I hereby certify that the following agenda was posted at least 72 hours prior to the time of the meeting so noticed below at 24251 Los Alisos Boulevard, Lake Forest, California.

DENNIS P. CAFFERTY, Secretary
of the El Toro Water District and
the Board of Directors thereof

AGENDA

EL TORO WATER DISTRICT

REGULAR MEETING OF THE BOARD OF DIRECTORS

FINANCE AND INSURANCE COMMITTEE MEETING AND ENGINEERING COMMITTEE MEETING

May 22, 2023

7:30 a.m.

BOARDROOM, DISTRICT OFFICE
24251 LOS ALISOS BLVD., LAKE FOREST, CA 92630

Vice President Vergara will be attending remotely from:
27231 Eastridge Drive
Lake Forest, CA 92630

This meeting will be held in person. As a convenience for the public, the meeting may also be accessed by Zoom and will be available by either computer or telephone audio as indicated below. Because this is an in-person meeting and the virtual component is not required, but rather is being offered as a convenience, if there are any technical issues during the meeting, this meeting will continue and will not be suspended.

Members of the public who wish to comment on any item within the jurisdiction of the District or on any item on the agenda, may attend the meeting in person at the District's office or may observe and address the Meeting by joining at this link: https://us02web.zoom.us/j/84107005090 (Meeting ID: 841 0700 5090).

Members of the public who wish only to listen to the telephonic meeting may dial in at the following numbers (669) 900-6833 or (346) 248-7799 with the same Meeting ID noted above. Please be advised the Meeting is being recorded.

CALL TO ORDER – President Havens

PLEDGE OF ALLEGIANCE – Director Gaskins

ROLL CALL (Determination of a Quorum)

ORAL COMMUNICATIONS/PUBLIC COMMENTS

Members of the public may address the Board at this time or they may reserve this opportunity with regard to an item on the agenda until said item is discussed by the Board. Comments on other items will be heard at the times set aside for "COMMENTS REGARDING NON-AGENDA ENGINEERING COMMITTEE ITEMS" or for "COMMENTS REGARDING NON-AGENDA FIC ITEMS." The public may identify themselves when called on and limit their comments to three minutes.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Determine need and take action to agendize item(s) which arose subsequent to the posting of the Agenda. (ROLL CALL VOTE: Adoption of this recommendation requires a two-thirds vote of the Board members present, or, if less than two-thirds of the Board members are present, a unanimous vote of those members present.)

1. Consider Board Member's Request for Remote Participation (AB 2449)

FINANCE AND INSURANCE COMMITTEE MEETING

CALL MEETING TO ORDER – Director Gaskins

2. Consent Calendar (Reference Material Included)

(All matters under the Consent Calendar will be approved by one motion unless a Board member or a member of the public requests separate action or discussion on a specific item)

a. Consider approving the minutes of the April 24, 2023 Finance and Insurance Committee meeting (Minutes included)

Recommended Action: The Board will be requested to approve the above Consent Calendar.

FINANCIAL INFORMATION ITEMS

3. Update on the Implementation of the Springbrook Software System (Reference Material Included)

Staff will provide an update on the status of the implementation of the Springbrook Software System.

FINANCIAL ACTION ITEMS

4. 2023/24 Water, Recycled Water, and Wastewater Rate Study and Proposition 218 Notice (Reference Material Included)

Staff will review and comment on the 2023/24 Water, Recycled Water, and Wastewater Rate Study, prepared by Raftelis, and the Proposition 218 Notice describing the proposed rate increases for the 2023/24 fiscal year.

Recommended Action: Staff recommends that the Board of Directors 1) approve the 2023/24 Water, Recycled Water, and Wastewater Rate Study and 2) approve the 2023/24 Proposition 218 Notice and authorize mailing of the Proposition 218 Notice to the District's customers.

5. Financial Package - Authorization to Approve Bills for Consideration dated May 22, 2023 and Receive and File Financial Statements as of April 30, 2023 (Reference Material Included)

The Board will consider approving Bills for Consideration dated May 22, 2023 and Receive and File Financial Statements as of April 30, 2023.

Recommended Action: Staff recommends that the Board 1) approve, ratify and confirm payment of those bills as set forth in the schedule of bills for consideration dated May 22, 2023, and 2) receive and file the Financial Statements for the period ending April 30, 2023.

COMMENTS REGARDING NON-AGENDA FIC ITEMS

CLOSE FINANCE AND INSURANCE COMMITTEE MEETING

ENGINEERING COMMITTEE

CALL MEETING TO ORDER – Director Freshley

6. Consent Calendar

(All matters under the Consent Calendar will be approved by one motion unless a Board member or a member of the public requests separate action or discussion on a specific item)

a. Consider approving the minutes of the April 24, 2023 Engineering Committee meeting. (Minutes Included).

