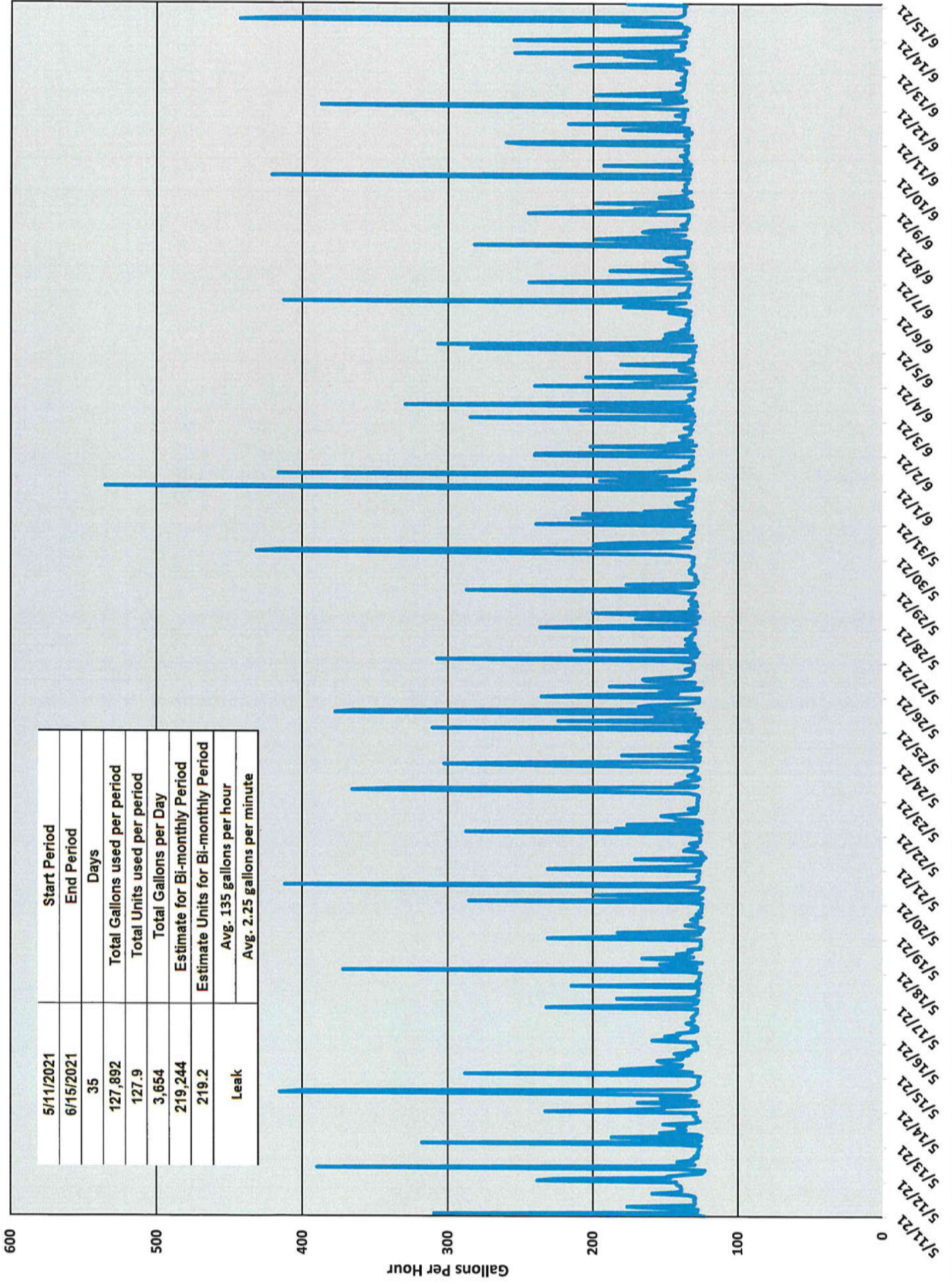
Please call our office anytime you need our meter turned off. This service is available at no charge 24 hours a day, 7 days a week. A Service Representative will be dispatched out to turn the meter off. When you are ready to have the water turned back on, just call our office again. Please DO NOT turn off our meter. Should you attempt to turn off our meter and cause damage, you will be charged any necessary repairs.

CWVD is responsible for the water line in the street and for the water line to our meter. We also maintain the valve, meter box and lid. Any repair past our meter towards the property is the customer's responsibility.

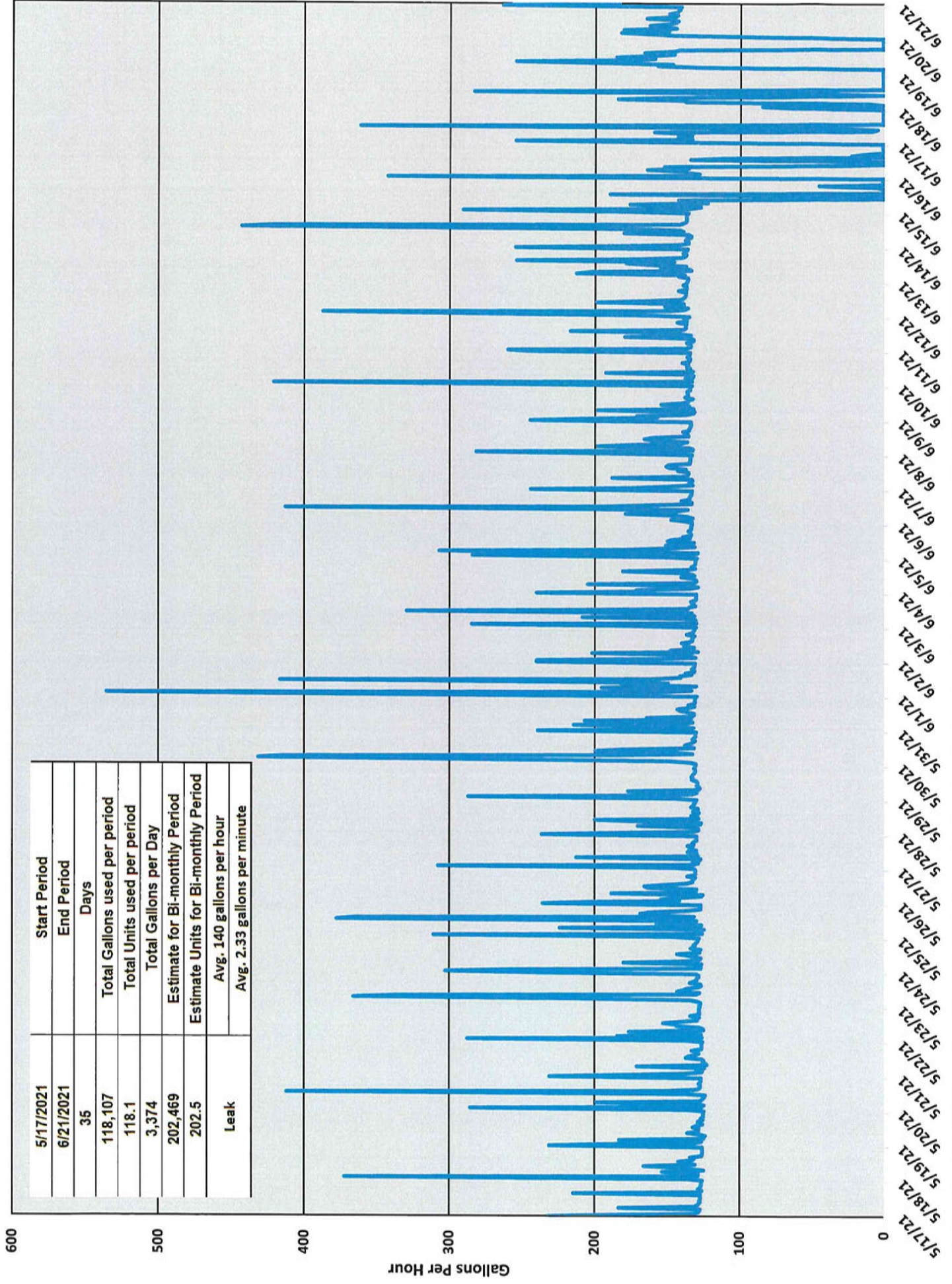
If you have a dispute regarding the billing you may notify the District within 30 days of receipt.



Water Use for 5914 Canyonside from 05/11/21 to 06/15/21



Water Use for 5914 Canyonside from 05/17/21 to 06/21/21



CRESCENTA VALLEY
WATER DISTRICT
2700 FOOTHILL BLVD
LA CRESCENTA, CA 91214-3590

ACCOUNT NUMBER	SERVICE ADDRESS
028885-000	5914 Canyonside
DUE DATE	04/16/21 to 06/15/21
TOTAL CHARGES	AMOUNT ENCLOSED
\$2,465.50	\$

Janet Tenney
5914 Canyonside Road
La Crescenta, CA 91214

CRESCENTA VALLEY WATER DISTRICT
2700 FOOTHILL BLVD.
LA CRESCENTA CA 91214-3590

DETACH AND RETURN THIS PORTION WITH YOUR PAYMENT

KEEP THIS PORTION FOR YOUR RECORDS

ADJUSTED STATEMENT

ACCOUNT NUMBER	SERVICE ADDRESS	DUE DATE	BILLING PERIOD
028885-000	5914 Canyonside		04/16/21 to 06/15/21
METER NUMBER	CURRENT READ	PRIOR READ	USAGE
79750656	1690	1502	188

SUMMARY OF CHARGES

Previous Balance	\$1,224.39
Payment	(\$400.00)
Tier 1 - 10 x \$5.17 (Basic Usage 0-10 Units)	\$51.70
Tier 2 - 16 x \$8.14 (Average Usage 11-26 Units)	\$130.24
Tier 3 -147 x \$8.14 (High Usage 27 + Units)	\$1,318.68
Water Service Charge	\$54.10
Sewer Service Charge	\$47.79
Sewer Flow Charge (Winter Water Use)	\$38.60
TOTAL DUE	\$2,465.50

Attachment 5

Tessa Allmon

From: Janet Tenney [REDACTED]
Sent: Tuesday, June 1, 2021 5:17 PM
To: customerservice
Subject: 5914 Water Leak/ Huge Bill/ four phone calls unanswered
Attachments: plumbing bill.pdf

RECEIVED
JUN 02 2021
CRESCENTA VALLEY
WATER DISTRICT

Today I received a red Past Due bill. I never, ever get these. I'm appalled. I've left four messages, and finally Christy Colby called me back.

She requested that I do the following:

explain:

My leak was in the street, in front of my house, in front of my mail box. I didn't know there was a leak for 35 days. Why? Because NO ONE notified me until after 35 days, and you showed up to my house and knocked on the door.

To get someone to fix a leak like that is impossible. Honestly. found someone. They wouldn't do it because it's in the street. oh, and by the way, EVERYONE SAID why is this your responsibility? It's in the street? I said because its cvwd. that's why.

I found someone else. They came and said they wouldn't work on it. In the meantime, two weeks have gone by .

Finally someone came and fixed.

send bill:

Attached is my \$1514.00 bill for the work done.

I need help to pay for the plumbing bill and for the water bill.

As I said, the water bill may as well be 18,000 because it's the same amount to me. I don't have either. I'm a single mother supporting my family by myself.

Janet Tenney

Hickey Plumbing

852 La Villa Lane
Brea, CA 91001
T 949-245-5278
hickeyplumbing.com

INVOICE
No. 3499
DUE DATE:
\$1,514.00

DATE: May 14, 2021

Bill To:
Tehany

DATE	DESCRIPTION	DATE	AMOUNT
5/14/21	Due upon receipt	5/14/21	-

DATE	DESCRIPTION	DATE	AMOUNT
5/14/21	See cut asphalt		
	dig down to main water line		
	replace rusted section of pipe		
	backfill & compact		
	patch asphalt		
	haul away debris		
	2 plumbers labor 4 hours each @ 100		\$300.00
	materials		\$100.00
			\$414.00

SUBTOTAL **\$1,514.00**

TOTAL **\$1,514.00**

Please pay check to Hickey Plumbing
THANK YOU FOR YOUR BUSINESS

Attachment 6

James Lee

From: James Lee
Sent: Thursday, June 24, 2021 10:53 AM
To: Janet Tenney
Cc: customerservice; Alex Sandoval
Subject: RE: Follow-up to our observations this morning

You're welcome. Looks like no leak.