Recommended Action: The Board will be requested to approve the subject minutes.

ENGINEERING ACTION ITEMS

7. Warehouse Construction Contract Award (Reference Material Included)

Staff will review and comment on construction bids submitted for the construction of the ETWD Warehouse at the demolished Filtration Plant site.

Recommended Action: Staff recommends that 1) the Board of Directors determine the bid submitted by Faris Constructors to be non-responsive due to substantial omissions of required bid documents and that the Faris Constructors bid be rejected, 2) authorize the General Manager to issue a contract to Dumarc Corp. in the amount of $2,184,000 for the construction of the ETWD Warehouse Project and 3) authorize the General Manager to issue a contract to Richard Brady & Associates in the amount of $222,095 for engineering services during construction. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

8. Headworks Grit Chamber Rehabilitation Project
(Reference Material Included)

Staff will review and comment on a design proposal submitted by Carollo Engineers, Inc. to design and prepare construction documents to implement Grit Chamber Rehabilitation design elements identified during the Headworks Rehabilitation Conceptual Design Study completed in 2022.

Recommended Action: Staff recommends that the Board of Directors authorize the General Manager to issue a contract to Carollo Engineers, Inc. in the amount of $63,878.00 for the design of the Headworks Grit Chamber Rehabilitation Project. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

9. **DAF Unit 2 Rehabilitation and Retrofit Project** (Reference Material Included)

Staff will review and comment on the proposed pre-purchase of certain additional equipment components necessary for the DAF Unit 2 Rehabilitation and Retrofit Project.

Recommended Action: Staff recommends that the Board of Directors authorize the General Manager to issue a purchase order to World Water Works, Inc. in the amount of $40,467.44 for the purchase of a Nikuni Pump for the DAF Unit 2 Rehabilitation and Retrofit Project. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

ENGINEERING INFORMATION ITEMS

10. **El Toro Water District Capital Project Status Report**
(Reference Material Included)

Staff will review and comment on the El Toro Water District Capital Project Status Report.

11. **Engineering Items Discussed at Various Conferences and Meetings**

The Committee will discuss any pertinent Engineering items discussed at Conferences.

COMMENTS REGARDING NON-AGENDA ENGINEERING COMMITTEE ITEMS

CLOSE ENGINEERING COMMITTEE MEETING

ATTORNEY REPORT

CLOSED SESSION

At this time the Board will go into Closed Session as follows:

1. Pursuant to Government Code Section 54956.9 (d) (2) to consult with legal counsel and staff – Potential Litigation (one matter).

2. Pursuant to Government Code Section 54956.9(a) to consult with legal counsel and staff. *Plaintiff, Marlene Jean v. Defendants, Dollar Tree Stores, et al./Cross-Complainant, Park Aliso Commercial Center, Ltd, et al. v. Cross-Defendant, El Toro Water District, et al.,* Superior Court of Los Angeles Case No. 19STCV25234. [Government Code Section 54956.9(a)] – Pending Litigation (one matter).

REGULAR SESSION

REPORT ON CLOSED SESSION (Legal Counsel)

Mr. Granito will provide an oral report on the Closed Session.

ADJOURNMENT

The agenda material for this meeting is available to the public at the District's Administrative Office, which is located at 24251 Los Alisos Blvd., Lake Forest, Ca. 92630. If any additional material related to an open session agenda item is distributed to all or a majority of the board of directors after this agenda is posted, such material will be made available for immediate public inspection at the same location.

Request for Disability-Related Modifications or Accommodations

If you require any disability-related accommodation, including auxiliary aids or services, in order to participate in this public meeting, please telephone the District's Recording Secretary, Polly Welsch at (949) 837-7050, extension 225 at least forty-eight (48) hours prior to said meeting. If you prefer, your request may be submitted in writing to El Toro Water District, P.O. Box 4000, Laguna Hills, California 92654, Attention: Polly Welsch.

MINUTES OF THE REGULAR MEETING
OF THE
FINANCE & INSURANCE COMMITTEE

April 24, 2023

At approximately 7:30 a.m. President Havens called the regular meeting to order.

Director Freshley led in the Pledge of Allegiance to the flag.

Committee Members KAY HAVENS, KATHRYN FRESHLEY, MIKE GASKINS, JOSE VERGARA (Zoom), and MARK MONIN (Zoom) participated.