From: Janet Tenney <[REDACTED]>
Sent: Thursday, June 24, 2021 9:21 AM
To: James Lee <JLee@cvwd.com>
Cc: customerservice <customerservice@cvwd.com>; Alex Sandoval <ASandoval@cvwd.com>
Subject: Re: Follow-up to our observations this morning

Thanks. So no leak showing on the meter?

[Sent from Yahoo Mail for iPhone](#)

On Thursday, June 24, 2021, 9:08 AM, James Lee <JLee@cvwd.com> wrote:

Good morning, we went to take a look. What we saw is that this time around, the plumbers cut the pavement around where we believed the actual leak was and pointed them toward. At the time your meter was observed yesterday afternoon, there was no leak.

\$125 every two weeks works just fine. Please feel free to make payments every two months as well if that's helpful at all.

Thank you,

James

From: Janet Tenney <[REDACTED]>
Sent: Wednesday, June 23, 2021 11:45 AM
To: James Lee <JLee@cvwd.com>

Cc: customerservice <customerservice@cvwd.com>; Alex Sandoval <ASandoval@cvwd.com>
Subject: Re: Follow-up to our observations this morning

Please send someone and let me know.

As far as payment, I can only afford [REDACTED] every two weeks, every paycheck.

Sent from Yahoo Mail for iPhone

On Wednesday, June 23, 2021, 11:39 AM, James Lee <JLee@cvwd.com> wrote:

Good morning, fingers crossed! Thank you for letting us know, and I'm glad you were able to secure the appropriate services.

I'd also like to provide you advanced notice that you'll be receiving a big bill from us (north of \$2,000). Your water will NOT be shut off. Also, we are still planning to bring your issue before the Board in July, which will include both of the high bills.

The bill is auto-generated and sent to you by the system, so please don't worry about it. If you want to pay an amount that approximates your "typical" bill, that's fine at this time. Please just arrange with our customer service staff, who are copied here as well.

In the interim, I'd like to send a serviceperson up to check your meter to ensure that the leak has been remediated.

Thank you,

James

From: Janet Tenney [REDACTED]
Sent: Wednesday, June 23, 2021 6:46 AM

To: James Lee <JLee@cvwd.com>

Subject: Re: Follow-up to our observations this morning

The line is fixed. I hope. Please let me know if that's so!

Thanks,

Janet

On Wednesday, June 16, 2021, 11:44:16 AM PDT, James Lee <jlee@cvwd.com> wrote:

Hi Janet, nice speaking earlier, and I'd like to detail what the District observed and did at your property this morning –

I joined our Construction Supervisor Alex Sandoval at your property, and we were met by [REDACTED], who identified himself as a family friend. Then we met Ron, the plumber from Hickey Plumbing. [REDACTED] left soon thereafter.

Ron let us know that a separate "leak locator" service had identified where they thought the leak would be. He said that when they dug at that spot, there was no leak, and showed us two pictures (attached as 1 and 2), and we also saw from the pictures that there was no leak. I asked why they made a repair and charged you when there was no leak, and he said that it's because the customer wanted the repair done. I asked whether he had called you to confirm, and he said yes.

Alex started by using a locating device to identify where along your property the main line runs (pic 3). He then scanned the length of the line using a listening device (pic 4). Alex also believes that the leak is coming from that vicinity. In our judgment, the plumber should not have made just a small cut and then put clamps on a pipe where there was no leak. They either should have made a larger cut or once they dug, should have tunneled a bit more to find the actual leak. We let them know our thoughts in case you retain them for another repair, although we believe the next repair should be covered under the original one, and my guess is Ron took our hint about what we thought about how the job was handled.

Hickey's original recommendation may have been to replace your entire main line from the street to your house. It's an original line made of galvanized steel, and it will likely experience more leaks in the future, as we can see has already happened with a number of your neighbors. If you were to hold onto the house, that may be the best course of action over the long term, because it's a matter of time before the next leak pops up. But

Ron shared that you're readying your house for sale, and given that we don't know when the next leak will pop up, you shouldering that cost now seems cost prohibitive. I've seen sales where repairs like this are included as a part of escrow.

I'm very sorry again about your circumstances. I hope this information is useful for you, and we are available to assist to the extent possible.

Thank you,

James



James Lee
Director of Finance & Administration

Crescenta Valley Water District

2700 Foothill Blvd. La Crescenta, CA 91214

office 818·248·3925 | cell 818·439·3242
| fax 818·248·1659
 www.cvwd.com

Attachment 7

James Lee

Subject: RE: Hello from the District / (RE: Did you receive my letter?)

From: James Lee <JLee@cvwd.com>
Sent: Tuesday, June 15, 2021 3:59 PM
To: Janet Tenney <[REDACTED]>
Cc: Wendy Holloway <wholloway@cvwd.com>; customerservice <customerservice@cvwd.com>
Subject: Re: Hello from the District / (RE: Did you receive my letter?)

Ok sounds good thanks for confirming.
Sent from my phone

On Jun 15, 2021, at 3:58 PM, Janet Tenney <[REDACTED]> wrote:
Christy told me 7:15.

<https://overview.mail.yahoo.com/?src=iOS>
On Tuesday, June 15, 2021, 3:52 PM, James Lee <mailto:JLee@cvwd.com> wrote:
We can be up there tomorrow at 7am. It would be really helpful if the plumber could meet us at 7:30 instead. If I don't hear back from you, see you at 7am. Thank you
Sent from my phone

On Jun 15, 2021, at 3:34 PM, Janet Tenney <[REDACTED]> wrote:
Urgent!
My plumber said he can meet whoever it is at my house tomorrow at 7:00 am.
Please please please let me know someone will meet him. Please.

<https://overview.mail.yahoo.com/?src=iOS>
On Tuesday, June 15, 2021, 3:27 PM, James Lee <mailto:JLee@cvwd.com> wrote:
Thank you for being open to this.

Will you please respond with a couple times that work for you? Also whether you prefer to be on site or not? Either way, I believe there is a gate that needs to be opened for us. Don't worry if your preference is for afterhours. We will figure something out.

From: Janet Tenney <[REDACTED]>
Sent: Tuesday, June 15, 2021 3:20 PM
To: James Lee <mailto:JLee@cvwd.com>; Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>
Subject: Re: Hello from the District / (RE: Did you receive my letter?)

Please do. I need all the help I can get.

<https://overview.mail.yahoo.com/?src=iOS>

On Tuesday, June 15, 2021, 3:08 PM, James Lee <mailto:JLee@cvwd.com> wrote:

The invoice lists an asphalt cut and backfill. It would be good to verify that that actually happened in an area we would expect the line to run. We could also see if we could use a sound locator that's used to get a better gauge of what's going on underground.

Thank you

From: Janet Tenney <mailto:[REDACTED]>

Sent: Tuesday, June 15, 2021 3:04 PM

To: James Lee <mailto:JLee@cvwd.com>; Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>

Subject: Re: Hello from the District / (RE: Did you receive my letter?)

It's under the street. How would you look?

<https://overview.mail.yahoo.com/?src=iOS>

On Tuesday, June 15, 2021, 2:57 PM, James Lee <mailto:JLee@cvwd.com> wrote:

Based on the data our best guess is that it was never fixed. I would expect the plumber to have made that basic check before charging you and leaving your property.

Are you open to us sending our serviceperson up to take a look at that repair in case we can ascertain anything with a visual check?

Thank you

From: Janet Tenney <mailto:[REDACTED]>

Sent: Tuesday, June 15, 2021 2:44 PM

To: James Lee <mailto:JLee@cvwd.com>; Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>

Subject: Re: Hello from the District / (RE: Did you receive my letter?)

So your records show the leak never ever ever was fixed?

<https://overview.mail.yahoo.com/?src=iOS>

On Tuesday, June 15, 2021, 1:40 PM, James Lee <mailto:JLee@cvwd.com> wrote:

Christy apprised us of the leak and conversation she just had with you. This is upsetting and frustrating, and I'm sorry about the circumstances.

Your plumber needed to have fixed this leak and/or identified this issue when they were out there and charged you. It appears that they invoiced you but left your meter spinning.

At the very least, you likely have grounds for having them make another repair under the same bill. We have downloaded information from your meter, and we can give this information to you so you have something that shows the plumber that they didn't address the issue.

Right now, the issue we all need to address is putting a stop to the leak, and we're doing what we can to assist you with it. We're glad your son is available to shut the meter off for the time being. Please let us know how your conversation with the plumber goes.

Thank you

From: Janet Tenney <mailto:[REDACTED]>
Sent: Tuesday, June 15, 2021 1:13 PM
To: James Lee <mailto:JLee@cvwd.com>; Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>
Subject: Re: Hello from the District / (RE: Did you receive my letter?)

I just spoke with her. I have another leak! I'm crying. I'm not a crier. Sick of throwing money I don't have to you people. I don't have grass even.

<https://overview.mail.yahoo.com/?src=iOS>
On Tuesday, June 15, 2021, 11:57 AM, James Lee <mailto:JLee@cvwd.com> wrote:
Good afternoon Janet,

Please excuse my late reply; a number of us have been out of the office.

Our understanding is that you have two concerns: 1) you don't want your water shut off; and 2) you are seeking relief from a very high water bill due to a leak that was difficult to get repaired in the first place.

Your water will not be shut off. You and all other customers who have overdue balances past a certain point have these notices sent automatically by our system. I understand that it's upsetting receiving such a notice. Please accept this message as confirmation that your water will remain on.

Also, we can present your appeal for the high water bill to our Board. Either you can present or we can make a case on your behalf. Christy Colby was being responsive to your concerns when she recommended that you write a letter to the Board for the next meeting. But it was after hours and she didn't realize the agenda for the next several meetings are quite full. I had suggested presenting your appeal in July because we have no plans to shut your water off. This means we have some time before the Board needs to hear your appeal.

I hope this is understandable and also addresses your concerns. Please let us know if we can assist further. Otherwise, we will schedule reaching back out to you as we approach July.

Thank you,

<image001.jpg>
James Lee
Director of Finance & Administration

Crescenta Valley Water District
2700 Foothill Blvd. La Crescenta, CA 91214
office 818-248-3925

|
cell 818-439-3242

<https://www.facebook.com/CrescentaValleyWaterDistrict/> <http://www.cvwd.com/>

|
fax 818-248-1659

From: Janet Tenney <mailto:[REDACTED]>
Sent: Monday, June 14, 2021 7:33 AM
To: Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>
Subject: Re: Did you receive my letter?

Thank you

<https://overview.mail.yahoo.com/?src=iOS>
On Monday, June 14, 2021, 6:56 AM, Wendy Holloway <mailto:wholloway@cvwd.com> wrote:
Good morning Janet,

I'm sorry, I was out of the office on Friday. The person that called you is James. I will let him know to contact you through your email. Your account has been placed on hold, so no late for shut off notices will be mailed to you.

Thank you,

<image001.jpg>
Wendy Holloway
Customer Service Manager

Crescenta Valley Water District
2700 Foothill Blvd. La Crescenta, CA 91214
office 818-248-3925
|
direct 818-236-4108

|
fax 818-248-1659

<https://www.facebook.com/CrescentaValleyWaterDistrict/> <https://www.cvwd.com/>

From: Janet Tenney <[REDACTED]>
Sent: Monday, June 14, 2021 6:53 AM
To: Wendy Holloway <mailto:wholloway@cvwd.com>; customerservice <mailto:customerservice@cvwd.com>
Subject: Re: Did you receive my letter?

Or at the very least emailed me

<https://overview.mail.yahoo.com/?src=iOS>
On Friday, June 11, 2021, 7:04 PM, Janet Tenney <[REDACTED]> wrote:
No response? Thanks. So typical of cvwd.

<https://overview.mail.yahoo.com/?src=iOS>
On Friday, June 11, 2021, 8:10 AM, Janet Tenney <[REDACTED]> wrote:
Someone named jay called abs left a message. Can you direct him to communicate with me through email.