Also participating were DENNIS P. CAFFERTY, General Manager, SCOTT HOPKINS, Operations Superintendent, HANNAH FORD, Engineering Manager, JASON HAYDEN, CFO, GILBERT J. GRANITO, General Counsel, MIKE MIAZGA, IT Manager, VU CHU, Water Use Efficiency Analyst, VICKI TANIOUS (Zoom), and CAROL MOORE, Laguna Woods City Council Member (Zoom).

Determination of a Quorum

Roll Call:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

All five Board members are present for the meeting, therefore a quorum was determined.

Oral Communications/Public Comments

There were no comments.

Items Received Too Late to be Agendized

President Havens asked if there were any items received too late to be agendized. Mr. Cafferty replied no.

Resolution No. 23-4-1 Modifying Standing and External Organization Board and Staff Assignments for Calendar Year 2023

Mr. Cafferty stated that this Resolution does two things; one is to change the Alternate for the Budget Committee, and the other is to allow for the Board President to make temporary changes to these assignments if necessary to preserve a Committee quorum without going back to the Board for approval by Resolution.

President Havens asked for a Motion.

Motion: Director Gaskins made a Motion, seconded by Director Freshley and unanimously carried across the Board to approve Resolution No. 23-4-1 Modifying Standing and External Organization Board and Staff Assignments for Calendar Year 2023.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Resolution 23-4-2 Amending El Toro Water District's Policy Statement 1993-10 (IV) Directors Compensation Policy

Mr. Cafferty stated that the Committee Assignments in Directors Compensation Policy have been aligned to be consistent with the meetings listed in Resolution No. 23-4-1.

Motion: Director Gaskins made a Motion, seconded by Director Freshley and unanimously carried across the Board to approve Resolution No. 23-4-2 amending El Toro Water District's Policy Statement 1993-10 (IV) Directors Compensation Policy.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Finance & Insurance Committee Meeting

At approximately 7:48 a.m. Director Gaskins called the Finance & Insurance Committee meeting to order.

Consent Calendar

Director Gaskins asked for a Motion.

Motion: Director Freshley made a motion, seconded by President Havens and unanimously carried across the Board to approve the Consent Calendar.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Financial Information Items

Update on the Implementation of the Springbrook Software System

Mr. Hayden stated that we have pushed back the schedule one month due to Union Bank being purchased by US Bank with the switchover happening in May. He further stated that staff is testing electronic communications with our system to ensure they work with US Bank's system.

2023-24 Fiscal Year Budget Status Update

Mr. Cafferty stated that the budget status has been challenging as we see historic cost drivers, double digit increases in water, power, electrical, and wastewater.

He further stated that we are considering a rate increase between 9%-10%.

Mr. Cafferty stated that we are increasing Capital Revenue by approximately 25% per year for the next four years. He further stated that we are proposing a Prop 218 Notice that covers a three-year period which will include a rate increase for this year and proposed rates for the next two years, which will allow us to avoid the effort of going through the Prop 218 Notice each year.

Director Freshley asked if there is a risk involved during the next two years of an inflationary period. Mr. Cafferty replied that the risk is if we under estimate the Revenue increase necessary for the next year.

Mr. Granito stated that the risk is if the District lacks the supporting data to justify the rate increases.

Financial Action Items

Quarterly Insurance Report

Director Gaskins noted that the dam insurance increased. Mr. Cafferty replied that JPIA has a difficult time finding carriers for the R-6 dam insurance.

Director Gaskins asked for a Motion.

Motion: Director Freshley made a Motion, seconded by President Havens and unanimously carried across the Board to Receive and File the Quarterly Insurance Report for the period of January 1, 2023 through March 31, 2023.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Financial Package - Authorization to Approve Bills for Consideration Dated April 24, 2023 and Receive and File Financial Statements as of March 31, 2023

Director Freshley asked what the "interim statement" means. Mr. Hayden replied that it is not a final Balance Sheet, but a projection for the ending period.

Mr. Hayden stated that March was a very good month for the District's investments, and there is a nice unrealized gain on Treasury Investments.

Director Gaskins asked for a Motion.

Motion: Director Freshley made a Motion, seconded by President Havens and unanimously carried across the Board to approve, ratify, and confirm payment of the bills set forth in the schedule of bills for consideration dated April 24, 2023, and receive and file the financial statements for the period ending March 31, 2023.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Comments Regarding Non-Agenda FIC Items

There were no comments.

Close Finance and Insurance Committee Meeting

There being no further business the Finance Committee meeting was closed at approximately 8:12 a.m.

Respectfully submitted,

POLLY WELSCH
Recording Secretary

APPROVED:

_____
KAY HAVENS, President
of the El Toro Water District and the
Board of Directors thereof

_____
DENNIS P. CAFFERTY, Secretary
of the El Toro Water District and the
Board of Directors thereof

Agenda Item No. 3

STAFF REPORT

To: BOARD OF DIRECTORS **Meeting Date: May 22, 2023**

From: Jason Hayden, Chief Financial Officer

Subject: Springbrook Implementation – Progress Update

Presented below are the activities, challenges, and opportunities of the ongoing Springbrook implementation process:

- Payroll is fully implemented with the exception of the Time and Attendance system. Staff is proceeding with the Springbrook Time and Attendance system and will be converting employees into the Springbrook system throughout 2023. It takes time to get an employee set up in the system and then trained to use it. The District's Payroll Accountant will be working on this process in between other responsibilities.
- Currently, Finance is actively using the following modules: General Ledger, Bank Reconciliation, Project Management, Accounts Payable, Payroll, Cash Receipting, Accounts Receivable, Human Resources, and Employee Self Service.
- The modules that still need to be implemented include Utility Billing, online credit card processing, and Fixed Assets.
- During the week of October 3, 2022, Customer Service Staff worked with the Springbrook consultant to complete a parallel utility billing process. These meetings were extensive, lasting more than 6 hours per day from Tuesday to Friday that week, and involved replicating the current utility billing process in Springbrook. The parallel billing process was successful and accurately generated individual utility bills that equaled the utility bills in the District's current software. Some additional setups have been completed. The next step in the process needs to be an additional parallel billing session but this was further delayed due to staffing challenges in the Customer Service Department and the alternate working arrangements that occurred as a result of HVAC project in the Administration Building.

  These delays in the implementation process have now been resolved with Staff having returned to the Administration Building in early April and a new Customer Service Office Representative hired. One additional challenge that has arisen is the transition of banking services due to the acquisition of Union Bank by US Bank. All of the District's banking processes have to transition to US Bank by the end of May and this will cause a further delay in the implementation of Springbrook. Finance Staff is now involved in the transition process and this will take several weeks of work. Finally, the replacement of the Chief Financial Officer position needs to occur so the new employee has the opportunity to assess the utility billing process and understand what will occur during the transition from the current Utility Billing system to the Springbrook system.

  The revised implementation schedule anticipates an implementation process that occurs in June and July, 2023.

Springbrook Finance/Payroll Systems Project Schedule as of 4/30/2023:

Week or Day	System	Description	Complete
1/13	Finance	Project Kick-off Conference Call	Yes
1/17 – 1/21	Finance	Business Process Questionnaire Review	Yes
1/31 – 2/4	Finance	Discovery Session Meetings	Yes
2/7 – 2/11	Finance	General Ledger/Chart of Accounts Consulting Session	Yes
3/4/22	Finance	Chart of Accounts/Accounts Payable Vendor List Due	Yes
3/4/22	Payroll	Payroll Business Process Questionnaire Due	Yes
3/7 – 3/11	Payroll	Payroll Questionnaire Review	Yes
3/14 – 3/18	Finance	General Ledger & Accounts Payable – Data Review and Load	Yes
3/14 – 3/18	Payroll	Discovery Session between ETWD and Springbrook	Yes
3/21 – 3/25	Finance	Setup & Configuration Session	Yes
5/6	Payroll	Payroll Data / Templates Due	Yes
6/28 – 7/7	Finance	Go Live Sessions	Yes
7/11 – 7/15	Payroll	Go Live Sessions	Yes
7/15 – 7/31	Both	Post Go Live Support	Ongoing

Springbrook Utility Billing Project Schedule as of 4/30/2023:

Week/Day	System	Description	Complete
5/2 – 5/6	Utility Billing	Utility billing discovery session begins	Yes
6/3	Utility Billing	Utility billing data transmitted to Springbrook	Yes
6/6 – 6/10	Utility Billing	Springbrook works on Data Mapping from CUSI	Yes
6/13/ - 6/17	Utility Billing	Initial data conversion and load	Yes
6/20 – 6/24	Utility Billing	Initial Data Review	Yes
8/1 – 8/5	Utility Billing	Setup and Configuration Sessions	Yes
8/16	Utility Billing	Continued Configuration Session	Yes
8/29 – 9/2	Utility Billing	Parallel Billing Session	Delayed
10/3 – 10/7	Utility Billing	Parallel Billing Session	Yes
May	Utility Billing	Additional Implementation and Setups	
June	Utility Billing	2nd Parallel Billing Session	
July	Utility Billing	Final testing for Go Live	
August	Utility Billing	Go Live with Utility Billing	