<https://overview.mail.yahoo.com/?src=iOS>
On Wednesday, June 9, 2021, 1:06 PM, Janet Tenney <[REDACTED]> wrote:
Thank you for the acknowledgement. I called two days ago. No one called me back. Very upsetting to get a shut off notice.

<https://overview.mail.yahoo.com/?src=iOS>
On Wednesday, June 9, 2021, 1:02 PM, Wendy Holloway <mailto:wholloway@cvwd.com> wrote:
Good afternoon,

We have received your letter and are working towards getting this on the agenda for the Board Meeting. We will contact you on when this is placed on the agenda. We have noted your account, so you will not receive any notices.

Thank you,

<image001.jpg>
Wendy Holloway
Customer Service Manager

Crescenta Valley Water District
2700 Foothill Blvd. La Crescenta, CA 91214
office 818-248-3925
|
direct 818-236-4108

|
fax 818·248·1659

<https://www.facebook.com/CrescentaValleyWaterDistrict/> <https://www.cvwd.com/>

From: Janet Tenney <mailto:[REDACTED]>
Sent: Wednesday, June 9, 2021 12:58 PM
To: customerservice <mailto:customerservice@cvwd.com>
Subject: Did you receive my letter?

No one acknowledged it and I received a shut off notice for today.

Janet Tenney.

<https://overview.mail.yahoo.com/?src=iOS>
<image003.png>
<image001.jpg>
<image002.png>

CVWD
hollw

Attachment 8

Utility Billing Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000249-10-2019
Account Number: 028885-000

Last Updated By: allmm
On: 10/30/2019

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONSIDE
LA CRESCENTA, CA 91214

Home Phone: [REDACTED]
Business Phone: [REDACTED]
Cell Phone: [REDACTED]
Service Address: 5914 CANYONSIDE

Request Date: 10/28/2019
Request Description: Down load meter info for 10/15/19 billing .54 gpm rd 093806070
Service Date: 10/28/2019
Service Description: 10/30/19 - Dave R - Avg leak 31 gph/.51 gpm - R 0942100. L/m for customer.

Download ID#1661

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000043-11-2019
Account Number: 028885-000

Last Updated By: allmm
On: 11/5/2019

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONside
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:
Service Address: 5914 CANYONside

Request Date: 11/5/2019

Request Description: Check for leak

Service Date: 11/5/2019

Service Description: 11/5/19 - Dave R - Leak .60 gpm - R 0952919. Not sure if water was being used. No one answered.

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:11 AM

Request Number: 000082-11-2019
Account Number: 028885-000

Last Updated By: allmm
On: 11/13/2019

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONSIDE
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:

Service Address: 5914 CANYONSIDE

Request Date: 11/7/2019
Request Description: Check for leak again. She said leak may have been found.
Service Date: 11/7/2019
Service Description: 11/13/19 - Dave R - No leak - R 0957608

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD

hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000203-02-2020

Account Number: 028885-000

Last Updated By: allmm

On: 3/2/2020

Account Status: Active

Name: JANET TENNEY

Billing Address: 5914 CANYONside
LA CRESCENTA, CA 91214

Home Phone: [REDACTED]

Business Phone:

Cell Phone: [REDACTED]

Service Address: 5914 CANYONside

Request Date: 2/26/2020

Request Description: Down load meter info for 2/15/20 billing .45 gpm rd 1099150.10

Service Date: 2/26/2020

Service Description: 2/27/20 - Adam S - Avg leak 34 gph/.56 gpm - R 1102030

Download ID#1981

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100	79750656			Ipearl	Ipearl.754	1690
	6/15/2021	188	4				

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000238-03-2020
Account Number: 028885-000

Last Updated By: allmm
On: 4/1/2020

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONSIDE
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:
Service Address: 5914 CANYONSIDE

Request Date: 3/27/2020
Request Description: Check for leak. Said she fixed it.

Service Date: 3/27/2020
Service Description: 3/27/20 - David R - Leak .29 gpm. Sometimes it goes down to zero. So it might be intermitent. No one answered door when David knocked.

Download ID#2045

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000056-04-2020
Account Number: 028885-000

Last Updated By: allmm
On: 4/8/2020

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONside
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:
Service Address: 5914 CANYONside

Request Date: 4/8/2020
Request Description: Check for leak
Service Date: 4/8/2020
Service Description: 4/8/20 - David R - No leak - R 1134006

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000175-04-2021
Account Number: 028885-000

Last Updated By: allmm
On: 4/21/2021

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONside
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:
Service Address: 5914 CANYONside

Request Date: 4/20/2021
Request Description: Down load meter info and check for leak. Billing shows she used 173,000 gallons.
Service Date: 4/20/2021
Service Description: 4/20/21 - Dave - Avg leak 116 gph/2 gpm. Talked to gentlemen that open the door and we called Janet. R 1506184

DL #3099

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD

hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000153-06-2021

Account Number: 028885-000

Last Updated By: allmm

On: 6/15/2021

Account Status: Active

Name: JANET TENNEY

Billing Address: 5914 CANYONside
LA CRESCENTA, CA 91214

Home Phone: [REDACTED]

Business Phone:

Cell Phone: [REDACTED]

Service Address: 5914 CANYONside

Request Date: 6/15/2021

Request Description: Down load meter info

Service Date: 6/15/2021

Service Description: 6/15/21 - Dave - Leak avg 135 gpm/2.25 gpm. R1691716

DL #3255

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100	79750656			Ipearl	Ipearl.754	1690
	6/15/2021	188	4				

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000230-06-2021
Account Number: 028885-000

Last Updated By: allmm
On: 6/24/2021

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONSIDE
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:
Service Address: 5914 CANYONSIDE

Request Date: 6/22/2021
Request Description: Down load meter info billing 6/15/21 (ball valve is shut 1703106.07)

Service Date: 6/21/2021
Service Description: 6/21/21 - Adam - Avg leak 140 gph/2.33 gpm R 1703106.07

DL #3276

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water	25-0100	79750656			Ipearl	Ipearl.754	1690
Meter	6/15/2021	188	4				

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CVWD
hollw

Utility Billing
Service Request Form

7/20/2021 - 10:12 AM

Request Number: 000272-06-2021
Account Number: 028885-000

Last Updated By: allmm
On: 6/23/2021

Account Status: Active

Name: JANET TENNEY
Billing Address: 5914 CANYONSIDE
LA CRESCENTA, CA 91214

Home Phone:
Business Phone:
Cell Phone:

Service Address: 5914 CANYONSIDE

Request Date: 6/23/2021
Request Description: Check for leak - customer said her leak has been fixed. Please check and take a full reading.
Service Date: 6/23/2021
Service Description: Alex - Repairs have been made and no leak at the meter. R 1704660.68

Water/Gas Meters	Route-Seq Read Dt	Serial No Cons	Register ID No Of Digits	MXU ID	Manufacturer	Model No	Reading
Existing Water Meter	25-0100 6/15/2021	79750656 188	 4		Ipearl	Ipearl.754	1690

Location: (UPPER ROAD) 4'N OF POLE

Comments:

Follow up needed? yes no Serviced By: _____ Date: _____ Time: _____

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Action Item No. 4
July 27, 2021

To: Honorable President and Members of the Board of Directors
From: David S. Gould, P.E. – Director of Engineering
Subject: Award of Contract – Pilot Program for the Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939

ACTION ITEM:

Pilot Program for the Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939 – Consideration and motion to authorize the General Manager to enter into an agreement with Apex Manufacturing Services (APEX) to provide SCADA programming and integration services for the said project at the cost of \$21,180 and establish a contingency amount of \$2,120 (10% of contract) to cover the cost of unforeseen or additional work and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).

BACKGROUND:

CVWD has an existing SCADA system with Programming Logic Controllers (PLCs) and Remote Terminal Units (RTUs) installed at each of the District's facilities. These components control the processes at each of the District's sites and communicates with the central control room at Glenwood. This communication facilitates control of assets such as booster pumps, reservoirs, wells, and transmits system parameters such as flow rate, pressure, water level, and temperature back to the central control room. The SCADA system at Glenwood also sends alarm information to the System Operators in the event operational setpoints are exceeded.

The existing hardware installed at CVWD's sites was commissioned in 1996 by Tesco Controls Inc (Tesco). At that time, Tesco was responsible for all aspects of the commissioning process, including providing the required hardware and software and integration services. This was very common during the development of SCADA equipment in the 1990s. Although the RTUs in the field have remained largely unchanged since initial commissioning, Staff has worked with Tesco to update the programs and add functionality as required through the years. However, since the programming software is proprietary, all such modifications require the support of Tesco personnel. When these updates are required, they are typically both costly and time-consuming.

As these devices were commissioned 25 years ago, they are at or beyond the end of their serviceable life. Intermittent hardware failures have resulted in increased labor costs and a reduction in the operational resiliency of the system overall. Additionally, in recent years support and repair of these devices have become increasingly expensive. These trends are expected to continue in the future. The existing Tesco RTU architecture is outdated and must be modernized to support current and future District requirements.

In 2018 CVWD initiated a system-wide SCADA review to identify a strategy for upgrading the current hardware and software to a modern version that applies best management principles and includes the following:

- An incremental approach to commissioning the new system such that it minimizes downtime and other impacts on daily operations.
- An extensible solution that can support District needs today and into the future.
- Open architecture for programming and integration that a variety of consultants and vendors can support.
- Easy integration with the existing software (Wonderware) that is used at the central Glenwood site.
- Utilization of "off-the-shelf" hardware components and coordination with strategic suppliers to ensure quick resolution times.
- Implementation of enhanced remote support and development capabilities.

As a result of the system-wide review project, CVWD identified the Allen Bradley (AB) CompactLogix series of programmable controllers as the basis for CVWD's future control system. AB is a long-standing leader in industrial automation, and the CompactLogix platform is a highly scalable solution that will support sites ranging from very simple analysis-only sites to the most complex site, including active devices such as pumps and valves.

CVWD has an existing relationship with the AB distributor for Southern California, Royal Industrial Solutions, and already has been using AB equipment for the motor control centers at Eagle Canyon, Oak Creek, Well 16, and Well 2 sites. Leveraging this existing relationship will help CVWD reduce overall project cost and increase the reliability of the upgrades to the SCADA system.

AB also provides an extensive list of hardware equipment and software applications that can be integrated seamlessly into CVWD's SCADA system. Finally, AB boasts one of the largest networks of integration vendors in the world.

CVWD staff has been working closely with Apex Manufacturing Solutions (APEX) since the original system review project to support the addition of new AB equipment. This equipment currently operates in parallel with the existing Tesco equipment and is used to accomplish the following very limited tasks:

- Collect data at specific sites not available via the existing Tesco architecture
- Reset telemetry hardware when required
- Support the future control of the sodium hypochlorite and liquid ammonia injection pumps required for chloramination

As part of the FY 21/22 CIP program, it is Engineering and Operation's goal to upgrade the SCADA system with newer equipment and programming based on industry standards, which can be repaired and/or replaced by a variety of consultants and contractors. This will also include integrating the data into the existing monitoring screens located at the operation control center at the Glenwood Plant.

DISCUSSION:

As part of the planning process, staff reviewed several options and project schedules to accomplish the goal of upgrading CVWD's SCADA system by December 2022. Options identified included:

- 1) Work directly with APEX to develop an overall SCADA system design with CVWD crews installing replacement hardware.
- 2) Employ a consulting firm to develop the overall SCADA system design and a contractor to install the replacement hardware.
- 3) Employ a single contractor to execute both the overall design phase and the hardware installation phase.
- 4) Execute a pilot project at two (2) simple sites to better understand the details of equipment, programming, integration requirements, and project costs.

Both Options 1 and 4 could potentially be executed within the schedule identified above. These options would result in the CVWD team having a strong engagement or pride of ownership with the development of the upgraded SCADA system and leverage existing vendor and contractor relationships.

However, there is concern that CVWD's lack of experience in this type of project would impact the project. The most likely impacts of this lack of experience are overlooked design requirements and increasing required commissioning time. APEX has completed projects similar in both type and scale previously, and a strategic partnership between CVWD and APEX will help mitigate the risk of overlooked design requirements.

A thorough discovery and design phase would be executed and result in a clear design specification document. Careful scheduling and control of CVWD personnel priorities would serve to combat the likelihood of project schedule setbacks.

Staff's initial review of the scope of work to execute Option 2 concluded that it would be improbable to complete the project within the schedule identified above. Option 2 is also likely to be the costliest of the identified options since the CVWD team will not be as closely involved with the design process as they would in Options 1 and 4.

Staff's review of Option 3 indicated that it could possibly be completed within the schedule identified above. However, project completion would be dependent upon careful selection of a contractor and careful management of the execution of the contract. Option 3 is likely to be somewhat less expensive than Option 2 but significantly more expensive than Option 1 or 4. Similar to Option 2, Option 3 is likely to result in lower sense of ownership among the CVWD team.

Option 4 bears many of the same benefits as Option 1 and provides additional project clarity at a fairly low cost. By moving forward with the two (2) pilot sites, the lower-level requirements for each site will be better identified, and the cost would be more closely understood.

These sites would serve to develop a template process that would be easily deployed to other sites as we moved towards the future. This template would include both programming components and installation guidelines, which would be carefully documented.

Option 4:

After careful consideration, it is the recommendation of CVWD staff that the District initiates Option 4 (Pilot Program). Well 8 and Well 14 have been identified as the most suitable pilot sites. These sites are simple while also containing all of the primary requirements for data communications at any site. Also, the programming and integration into the SCADA server could be used as a template for the other well and booster pump stations sites.

The proposed tasks will include working through the details on equipment, programming, and integrating into Wonderware (SCADA monitoring software) to better understand the process with respect to time and project costs. Staff requested a quote from APEX for the programming, integration (See Attachment), and purchase of new equipment from Royal Industrial Solution, supplier of A/B equipment. The preliminary estimated cost for the pilot program will be \$35,000 as shown in the detailed cost breakdown below, and this project would be wrapped into the overall SCADA system project.

Description	Quantity	Unit Cost	Total Cost
Point IO Communication & Base Module	2	\$ 780.00	\$ 1,560.00
Analog Input Module	4	\$ 350.00	\$ 1,400.00
Discrete Input/Output Modules	2	\$ 360.00	\$ 720.00
Distribution Modules	4	\$ 85.00	\$ 340.00
Analog Input Signal Conditioner	1	\$ 250.00	\$ 250.00
7-inch HMI Panel/Screen & Cover	2	\$ 1,350.00	\$ 2,700.00
Back Panel	2	\$ 250.00	\$ 500.00
UPS	2	\$ 650.00	\$ 1,300.00
Misc	1	\$ 1,290.00	\$ 1,290.00
Equipment sub-total			\$ 10,060.00
Programming & Integration	1	\$ 21,180.00	\$ 21,180.00
Contingency		10%	\$ 2,120.00
Programming/Integration - Subtotal			\$ 23,300.00
Field Installation by CVWD	32	\$ 51.25	\$ 1,640.00
Total			\$ 35,000.00

Overall Project Budget:

For Budget FY 21/22, the Board approved a budgeted amount of \$374,000 for the SCADA system upgrades, and a portion of the overall cost will be included in FY 22/23 CIP Budget. The pilot program will allow staff to review the work and prepare an updated and detailed budget for review at future Engineering Committee for any budget and/or project schedule adjustments.

ENVIRONMENTAL REVIEW:

This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guidelines. This exemption covers the repair of existing facilities involving negligible or no expansion of existing use.

RECOMMENDATION:

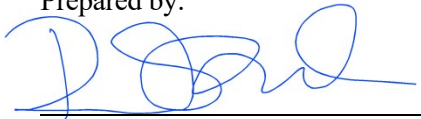
It is Staff's recommendation to authorize the General Manager to enter into an agreement with APEX to proceed with the SCADA Replacement Pilot Program at the cost of \$21,180 and establish a contingency amount of \$2,120 (10% of contract) to cover the cost of unforeseen or additional work. This action item was reviewed with the Engineering Committee, and the Committee concurred with Staff's recommendation.

FUNDING AVAILABILITY:

There are sufficient funds available in the following account for the project:

Account Description	Amount
FY 21/22 Water CIP – Technology – SCADA Replacement	\$374,00
APEX Contract w/10% Contingency	<23,300>
Estimate of CVWD field crews and Equipment	<\$11,700>
Pilot Program Total	< \$35,000 >
Amount Remaining in Water CIP – Technology - SCADA Replacement	\$339,000

Prepared by:



David S. Gould, P.E.
Director of Engineering

Submitted by:



Nem Ochoa
General Manager

Attachments:

1. Proposal from APEX dated 7/5/21

**Apex Manufacturing Solutions**

300 E. Mallard Drive
Suite #300
Boise, Idaho 83706
Phone: 208.344.5535

www.apexmfgsolutions.com

Date:	5 July 2021		
Customer:	Crescenta Valley Water District		
Customer Contact:	David Gould	Phone:	(818) 248-3925
Project:	CVWD0025 - Well 8 and Well 14 Control Integration		
Apex Contact:	Donald Helvie	Phone:	(208) 344-5535 Ext. 212 (Office) (208) 921-4107 (Cell)

SERVICE SUMMARY

Thank you for the opportunity to submit this proposal to the Crescenta Valley Water District (CVWD). This proposal is a Time and Materials (T&M) estimate for Apex to integrate the control of the field devices at Well 8 and Well 14 with the existing Allen Bradley processors at each site. This project will result in all control and monitoring functions for these two sites migrating away from the Tesco processors and to the Allen Bradley processors. Upon completion of this migration the Tesco processors can be removed without impact to system operation. Due to previous investment in system components supporting remote access and the ready availability of local electrical support, all integration work will be performed remotely.

Revision 1 represents a renewal of the previous proposal. All rates and terms remain unchanged from this previous proposal.

Field Devices:

- Well 8
 - Flow Meter
 - Well Level
 - Discharge Pressure
 - Pump Run Command
 - Pump MPCB Status
- Well 14
 - Flow Meter
 - Well Level
 - Discharge Pressure
 - Pump Run Command
 - Pump MPCB Status
- Glenwood
 - Signal Conditioner (Forebay Level)

Scope of Support would include:

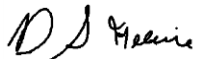
- Review existing Tesco control documentation
- Develop Control Sequence Functional Document (CSFD)
- Support component installation and commissioning (Remote)
- Commission and program local HMI panel
- Implement control strategy defined within CSFD
- Update existing InTouch references and Glenwood well control window
- Remove InTouch elements (tags, scripts, windows) identified as no longer required
- Functional verification
- Site startup support

ASSUMPTIONS TERMS & CONDITIONS

- Full remote access via TeamViewer is assumed to be available and all work will be performed remotely
- Although downtime is expected to be brief, downtime will be required. This downtime will be carefully coordinated to minimize impact.
- All hardware will be acquired, installed, and commissioned by CVWD personnel
- All hardware to be decommissioned will be disconnected and removed by CVWD personnel
- **Proposal Expiration Date:** 30 days from date above
- **Payment Terms:** Net 15 days from date of invoice
- **Late Charges:** Invoices amounts unpaid by due date are subject to a late charge calculated at 1.5% of unpaid balance per month, compounded monthly

PROJECT COSTING

Services				Cost	
<i>Remote Development and Support</i>				\$	21,180.00
<i>- Quoted on a time & materials (T&M) basis</i>					
<i>- Offsite Hours</i>	134	<i>Hrs. @</i>	\$ 145.00	<i>Hr. =</i>	\$ 19,430.00
<i>- PM Time</i>	10	<i>Hrs. @</i>	\$ 175.00	<i>Hr. =</i>	\$ 1,750.00
Subtotal Services Cost				\$	21,180.00



Donald Helvie
Senior Systems Engineer
Mobile: (208) 921-4107
Office: (208) 344-5535 Ext 212

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 5
July 27, 2021

To: Honorable President and Members of the Board of Directors
From: James Lee – Director of Finance and Administration
Subject: **Budget & Proposition 218 Process**

ACTION ITEM:

Placeholder for discussion and possible action for schedule, timing, and other considerations related to completing the budget and Proposition 218 process.

DISCUSSION:

This action item serves as a placeholder for any discussion related to the schedule and timing for completing the budget, Prop 218 process, and related considerations. A schedule of meetings and tasks is updated on an ongoing basis and included with each placeholder.

RECOMMENDATION

NA.

Submitted by:



James Lee
Director of Finance & Administration

Attachment(s): 1) CVWD Meeting Schedule (ongoing updates)

g:\management\board meeting staff reports\2021\07-27-21 Board Memo - Budget & Prop 218 Placeholder.docx

FY 2021/22 - CVWD Meeting Schedule <i>(ongoing updates)</i>		
Date	Agenda	Status
Week of 3/15	Finance Committee Meeting (CIP & Budget Discussion) * Engineering Committee Meeting *	✓
Week of 3/15	Community Advisory Committee Meeting *	✓
3/23	Board Meeting - Budget Discussion	✓
Week of 3/29	Finance Committee Meeting (Cost of Service & Rate Design / Budget) * Engineering Committee Meeting *	✓
Week of 3/29	Community Advisory Committee Meeting *	✓
4/13	Board Meeting - Budget Discussion	✓
Week of 4/19	Finance Committee Meeting * Engineering Committee Meeting *	✓
Week of 4/19	Community Advisory Committee Meeting *	✓
4/27	Board Meeting - Budget Discussion	✓
5/11	Board Meeting	✓
Week of 5/10	Finance Committee Meeting (Sewer Pass through / Budget) * Engineering Committee Meeting *	✓
5/25	Board Meeting - (FY 2022 Budget Approved)	✓
6/8	Board Meeting	✓
Week of 6/14	Community Relations Committee (Prop 218 Notice) * Finance Committee Meeting *	✓
6/22	Board Meeting - Review Prop 218 Notice	✓
7/13	Board Meeting	✓
Week of 7/12	Finance Committee Meeting (Draft Cost-of-Service Report/218 Notice) *	✓
7/20	Special Board Meeting - Review Cost-of-Service Report/218 Notice	✓
7/27	Board Meeting - Approve Cost-of-Service Report/218 Notice	
Week of 8/2	Mail 218 Notice	
8/10	Board Meeting	
8/24	Board Meeting	
9/14	Board Meeting	
Week of 9/20	Prop 218 Letters - 45 days	
9/21	Public Hearing - Last Day for 218 protest letters - Water/Wastewater Rates	
9/28	Board Meeting - Adopt Rates & Budget	
10/1	Implement Adopted Rates	

* Subsequent meetings will be scheduled as needed.

CRESCENTA VALLEY WATER DISTRICT

General Manager Report

To: Honorable President and Members of the Board of Directors
From: Nem Ochoa, General Manager
Subject: **General Manager Report**

GM Report
July 27, 2021

General Managers Report Topics:

- GM Activities

The following are some highlights in this month's report:

- Finance, Administration & Public Outreach Dashboard
- CVWD Employee Spotlight of the Month: Kellen Boyce
- Director of Operations Recruitment Update

STAFFING

As of July 22nd, the District has gone 611 days without a lost time accident.