Agenda Item No. 4

STAFF REPORT

To: **Board of Directors** **Meeting Date: May 22, 2023**

From: **Dennis Cafferty, General Manager**

Subject: **2023/24 Water, Recycled Water, and Wastewater Rate Study and Proposition 218 Notice**

At the Board Budget Workshop, held on May 3, 2023, a draft Proposition 218 Notice and draft Rate Study were presented to the Board. At the Workshop staff noted that the 10" Recycled Water Meter that supplies recycled water to the Laguna Woods Village Golf Course is currently the only billing meter in the ETWD potable or recycled water systems that does not have an allocation of fixed and capital charges. Staff recommended, and the Board concurred, that a fixed meter charge and a capital charge should be developed for the 10" Recycled Water Meter. Raftelis, the District's rate consultant and author of the Cost of Service Rate Study, subsequently developed appropriate fixed and capital charges for the subject meter. The 218 Notice and the Rate Study have been updated to include the following monthly charges for the 10" Recycled Water meter:

- Fixed Meter Charge $1,360 / month
- Capital Charge $640 / month

Following the Board Budget Workshop the Rate Study and Proposition 218 Notice were provided to legal counsel for review. Staff subsequently met with legal counsel and Raftelis to discuss the counsel's comments regarding the Rate Study. Based on recommendations from legal counsel the rates for the water capital charges have been updated. The revised capital charges result in small changes in the charges within each meter size. The following table illustrates the changes from the water capital rates presented at the Board Budget Workshop.

Meter Size	2022-23 Rate	Previous 2023-24 Rate	Revised 2023-24 Rate
5/8"	$5.09	$6.37	$5.56
3/4"	$5.09	$6.37	$8.33
1"	$8.50	$10.63	$13.88
1 ½"	$20.65	$25.82	$27.76
2"	$51.84	$64.80	$55.52
10"			$640.00

The Single Family Residential customer class includes both 5/8” and 3/4” meters. The previous capital charges for the 5/8” and 3/4” meters were identical. The updated charges create separate charges for the two different meter sizes based on the meter capacities. The Single Family Residential sensitivity analysis has been updated to show two separate tables for the two different meter sizes.

Single Family Residential 5/8” Meter	2022-2023	2023-2024	Change ($)	Change (%)
Tier I (10 ccf)	$28.20	$30.00	$1.80	
Water Fixed Meter	$17.46	$18.07	$0.61	
Water Capital Fixed Meter	$5.09	$5.56	$0.47	
Total Water	**$50.75**	**$53.63**	**$2.88**	**5.7%**
Sewer Fixed Meter	$34.67	$37.98	$3.31	
Sewer Capital Fixed Meter	$7.09	$8.87	$1.78	
Total Sewer	**$41.76**	**$46.85**	**$5.09**	**12.2%**
Total Bill	**$92.51**	**$100.48**	**$7.97**	**8.6%**

Single Family Residential 3/4” Meter	2022-2023	2023-2024	Change ($)	Change (%)
Tier I (10 ccf)	$28.20	$30.00	$1.80	
Water Fixed Meter	$23.62	$24.72	$1.10	
Water Capital Fixed Meter	$5.09	$8.33	$3.24	
Total Water	**$56.91**	**$63.05**	**$6.14**	**10.8%**
Sewer Fixed Meter	$34.67	$37.98	$3.31	
Sewer Capital Fixed Meter	$7.09	$8.87	$1.78	
Total Sewer	**$41.76**	**$46.85**	**$5.09**	**12.2%**
Total Bill	**$98.67**	**$109.90**	**$11.23**	**11.4%**

The changed capital charges also affect the sensitivity analysis for Laguna Woods Village. The updated sensitivity analysis for the Laguna Woods Village community is presented in the following table.

Laguna Woods Village	2022-2023	2023-2024	Change ($)	Change (%)
Third Mutual	$5,134,480	$5,575,783	$441,303	8.6%
United Mutual	$4,052,897	$4,425,180	$372,283	9.2%
Golden Rain Foundation	$906,180	$990,974	$84,794	9.4%
Mutual 50	$211,636	$230,277	$18,641	8.8%
Total Community	$10,305,192	$11,222,214	$917,021	8.9%

The updated Proposition 218 Notice and Rate Study are attached reflecting the revised water capital charges as well incorporating comments on both documents from legal counsel.

Recommended Action: Staff recommends that the Board of Directors 1) approve the 2023/24 Water, Recycled Water, and Wastewater Rate Study and 2) approve the 2023/24 Proposition 218 Notice and authorize mailing of the Proposition 218 Notice to the District's customers.