GENERAL MANAGER ACTIVITIES

Meetings:

All-Hands Meeting	-July 14 th
Finance Committee Meeting	-July 14 th
Vacation	-July 19 th – July 23 rd

Submitted by:



Nem Ochoa
General Manager



Crescenta Valley Water District – Finance, Administration & Public Outreach Report for < June 2021 >

Customer Service & Administration Activity

**Service
Requests**
335

**Meter
Downloads**
93

**New
Sign-Ons**
69

**Closed
Accounts**
59

**Meter
Re-Reads**
257

Public Outreach Corner

- **Website Traffic** –
 - ~3,000 visits
 - Most views: 'Pay My Bill'
- **Everbridge** –
 - 1 emergency water shutoff notice for a main leak on Rosemont
 - 475 customers have opted in and updated their account information
- **Social Media** –
 - 3 Facebook posts
 - 49 page likes
- **CV Weekly** –
 - OpEd from the General Manager
 - Editor's article on ongoing Stage 1 water shortage



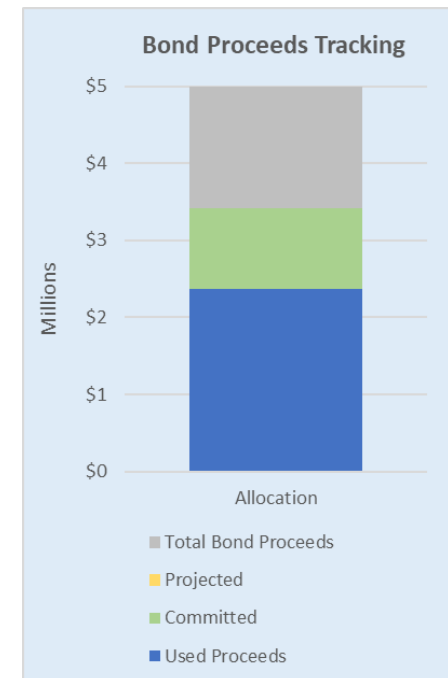
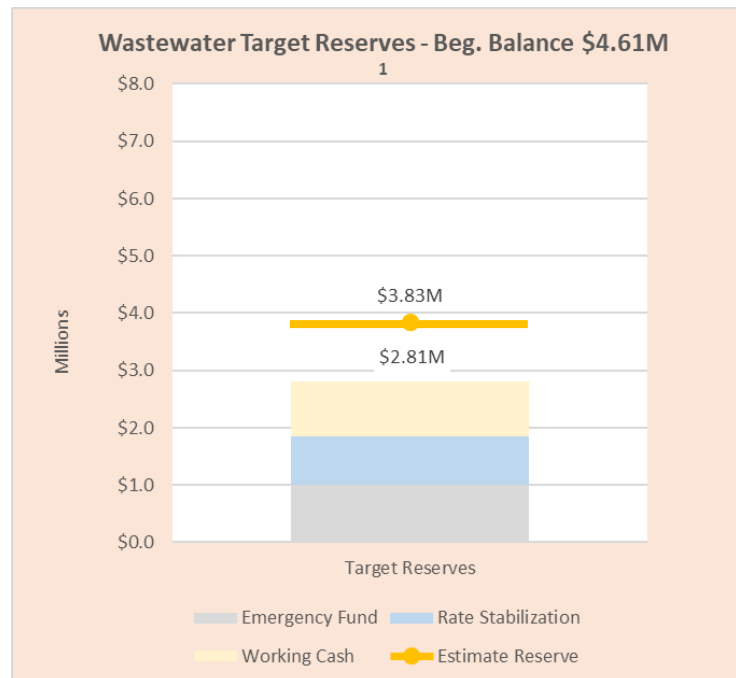
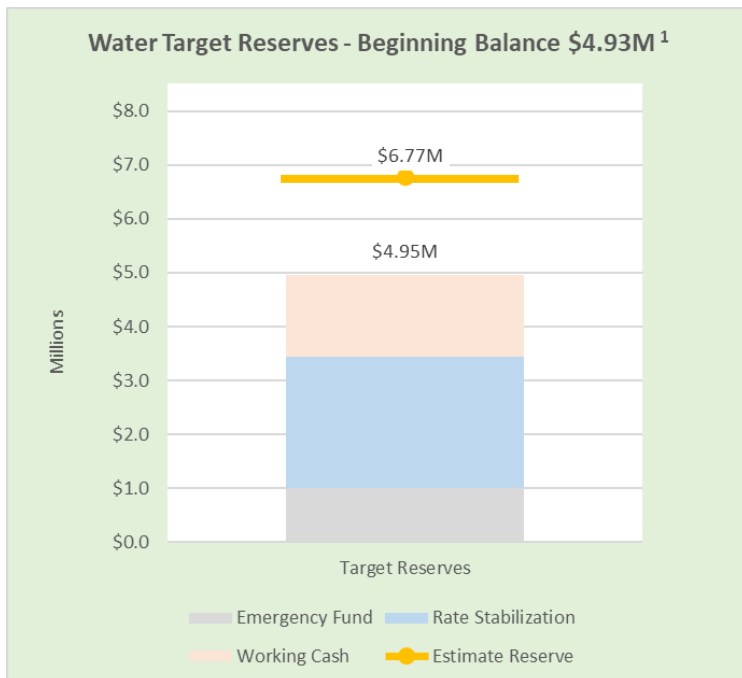
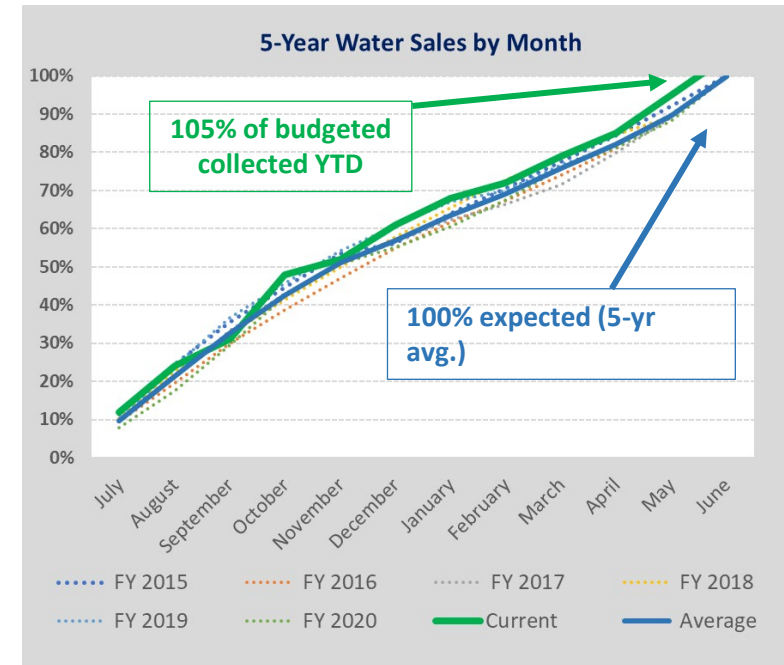
Crescenta Valley Water District – Finance, Administration & Public Outreach Report for < June 2021 >

Water Fund - revenues & operating expenses

Proj. Revenue	\$13,037,615		Proj. Expense	\$9,745,373	
Budget	\$12,621,363	103%	Budget	\$9,513,892	102%

Wastewater Fund - revenues & operating expenses

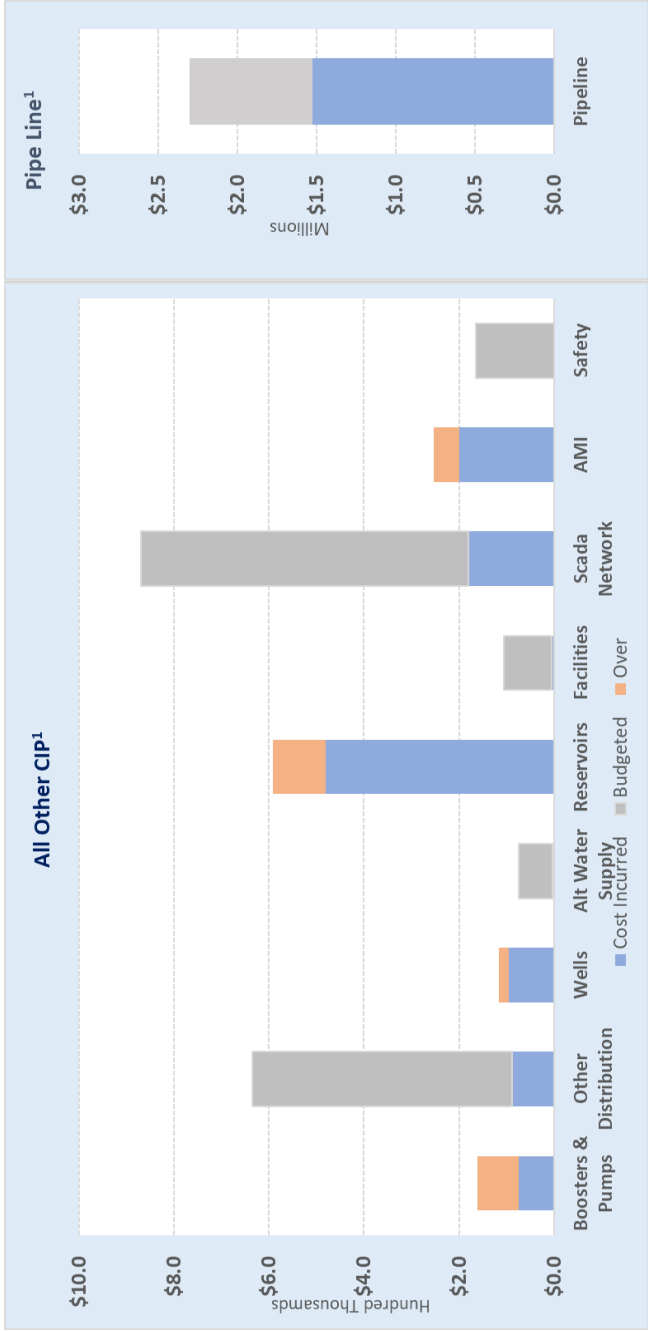
Proj. Revenue	\$3,485,150		Proj. Expense	\$3,811,615	
Budget	\$3,364,575	104%	Budget	\$4,049,989	94%



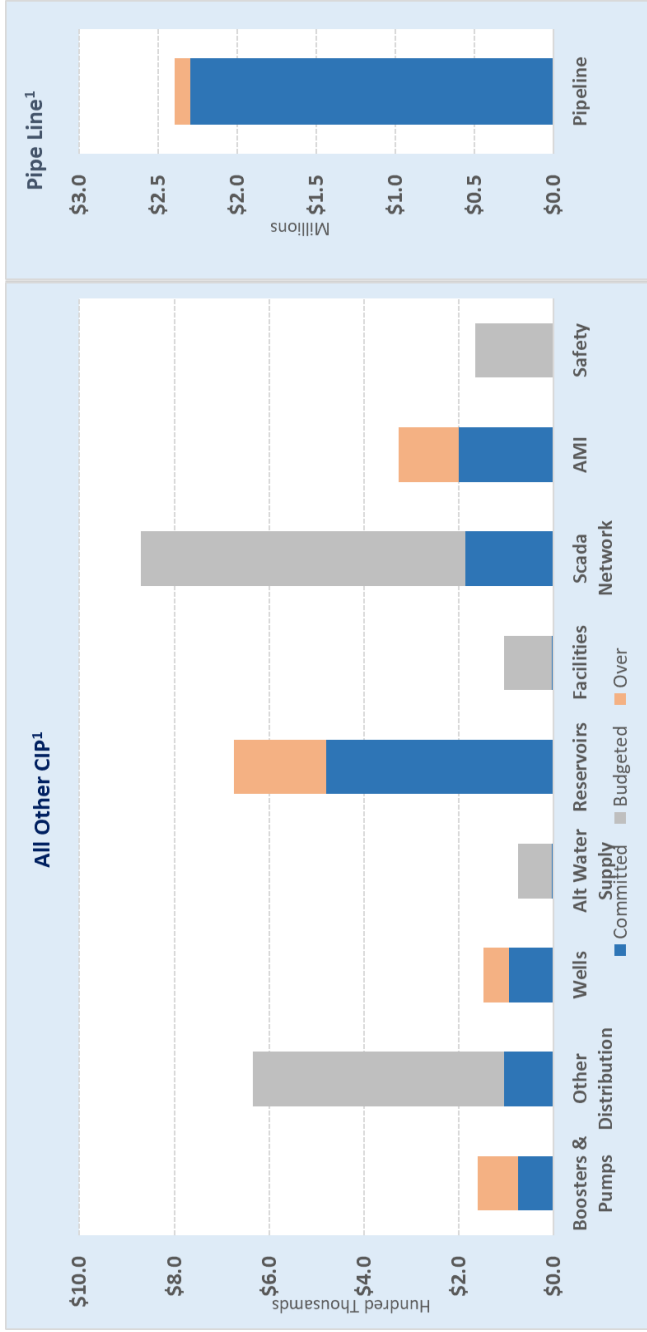
1. CVWD Reserve Policy adopted on 7/28/20