Attachments

Attachment 1 2023/24 Water, Recycled Water, and Wastewater Rate Study
Attachment 2 Proposition 218 Notice

ATTACHMENT 1

2023/24 Water, Recycled Water, and Wastewater Rate Study

EL TORO WATER DISTRICT

2023-24 Water, Recycled Water, and Wastewater Rate Study

Draft Report / May 18, 2023

EL TORO WATER DISTRICT
Serving the Public
Respecting the Environment

RAFTELIS

RAFTELIS

May 18, 2023

Dennis P. Cafferty, P.E.
General Manager
El Toro Water District
24251 Los Alisos Blvd.
Lake Forest, CA 92630

Subject: 2023-24 Water, Recycled Water, and Wastewater Rate Study Report

Dear Mr. Cafferty:

El Toro Water District (ETWD or District) engaged Raftelis Consultants, Inc. (Raftelis) to conduct a cost-of-service study to develop its water, wastewater, and recycled water rates that comply with Proposition 218 and other legal requirements. As part of the Study, we reviewed the latest operating budget (including purchased water costs), referenced previously conducted cost of service analyses, and calculated the water, wastewater, and recycled water rates for the District in fiscal year (FY) 2023-24 and for the two following years (FY 2025 and FY 2026). The updated rates, scheduled to take effect on August 1, 2023, reflect projected changes in net revenue requirements for each enterprise and projected water sales for FY 2023-24.

This Water, Recycled Water, and Wastewater Rate Update Study Report summarizes the key findings and recommendations related to developing the respective rates.

It has been a pleasure working with the District. We want to thank you for your assistance during the Study.

Sincerely,

Sudhir Pardiwala
Executive Vice President – Project Manager

Nicki Bartak
Consultant – Analyst

445 S Figueroa Street, Suite 1925
Los Angeles, CA 90071
www.raftelis.com

Table of Contents

List of Tables

List of Figures

List of Appendices

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1. Executive Summary

1.1. Background of the Study

The District engaged Raftelis Consultants, Inc. (Raftelis) to conduct the Water, Recycled Water (RW), and Wastewater Rate Update Study (Study) to develop rates for all three enterprises that are equitable and in compliance with Proposition 218. Raftelis prepared rate proposals for this upcoming Fiscal Year (FY) 2023-24 and the two following years (FY 2025 and FY 2026). The Water, Recycled Water, and Wastewater Rate Update Study Executive Summary ("Summary") summarizes the key findings and recommendations for developing the respective rates.

The District's current water and wastewater rate structure consists of the following components:

Water

- Monthly Service Charges by meter size to recover a portion of operating costs
- Variable Rates: Tiered Residential Rates and Uniform Commercial Rates, comprised of the following rate components:
  - Water Supply Rate to pay for purchased water supply costs
  - Delivery Rate to recover the remaining operating costs
  - Revenue Offset to provide a rate incentive and affordability for essential water use in Tier 1
  - Conservation and Recycled Water Program costs applied to inefficient and excessive water use to fund the District's conservation and supplemental water supply programs (e.g., Recycled Water expansion)
- Capital Facility Charges by meter size to pay for capital replacement and refurbishment (R&R) of the existing water system

Wastewater (WW)

- Operations and Maintenance ("O&M") Rates (by dwelling units for residential customers and by estimated strength of discharge for non-residential customers by customer class)
- Capital Facility Charges by meter size to pay for capital (R&R) of the existing wastewater system

Recycled Water

- Monthly service charge to cover a portion of the fixed costs of O&M
- Variable rate: Uniform commodity rate
- Capital Facility Charge to pay for R&R and debt service associated with the capital construction

1.2. Proposed Water Rates

1.2.1. MONTHLY SERVICE CHARGES

Table 1-1 shows the proposed monthly service charges for FY 2024, effective August 1, 2023. All rates and charges are rounded up to the nearest cent.

Table 1-1: FY 2024 Proposed Monthly Water Service Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change
5/8"	**$18.07**	$17.46	$0.61	3.5%
3/4"	**$24.72**	$23.62	$1.10	4.7%
1"	**$38.02**	$35.93	$2.09	5.8%
1-1/2"	**$71.27**	$66.70	$4.57	6.9%
2"	**$137.76**	$128.25	$9.51	7.4%

The monthly service charges in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the service charge increase will be used to calculate the rates.

1.2.2. CAPITAL FACILITY CHARGES

The District proposes an overall 25% annual increase on its current Capital Facility Charges for potable water services for FY 2024 through FY 2026 to carry out treatment plant improvements, replace and refurbish infrastructure and debt service.[1] Table 1-2 shows the proposed monthly capital charges for FY 2024, effective August 1, 2023.

Table 1-2: FY 2024 Proposed Monthly Water Capital Facility Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change
5/8"	**$5.56**	$5.09	$0.47	9.2%
3/4"	**$8.33**	$5.09	$3.24	63.7%
1"	**$13.88**	$8.50	$5.38	63.3%
1-1/2"	**$27.76**	$20.65	$7.11	34.4%
2"	**$55.52**	$51.84	$3.68	7.1%

Table 1-3 shows the proposed monthly capital charges for FY 2025 and FY 2026.

Table 1-3: FY 2025 and FY 2026 Proposed Monthly Water Capital Facility Charges

Meter Size	Proposed FY 2025	Proposed FY 2026
5/8"	$6.95	$8.69
3/4"	$10.42	$13.02
1"	$17.35	$21.69
1-1/2"	$34.70	$43.38
2"	$69.40	$86.75

[1] See Appendix 7 for detailed Capital Projects Budget.

1.2.3. COMMODITY RATES

The proposed water commodity rates for FY 2024, shown in Table 1-4, will be effective August 1, 2023. The proposed rates reflect the projected increases in purchased water supply costs from the Metropolitan Water District of California through the Municipal Water District of Orange County (MWDOC) as well as O&M cost increases for water supplied from the Baker Water Treatment Plant. Table 1-5 shows the proposed commodity rates for FY 2025 and FY 2026. The FY 2025 and FY 2026 rates reflect the pass through of the projected Metropolitan Water District rates as well as inflationary impacts on O&M costs at the Baker Water Treatment Plant.

Table 1-4: FY 2024 Proposed Water Commodity Rates

Water Usage Rates	Proposed FY 2024	Current FY 2023	$ Impact	% Impact
Tier 1 - Essential Use	**$3.00**	$2.82	$0.18	6.4%
Tier 2 - Efficient Use	**$3.37**	$3.18	$0.19	6.0%
Tier 3 - Inefficient Use	**$6.70**	$6.50	$0.20	3.1%
Tier 4 - Excessive Use	**$8.67**	$8.35	$0.32	3.8%
Uniform - Commercial Use	**$3.49**	$3.31	$0.18	5.4%

Table 1-5: FY 2025 and FY 2026 Proposed Water Commodity Rates

Meter Size	Proposed FY 2025	Proposed FY 2026
Tier 1 - Essential Use	$3.18	$3.39
Tier 2 - Efficient Use	$3.55	$3.76
Tier 3 - Inefficient Use	$6.88	$7.09
Tier 4 - Excessive Use	$8.85	$9.06
Uniform - Commercial Use	$3.67	$3.88

1.2.4. PRIVATE FIRE RATES

The private fire rates account for the extra capacity demand to fight an average fire in the District. The proposed private fire rates for FY 2024 are shown in Table 1-6. The proposed rates for FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the private fire rate increase will be used to calculate the rates.

Table 1-6: FY 2024 Proposed Monthly Private Fire Service Rates

Meter Size	Accounts	Proposed FY 2024	Current Rates	$ Change	% Change
4"	27	**$17.26**	$16.15	$1.11	6.9%
6"	90	**$24.79**	$23.45	$1.34	5.7%
8"	53	**$37.78**	$36.04	$1.74	4.8%
10"	4	**$57.31**	$54.97	$2.34	4.3%

1.3. Proposed Wastewater Rates

1.3.1. WASTEWATER SERVICE CHARGES

The District classifies non-residential wastewater customers into four groups based on the estimated strength[2] of the wastewater discharged into the District's system. Residential customers are classified into three groups: Single Family Residential Unrestricted, Multi-Family Restricted, and Multi-Family Unrestricted. Table 1-7 shows the respective customer classes and their assumed strengths.

Table 1-7: Wastewater Customer Classes and Strengths

Customer Classes	BOD (mg/L)	TSS (mg/L)	Total Strengths	Notes
Single Family Residential Unrestricted	282	272	554 mg / L	LACSD data[3]
Multi-Family Restricted	282	272	554 mg / L	LACSD data
Multi-Family Unrestricted	282	272	554 mg / L	LACSD data
Low Strength Commercial	0-150	0-150	≤ 300 mg / L	
Medium Strength Commercial	150-300	150-300	301- 600 mg / L	
High Strength Commercial	> 300	> 300	> 600 mg / L	
Restaurants	282	272	554 mg / L	Same as Single Family Residential[4]

The proposed wastewater rates are shown in Table 1-8 for FY 2024. The wastewater rates in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the wastewater rate increase will be used to calculate the rates.