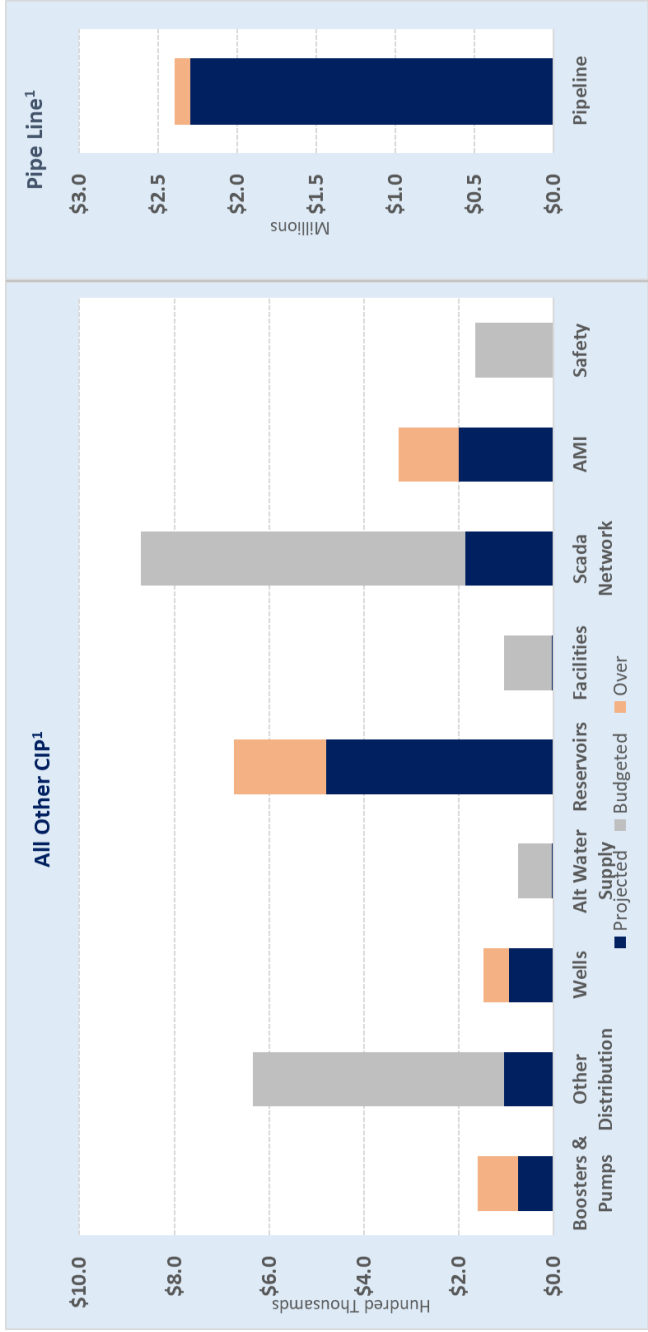
CIP Costs Incurred to Date



CIP Costs Committed to Date



CIP Projected vs. Budgeted



1. Pipelines CIP reported separately to preserve scale of the graph

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

To be held on
July 14, 2021 at 4:45 PM

Agenda for the Meeting of the Finance Committee
of the Crescenta Valley Water District

Posted July 12, 2021 at 7:00 PM

TELECONFERENCING NOTICE

[This meeting will be held by teleconference only.]

Pursuant to the provisions of Executive Order N-08-21 issued by Governor Gavin Newsom on June 11, 2021, a local legislative body is authorized to hold public meetings via teleconference.

Any member of the public may participate using a touchtone phone. You may select any of the following phone numbers (there are more than one for increased reliability during this time of increased phone traffic)

(669) 900-6833

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(929) 205-6099

(253) 215-8782

(301) 715-8592

(312) 626-6799

Then, enter Access Code: 891 2439 4298

[Pursuant to the above Executive Order, the public may not attend the meeting in person]

Those members of the public who are able to and would like to additionally participate with a computer through videoconference may access the Zoom videoconferencing tool available at the following link – <https://us02web.zoom.us/j/89124394298>

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting the District by phone or in writing at customerservice@cvwd.com. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

Call to Order

Adoption of Agenda

Public Comment:

At this time, members of the public shall have an opportunity to address the Committee on items of interest that are within the subject matter jurisdiction of this Committee. This opportunity is non-transferable, and speakers are limited to three (3) minutes each. Under the provisions of the Brown Act, the Board is prohibited from taking action on items not listed on the agenda, except under certain circumstances.

Action Items(s)

The public shall have an opportunity to comment on any action item as each item is considered by the Committee. This opportunity is non-transferrable and speakers are limited to one two-minute (2) comment each.

1. Cost of Service Study Presentation - Raftelis

Committee Members' Request for Future Agenda Items

Adjournment

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CRESCENTA VALLEY WATER DISTRICT

MEMORANDUM

DATE: July 20, 2021
TO: Engineering Committee
FROM: David S. Gould, District Engineer
SUBJECT: CVWD Engineering Committee Meeting No. 327

Following is a summary of Engineering Committee Meeting No. 327, held at 2:41 PM on July 20, 2021, at CVWD's main office, and was attended by the following:

Director Sharon Raghavachary – Committee Chairperson	CVWD
Director Judy Tejeda	CVWD
David Gould – Director of Engineering	CVWD
Brook Yared – Engineer Manager	CVWD
James Lee – Director of Finance and Administration	CVWD
Arturo Montes - Finance and Administration Manager	CVWD
Pam Leddy – Administrative Assistant	CVWD
Jennifer Bautista – Project Coordinator	CVWD

Information Items

1. Discussion of Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939

Mr. Gould provided a background of CVWD's existing SCADA system, consisting of Remote Terminal Units (RTUs) and Programming Logic Controllers (PLCs). The RTUs and PLCs collect data, transmit the data to the existing monitoring screens located at the Glenwood Plant, allow remote monitoring, and control, and provide system alarms when the water system parameters have exceeded. The SCADA system also eliminates the need to send personnel to each site during off-hours reducing operational and labor costs.

Mr. Gould explained that the existing RTU & PLC hardware, software, and programming were manufactured and installed by Tesco Controls Inc (Tesco) in 1996. Any modification to the programming of these devices or upgrades to the PLCs/RTUs can only be done by a representative from Tesco as the equipment and programming are proprietary to Tesco. However, this process has become both time consuming and expensive for CVWD.

Mr. Gould explained that in 2018, CVWD initiated a system-wide SCADA review to identify a strategy for upgrading the current hardware and software to a modern version that applies best management principles which include open architecture for programming and integration that a variety of consultants and vendors can more easily support. It also includes utilizing an "off-the-shelf" industry-standard system for all components, implementation of enhanced remote support capabilities, and provides support for basic remote site development.

Mr. Gould added that the system-wide review, CVWD selected a new programmable automation controller and supporting hardware manufactured by Allen Bradley (AB). The hardware and programming logic for AB equipment uses a standard protocol that any certified technician or programmer can service.

Mr. Gould added that Staff has been working with Apex Manufacturing Services (APEX) for the past year on the installation of new AB equipment that collects limited data at specific sites, resets the radio communication controls, and for future control of the new sodium hypochlorite and liquid ammonia injection pumps required for chloramination. Currently, the existing Tesco SCADA system works parallel with the AB equipment until the new AB system is ready to implement fully.

Mr. Gould informed the Engineering Committee that it is Engineering and Operation's goal to upgrade the SCADA system with newer equipment and programming based on industry standards, which can be repaired and/or replaced by a variety of consultants and contractors. This will also include integrating the data into the existing monitoring screens located on the main computers at the Glenwood Plant.

Mr. Gould discussed the Staff's review of several preliminary options and project schedules to accomplish the goal by the end of 2022. Options included 1) working directly with APEX on the design, and CVWD's crews performing the work to install the system 2) using a consultant for the design and a contractor to install the system, 3) using a contractor to design/build the system, and 4) performing a pilot project at two (2) sites to work through the details on equipment, programming, and integrating into Wonderware (SCADA monitoring software) to gain a better understanding of the process with respect to time and costs.

Mr. Gould presented the preliminary schedules for each of the options. The preliminary schedules show that Options 1, 3, & 4 could be completed before the end of 2022 to meet our goal, and Option 2 would be completed towards the end of 2023.

Mr. Gould declared that Staff determined that Option 4 (Pilot Program) would allow staff and APEX to work together on the programming and installation at a smaller scale and allow the team to get a better idea of the time and costs involved in the upgrade.

Mr. Gould noted said that Staff had budgeted \$610,000 for FY 20/21, and \$104,033 had been spent to date. For Budget FY 21/22, the Board approved a budgeted amount to \$374,000 as Staff anticipated that a portion of the project will be completed in FY 20/21. The pilot program will allow Staff to prepare a detailed budget for review at future Engineering Committee for any budget adjustments.

Mr. Gould said that it is Staff's recommendation to request a quote from APEX for the programming, integration, and purchase of new equipment from Royal Industrial Solution, supplier of AB equipment. The preliminary estimated cost for the pilot program will be \$35,000. It is Staff's recommendation to proceed with the pilot project and bring this item to the next Board meeting for approval.

2. Discussion of Project Update - FY 20/21 Capital Improvement Project

Mr. Gould provided an update to the FY 20/22 CIP program, including the status of the CIP projects as listed below:

- Construction is complete for the Steel Reservoir Rehabilitation project at Rosemont Reservoir. Rosemont Reservoir is back in service, and project costs are finalized.
- Construction is complete for Projects 1, 2, and 3 of the Annual Pipeline Replacement projects. Construction is complete, pipelines are back in service, and final project costs are being negotiated.
- Project 4 of the Annual Pipeline Replacement is still in construction.

- Update to the Local Hazard Mitigation Plan (LHMP). Tetra Tech completed the Draft LHMP and is on schedule to submit the LHMP to Cal OES by August 2021.
- New Emergency Generator at La Granada Sewer Lift Station project is behind schedule. CVWD is waiting for Los Angeles County Parks & Recreation Department to respond to CVWD's comments on the preliminary license agreement.
- Update for the Advanced Metering Infrastructure (AMI) project. Mr. Gould said that the field crews have replaced around 537, ¾-inch & 1-inch water meters for FY 20/21.
- Construction for the Well 12 Rehabilitation project is complete. Well 12 was placed back into service on June 23, 2021. Mr. Yared added that Well 12 has been producing about 120 gpm, which was higher than the 60 gpm before rehabilitation.
- The SCADA Radio Feasibility Study is complete, and Staff is working on a Request for Quote to bring to the Board in September 2021.
- Mr. Gould stated that Staff and Cannon have started on the design of the new pressure reducing valve station and upgraded to the Ramsdell/Mayfield mixing station. Staff's goal is to advertised for bids by October 2021.
- Staff will bring the Replacement of Supervisory Control and Data Acquisition (SCADA) System Upgrade project to the Board on July 27, 2021.
- Staff has met with LADWP to work on alternatives regarding water rights for the Stormwater Recharge Program. Mr. Gould mentioned that he would present the project to the Engineering Committee in August 2021. The project schedule is behind.
- The Rehabilitation Surge Tank at Glenwood project is on hold.
- The 16-inch Manifold and Valve Replacement at Oak Creek Reservoir project is complete.
- The Annual Booster Pump Replacement project at Paschall is completed.

Mr. Gould reviewed the Capital Improvement Project Summary and Cost Updates, including costs spent to date, cost committed to for the remainder of the year, and the total cost for each project. Staff is predicting a cost of \$4.1M.

3. Discussion of Project Update - FY 21/22 Capital Improvement Projects

Mr. Gould provided the Engineering Committee an update for each of the FY 21/22 CIP projects and the status of design:

- Tetra Tech was awarded the design contract for the new pipeline projects and a kickoff meeting was held on July 21, 2021.
- Cannon was awarded the design contract for the new pressure reducing station & rehabilitation of the Ramsdell Mixing Station. The kickoff meeting was held on June 10, 2021, and the design team held a meeting in the field on July 7, 2021.
- Harper & Associates Engineering was awarded the design contract for the steel reservoir rehabilitation at Edmund No. 2.
- Staff is working with Apex Manufacturing Services (APEX) on the Pilot Program for the replacement of SCADA Equipment, Programing & Integration.
- Staff is finalizing the RFQ for the Replacement of SCADA Communication Radio Network. RFQs will be sent out on August 3, 2021, and due on September 8, 2021.

- Staff is working on a RFP for a consultant to assist operations staff with conversion, monitoring, and standard operating procedures for the conversion to chloramines.
- Staff is working on a preliminary Scope of Work for a consultant to prepare a Wastewater Master Plan, with Wastewater Treatment Plant Feasibility Study.
- Staff is working on a scope of work for a consultant to assist with the GIS mobile deployment.

Committee Member's Request for Future Agenda Items - None

Next Meeting

- Next meeting scheduled for August 17, 2021, at 2:30 pm

Adjournment - The Engineering Committee meeting was adjourned at 3:39 pm on July 20, 2021.

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

To be held on
July 20, 2021 at 2:30 PM

Agenda for the Meeting of the Engineering Committee
of the Crescenta Valley Water District

Posted July 19, 2021 at 2:00 PM

TELECONFERENCING NOTICE

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Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting the District by phone or in writing at customerservice@cvwd.com. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

Call to Order

Adoption of Agenda

Public Comment:

At this time, members of the public shall have an opportunity to address the Committee on items of interest that are within the subject matter jurisdiction of this Committee. This opportunity is non-transferable, and speakers are limited to three (3) minutes each. Under the provisions of the Brown Act, the Board is prohibited from taking action on items not listed on the agenda, except under certain circumstances.

Action Items

The public shall have an opportunity to comment on any action item as each item is considered by the Committee. This opportunity is non-transferrable, and speakers are limited to one two-minute (2) comment each.

1. Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939
2. Update - FY 20/21 Capital Improvement Project Budget
3. Update - FY 21/22/21 Capital Improvement Projects

Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – August 17, 2021, at 2:30 pm

Adjournment

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 1

July 20, 2021

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: **Replacement of Supervisory Control and Data Acquisition (SCADA) System, Project E-939**

BACKGROUND:

CVWD has an existing SCADA system with Programming Logic Controllers (PLCs) and Remote Terminal Units (RTUs) that were installed at each of the District's facilities that transmits information on the status of the water system, provides for the ability to remotely control the booster pump operation, and sends out system alarms to the System Operators when the water system parameters have been exceeded.

The existing RTU & PLC hardware, software, and programming were manufactured and installed by Tesco Controls Inc (Tesco) in 1996. As these devices were commissioned more than 25 years ago, they are nearing the end of their serviceable life and are increasingly hard to support as we move towards the future. Additionally, any modification to the programming of these devices or upgrades to the PLCs/RTUs can only be done by a representative from Tesco as the equipment and programming are proprietary to Tesco. This was very common during the development of SCADA equipment at that time. However, this process has become both time consuming and expensive for CVWD.

The existing Tesco SCADA system is outdated and needs to be modernized to meet today's goals. Staff has worked with Tesco to update programming over the years. However, the existing software platform, from 1996, has become obsolete and caused temporary outages, resulting in a significant increase in overtime labor hours needed to correct it and an appreciable loss in operational resiliency.

In 2018 CVWD initiated a system-wide SCADA review to identify a strategy for upgrading the current hardware and software to a modern version that applies best management principles and includes:

- Open architecture for programming and integration that a variety of consultants and vendors can more easily support.
- Utilization of an "off-the-shelf" industry-standard system for all components.
- Implementation of enhanced remote support capabilities.
- Provide support for basic remote site development.

As a result of the system-wide review, CVWD selected a new programmable automation controller, and supporting hardware, manufactured by Allen Bradley (A/B). A/B is the brand name for a line of factory automation equipment owned by Rockwell Automation, which has been part of the water/wastewater industry for decades. The hardware and programming logic for A/B equipment uses standard protocol that can be serviced by any certified technician or programmer.

Staff has also been working with Apex Manufacturing Services (APEX) for the past year on the installation of new A/B equipment that it used to collect limited data at specific sites, reset the radio communication controls, and for future control of the new sodium hypochlorite and liquid ammonia injection pumps required for chloramination. Currently, the existing Tesco SCADA system is working in parallel with the A/B equipment until the new A/B system is ready to fully implement.

It is Engineering and Operation's goal, as part of the FY 21/22 CIP program, to upgrade the SCADA system with newer equipment and programming based on industry standards, which can be repaired and/or replaced by a variety of consultants and contractors. This will also include integrating the data into the existing monitoring screens located on the main computers at the Glenwood Plant.

DISCUSSION:

As part of the planning process, staff reviewed several preliminary options and project schedules to accomplish the goal of upgrading CVWD's SCADA system by the end of 2022. Options included 1) working directly with APEX on the design, and CVWD's crews performing the work to install the system 2) using a consultant for the design and a contractor to install the system, 3) using a contractor to design/build the system, and 4) performing a pilot project at two (2) sites to work through the details on equipment, programming, and integrating into Wonderware (SCADA monitoring software) to gain a better understanding of the process with respect to time and costs. Attachment No. 1 shows a preliminary project schedule for each Option.

The preliminary schedules show that Options 1, 3 & 4 could be completed before the end of 2022 to meet our goal, and Option 2 would be completed towards the end of 2023. Staff proceeded to look further into Options 1, 3 & 4 as the next step. A concern that was brought up internally was that staff has not had any in-depth experience with replacing a SCADA system, and the additional time that may be needed for both CVWD crews, operations, and engineering for the design and installation.

After much consideration, staff determined that Option 4 (Pilot Program) would allow staff and APEX to work together on the programming and installation at a smaller scale and allow the team to get a better idea of the time and costs involved in the upgrade. The two (2) sites that we are looking at are Well 8 and Well 14 since these sites are close to the Glenwood Operations Facility and have a relatively small number of monitoring components such as flow, water level, pressure, and controls. Also, the programming and integration into the CVWD master computers could be used as a template for the other well sites.

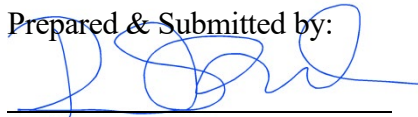
Project Budget:

Staff had budgeted \$610,000 for FY 20/21 and \$104,033 had been spent to date. For Budget FY 21/22, the Board approved a budgeted amount to \$374,000 as staff anticipated that a portion of the project will be completed in FY 20/21. The pilot program will allow staff to prepare a detailed budget for review at future Engineering Committee for any budget adjustments.

RECOMMENDATION:

Staff requested a quote from APEX for the programming, integration, and purchase of new equipment from Royal Industrial Solution, supplier of A/B equipment. The preliminary estimated cost for the pilot program will be \$35,000, and this project would be wrapped into the overall SCADA system project. It is Staff's recommendation to proceed with the pilot project and bring this item to the next Board meeting for approval.

Prepared & Submitted by:



David S. Gould, P.E.
Director of Engineering

Attachment:

1. Project Schedule Options

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 2
July 20, 2021

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Project Update – June 2021 - FY 20/21 Water Capital Improvement Program

BACKGROUND:

The Board approved the FY 20/21 Water Budget at the June 9, 2020, meeting with \$2.3M available for CIP projects. The Board also agreed to pursue refinancing CVWD's existing bond debt and requesting additional funding, totaling \$5M, for FY 20/21 CIP. The \$5M Bond process was completed on September 15, 2020.

DISCUSSION:

The following is the **July 2021** update of the progress and schedule for the FY 20/21 CIP projects. Project costs are shown on the attached Updated Project Cost Summary:

1. **Steel Reservoir Rehabilitation – Rosemont Reservoir** – This project is for the structural repairs and re-coating of the reservoir interior to maintain the District's water storage capacity and to increase the life expectancy of the steel tank.
Progress: Construction is complete, reservoir back in service & project costs are finalized
2. **Annual Pipeline Replacement** – This project is for the replacement of steel pipelines that are at least 50-years old or older in a timely manner.
 - A. **Projects 1 & 2:** Replacement of 4-inch & 6-inch pipelines on the 2400 & 2500 Blocks of Janet Lee (Project 1), and the 4300 Block of Rosemont (Project 2).
Progress: Construction is complete, pipelines are back in service & final project costs are being negotiated.
 - B. **Projects 3:** Replacement of 8-inch pipeline on the 3400 & 3500 Blocks of Encinal (Project 3)
Progress: Construction is complete, pipelines are back in service & project costs have been finalized.
 - C. **Projects 4:** Replacement of 4-inch, 6-inch & 8-inch pipelines on the 4800 Block of Dyer, 2800 Block of El Caminito, 4800 Block of Glenwood, 2800 Block of Stevens and 2700 Block of Paraiso Way (Project 4).
Project Schedule: Under Construction
 - June 7, 2021 – Begin Construction
 - August 2021 – Anticipate work to be completed.
3. **Local Hazard Mitigation Plan** - CVWD was awarded a grant from Cal OES and FEMA to prepare a Local Hazard Mitigation Plan (LHMP) to address high priority hazards related to its water and sewer systems during a drought, energy shortage/outage, wildfire, earthquake, terrorism or cyber-attack. The total grant amount to prepare a local hazard mitigation plan is \$165,000, with \$125,000 grant funding from FEMA and \$40,000 funding from CVWD.

Progress: Tetra Tech completed the Draft LHMP that was discussed at Steering Committee Meeting #8 on 6/23/21.

Project Schedule: On Schedule

- July 13, 2021 – Draft LHMP review at Board Meeting
- July 13 – July 27, 2021 – Public Comment Period
- August 2021 – LHMP submitted to Cal OES.
- September 2021 – Grant Applications due

4. **New Emergency Generator at La Granada Sewer Lift Station** – Installation of a new emergency electrical generator at the sewer lift station.

Progress: Cannon and staff have completed the design and project was awarded to Affordable Generator Services.

Project Schedule: Behind Schedule

- [LA County Parks & Recreation Department – preliminary license agreement - 6/24/21](#)
- [Waiting on LA County to response to CVWD’s comments – End of July 2021](#)
- September 2021 – Construction to begin. Anticipated delivery date for emergency generator.

5. **Advanced Metering Infrastructure (AMI) Program** – This project has two (2) components: 1) replacement of ¾” & 1” meters with new Sensus iPERL “Smart Meters” in Pressure Zone 2, and 2) installation of the AMI network communication system.

Progress: Field crews have replaced around 537, ¾-inch & 1-inch, water meters for FY 20/21. Esource completed RFQ, and the contract was awarded to Aqua Metric for the AMI network communication system.

Project Schedule: On Schedule

- [Completed AMI network communication system & installation of 100 meters.](#)
- [Sent out RFP on June 28, 2021; Proposals due August 3, 2021](#)
- [Presentation by Vendors – August 9 – 11, 2021](#)

6. **Groundwater Well Rehabilitation** – This project is for the rehabilitation of Well 12, which was last rehabilitated in 2010.

Progress: [Construction complete and Well 12 placed back into service on June 23, 2021](#)

7. **Replacement of SCADA Communication Radio Network** – CVWD has an existing radio communication network that operates on the 900 MHz radio frequency. In the past year, the radio system has seen interference with other communication devices, and the equipment, which was installed 7 years ago, has been malfunctioning, which indicates it is nearing the end of its useful life.

Progress: [SCADA radio feasibility study complete; Staff working on Request for Proposal.](#)

8. **New Pressure Reducing Valve (PRV) Station & Upgrade Ramsdell/Mayfield Mixing Station** – This project includes installing a new PRV station near the intersection of Mayfield Ave. and Ramsdell Ave. and upgrading the Ramsdell/Mayfield Mixing Station. The new PRV Station is needed to provide water from Zone 2 to Zone 1 when Encinal Reservoir and the Ramsdell/Mayfield Mixing Station are out of service. To meet the current FY 20/21 CIP schedule, staff will need assistance from a consulting firm to complete the specifications and advertise for bids.

Progress: Staff and Cannon have started on the design

Project Schedule: On Schedule

- [Under Design - Cannon](#)
- October 2021 – Advertise for Bids.

9. **Replacement of Supervisory Control and Data Acquisition (SCADA) System Upgrade** – CVWD has an existing SCADA system with RTU/PLCs that were installed at each of the District’s facilities in 1996. The SCADA system provides information on the status of the water system, controls for pump operation, and communication of alarms to the System Operators. The upgraded SCADA system will include upgrading equipment, programing, and integration based on industry standards, which can be repaired and/or replaced by various consultants/contractors.

Progress: See Staff Report – Pilot Project.

Project Schedule: On Schedule.

- July 2021 – Review project with Engineering Committee.

10. **Stormwater Recharge Program** - Stormwater Recharge Project at Crescenta Valley County Park (CVC Park) includes the design and installation of a stormwater infiltration system within CVC Park that will direct stormwater from the Verdugo Wash into infiltration galleries for groundwater recharge. The focus will be to coordinate with the City of Los Angeles on stormwater rights.

Progress: Met with LADWP, and staff working on alternatives regarding water rights.

Project Schedule: On Schedule

- August 2021 – Presentation to Engineering Committee on status of project.

11. **Rehabilitation Surge Tank at Glenwood** – This project is the rehabilitation of the surge tank at the Glenwood Operations Facility. A preliminary design was completed in 2017.

Progress: Project put on hold

12. **16-inch Manifold and Valve Replacement at Oak Creek Reservoir** – CVWD's operations staff observed a leak on the underside of the existing inlet/outlet pipeline manifold that joins Oak Creek #1 and #2 reservoirs. The inlet/outlet manifold was installed 1961 and is a critical junction point as it allows influent water to fill each reservoir.

Progress: Complete.

13. **Annual Booster Pump Replacement** – This project was originally planned to replace Markridge Booster 25. However, Booster B at Paschall was shut down due to what appears to be mechanical failure. Staff is working with the pump contractor that replaced the pump in 2018 to remove and replace the pump.

Progress: Complete

14. **Facility Improvement Program** – This project is for the installation of a new roof on the existing 70 ft diameter concrete reservoir at Encinal for material and equipment storage. Staff will be preparing an RFP for a consulting firm to perform the structural design of the new roof.

Progress: Complete

SUMMARY:

Attached for review is a summary of project costs including costs spent to date, cost committed to for the remainder of the year, and the total cost for each project.

Prepared & submitted by:



David S. Gould, P.E.
Director of Engineering

Attachment: FY 20/21 Capital Improvement Project Program - Cost Update: 7/19/21

FY 20/21 Capital Improvement Project Program Cost Update: 07/20/21	Recorded FY 19/20	Budget FY 20/21	<u>FY 20/21</u> Cost to date from 7/1/20 to 06/30/21	<u>FY 20/21</u> Cost Committed - Transfer to FY 21/22	Projected FY 20/21
Capital Improvement Project Summary					
1. Water Supply	\$ 300,375	\$ 170,000	\$ 151,365	\$ -	\$ 151,365
2. Water Storage	\$ 498,530	\$ 480,000	\$ 674,000	\$ -	\$ 674,000
3A. Water Distribution - Pipeline	\$ 1,126,030	\$ 2,300,000	\$ 1,753,577	\$ 641,923	\$ 2,395,500
3B. Water Distribution - Other	\$ 10,892	\$ 710,000	\$ 134,622	\$ -	\$ 134,622
4. Water Treatment	\$ 469,205	\$ -	\$ 54,073	\$ -	\$ 54,073
5. Technology	\$ 152,597	\$ 1,070,000	\$ 512,501	\$ -	\$ 512,501
6. Public Safety/Emergency Response	\$ 5,810	\$ 165,000	\$ 116,600	\$ 48,400	\$ 165,000
7. Facilities & Planning	\$ -	\$ 105,000	\$ 3,956	\$ -	\$ 3,956
Capital Improvement Projects - Total	\$ 2,563,438	\$ 5,000,000	\$ 3,400,694	\$ 690,323	\$ 4,091,017
Bond Financing - CIP	\$ -	\$ 2,695,174	\$ 2,753,944	\$ 450,730	\$ 3,204,674
Water Fund Financing - CIP	\$ 2,563,438	\$ 2,304,826	\$ 646,750	\$ 239,593	\$ 886,343
Total Financing - CIP	\$ 2,563,438	\$ 5,000,000	\$ 3,400,694	\$ 690,323	\$ 4,091,017

FY 20/21 Capital Improvement Project Program Cost Update: 07/20/21		Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21
1. Water Supply						
A. Groundwater Water Supply						
i. Well Rehabilitation						
	Well 7 Rehabilitation	\$ 102,696				
	Well 16 Rehabilitation	\$ 103,713				
	Well 11 Rehabilitation	\$ 14,694	\$ -	\$ 56,106	\$ -	\$ 56,106
	Well 12 Rehabilitation		\$ 95,000	\$ 92,724	\$ -	\$ 92,724
ii. New Wells						
	Re-Activate Well 2 - Construction	\$ 79,272				
iii. Groundwater Basin Recharge						
	Stormwater Recharge Project at CVC Park - Planning		\$ 75,000	\$ 2,535	\$ -	\$ 2,535
WS Total		\$ 300,375	\$ 170,000	\$ 151,365	\$ -	\$ 151,365
2. Water Storage						
A. Reservoir Rehabilitation						
i. Steel Reservoir Re-Coating/Roof/Vents Rehabilitation						
	Markridge	\$ 498,530	\$ -	\$ 367	\$ -	\$ 367
	Rosemont		\$ 480,000	\$ 618,452	\$ -	\$ 618,452
	Oak Creek - 16" Manifold Repair		\$ -	\$ 55,181	\$ -	\$ 55,181
WS Total		\$ 498,530	\$ 480,000	\$ 674,000	\$ -	\$ 674,000
3. Water Distribution						
A. Pipeline Replacement						
	3200 & 3300 Blocks of Brookhill	\$ 623,009				
	4700 & 4800 Block of Pennsylvania	\$ 503,021				
	2400 & 2500 Block of Janet Lee - Project 1		\$ 538,000	\$ 529,682	\$ 33,068	\$ 562,750
	Project 2		\$ 280,000	\$ 286,850	\$ 17,900	\$ 304,750
	Project 3		\$ 707,000	\$ 742,045	\$ 7,955	\$ 750,000
	Project 4		\$ 775,000	\$ 195,000	\$ 583,000	\$ 778,000
	Annual Pipeline Replacement		\$ 2,300,000	\$ 1,753,577	\$ 641,923	\$ 2,395,500
C. Booster Pump System						
i. Annual Pump /Motor Replacement						
	Boosters - Glenwood 32 & 33	\$ 4,384	\$ -	\$ 85,951	\$ -	\$ 85,951
	Booster Replace - Booster B at Paschall		\$ 75,000	\$ 20,218	\$ -	\$ 20,218

FY 20/21 Capital Improvement Project Program Cost Update: 07/20/21		Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21
D. Pressure Reducing Stations						
PRS - Zone 2 to Zone 1		\$ 6,508	\$ 150,000	\$ 28,453	\$ -	\$ 28,453
i. Water Surge Control						
Rehabilitation Surge Tank at Glenwood			\$ 35,000	\$ -	\$ -	\$ -
iii. Misc.						
Upgrade - Ramsdell Mixing Station			\$ 450,000	\$ -	\$ -	\$ -
WD Total		\$ 1,136,922	\$ 3,010,000	\$ 1,888,199	\$ 641,923	\$ 2,530,122
4. Water Treatment						
C. Disinfection - Convert to Chloramines						
Conversion to Chloramination		\$ 469,205	\$ -	\$ 54,073	\$ -	\$ 54,073
WT Total		\$ 469,205	\$ -	\$ 54,073	\$ -	\$ 54,073
5. Technology						
A. Automated Meter Information (AMI) System						
AMI - 3/4" to 1" - Smart Meters		\$ 83,590	\$ 50,000	\$ 112,105	\$ -	\$ 112,105
AMI - Communication			\$ 150,000	\$ 214,262	\$ -	\$ 214,262
B. Supervisory Control and Data Acquisition (SCADA)						
Communication Radio Network			\$ 260,000	\$ 77,101	\$ -	\$ 77,101
SCADA Replacement - Design		\$ 69,007				
SCADA Replacement - Installation			\$ 610,000	\$ 109,033	\$ -	\$ 109,033
TECH Total		\$ 152,597	\$ 1,070,000	\$ 512,501	\$ -	\$ 512,501
6. Public Safety/Emergency Response						
Dunsmore/Pickens - Seismic Sensors		\$ 5,810				
D. Miscellaneous						
FEMA Local Hazard Mitigation Plan			\$ 165,000	\$ 116,600	\$ 48,400	\$ 165,000
SF/ER Total		\$ 5,810	\$ 165,000	\$ 116,600	\$ 48,400	\$ 165,000
7. Facilities & Planning						
Roof for Old Encinal - Storage Bldg			\$ 105,000	\$ 3,956	\$ -	\$ 3,956
F & P Total		\$ -	\$ 105,000	\$ 3,956	\$ -	\$ 3,956
Capital Improvement Projects - Total		\$ 2,563,438	\$ 5,000,000	\$ 3,400,694	\$ 690,323	\$ 4,091,017

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 3
July 20, 2021

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Update for FY 21/22 Capital Improvement Project Budget and Consultants

BACKGROUND:

Staff has been discussing the FY 21/22 Capital Improvement Project (CIP) budget with respect to the Long-Term Infrastructure and Funding Roadmap, including future financing through the PayGo option. The Board has tentatively agreed to the FY 21/22 CIP budget, and the following is an update of projects and status of design.

DISCUSSION:

There are several CIP projects that need the assistance of outside consultants to begin design services so that construction can start in October or November 2021 instead of starting after January 2022. Shown below are the proposed projects and status update:

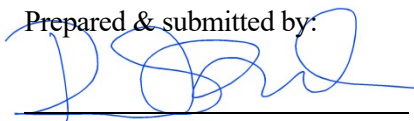
1. Design consultant for the new pipelines on the 2800 to 3100 Blocks of Los Olivos; 3200 Block of Alabama 4700 & 4800 Blocks of Cheryl & 3300 Block of Thelma St.
 - a. *Design contract awarded to Tetra Tech on July 13, 2021.*
 - b. *Kickoff meeting on July 21, 2021*
2. Design consultant for a new Pressure Reducing Station & Rehabilitation of the Ramsdell Mixing Station.
 - a. *Design contract awarded to Cannon Corporation*
 - b. *Kickoff meeting held on June 10, 2021.*
 - c. *Design team held a meeting in the field on July 7, 2021*
3. Design consultant for the steel reservoir rehabilitation at Edmund #2.
 - a. *Design contract awarded to Harper & Associates Engineering, Inc.*
4. Design consultant for the replacement of SCADA communication radio network.
 - a. *Staff finalizing the Request for Quote (RFQ) for installation of new radios and antennas.*
 - b. *RFQ to be sent out August 3, 2021, and due back-on September 8, 2021*
5. Design consultant for the replacement of SCADA Equipment, Programing & Integration.
 - a. *Staff working with Apex Manufacturing Services (APEX) on Pilot Program.*
6. Consultant to assist operations staff with conversion, monitoring and standard operating procedures for the conversion to chloramines.
 - a. *Staff working on Request for Proposal.*
7. Consultant to prepare a Wastewater Master Plan, with Wastewater Treatment Plant Feasibility Study.
 - a. *Staff working on preliminary Scope of Work.*
8. Consultant to assist in GIS mobile deployment.
 - a. *Staff working on Scope of Work.*

Staff will be bringing action items to future Board meetings for approval of consultant contracts. Staff is estimating about \$250,000 to \$300,000 of consulting fees will be spent prior to the October 2021 approval of the CIP budget.

RECOMMENDATION:

Staff is recommending to the Engineering Committee that staff move forward with preparing and awarding design consultant contracts prior to the final adoption of the FY 21/22 CIP Budget.

Prepared & submitted by:



David S. Gould, P.E.
Director of Engineering