Table 1-8: FY 2024 Proposed Monthly Wastewater Service Charges

Wastewater Service Charges	FY 2023	FY 2024	Impact from Current Rates	
	Current	Proposed	$ Increase	% Increase
Residential ($/EDU)				
Residential Unrestricted	$34.67	**$37.98**	$3.31	9.5%
Multi-Family Restricted	$16.47	**$18.05**	$1.58	9.6%
Multi-Family Unrestricted	$25.34	**$27.76**	$2.42	9.6%
Commercial Use ($/ccf)				
Low St. Commercial	$4.10	**$4.45**	$0.35	8.5%
Medium St. Commercial	$5.07	**$5.54**	$0.47	9.3%
High St. Commercial	$9.49	**$10.58**	$1.09	11.5%
Restaurants	$5.15	**$5.65**	$0.50	9.7%

[2] Total strength = Total Suspended Solids (TSS) + Biochemical oxygen demand (BOD) (in mg/L)
[3] LACSD Revenue Program Report Table 3
[4] Restaurant strengths are assumed to be the same as residential given the strict regulations of Fats, Oils, Grease ("FOG") for restaurants within the District service areas

1.3.2. CAPITAL FACILITY CHARGES

Table 1-9 shows the current FY 2023 and proposed Wastewater Capital Facility charges for each customer class, effective August 1, 2023 (FY 2024). The FY 2024 charges show an approximate 25% increase from the FY 2023 Revised COS Rates. Increases of 25% each year for FY 2025 and FY 2026 are required for replacement and refurbishment of infrastructure and debt service.[5] Please refer to Section 6 for details of the analysis.

Table 1-9: FY 2024 Proposed Monthly Wastewater Capital Facility Charges

Wastewater Service Charges	FY 2023	FY 2024	Impact from Current Rates	
	Current	Proposed	$ Increase	% Increase
Residential ($/EDU)				
Residential Unrestricted	$7.09	**$8.87**	$1.78	25.1%
Multi-Family Restricted	$3.37	**$4.21**	$0.84	25.0%
Multi-Family Unrestricted	$5.18	**$6.48**	$1.30	25.1%
Commercial Use ($/ccf)				
Low St. Commercial	$0.84	**$1.04**	$0.20	23.8%
Medium St. Commercial	$1.04	**$1.29**	$0.25	24.0%
High St. Commercial	$1.93	**$2.47**	$0.54	28.0%
Restaurants	$1.05	**$1.32**	$0.27	25.7%

Table 1-10: FY 2025 and FY 2026 Proposed Monthly Wastewater Capital Facility Charges

Wastewater Capital Facilities Charges	Proposed FY 2025	Proposed FY 2026
Residential ($/EDU)		
Residential Unrestricted	$11.09	$13.86
Multi-Family Restricted	$5.27	$6.59
Multi-Family Unrestricted	$8.11	$10.13
Commercial Use ($/ccf)		
Low St. Commercial	$1.30	$1.63
Medium St. Commercial	$1.62	$2.02
High St. Commercial	$3.09	$3.86
Restaurants	$1.65	$2.07

1.4. Proposed Recycled Water Rates

The current variable rate for recycled water is $2.86/ccf. The proposed recycled water ("RW") rate for FY 2024 is **$3.03/ccf**. Table 1-11 shows the proposed RW variable rate for FY 2025 and FY 2026.

Table 1-11: FY 2025 and FY 2026 Proposed RW Variable Charge

Recycled Water Variable Charges	Proposed FY 2025	Proposed FY 2026
	$3.20	$3.38

[5] See Appendix 7 for detailed Capital Projects Budget.

All RW customers connected to the recycled water distribution system will be assessed Monthly Service Charges (Table 1-12) and Capital Facility Charges (

Table 1-13) which are the same as potable meters, to recover the customer service, meter service, a portion of capacity and other RW related fixed costs and pay for the capital debt service and replacement and refurbishment of the expanded RW system.

The monthly service charges in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the service charge increase will be used to calculate the rates. Table 1-14 shows the proposed Capital Facility Charges for recycled water for FY 2025 and FY 2026.

Table 1-12: FY 2024 Proposed Recycled Water Monthly Service Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change[6]
5/8"	**$18.07**	$17.46	$0.61	3.5%
3/4"	**$24.72**	$23.62	$1.10	4.7%
1"	**$38.02**	$35.93	$2.09	5.8%
1-1/2"	**$71.27**	$66.70	$4.57	6.9%
2"	**$137.76**	$128.25	$9.51	7.4%
10"	**$1,360.00**	N/A		

Table 1-13: FY 2024 Proposed Recycled Water Capital Facility Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change[7]
5/8"	**$5.56**	$5.09	$0.47	9.2%
3/4"	**$8.33**	$5.09	$3.24	63.7%
1"	**$13.88**	$8.50	$5.38	63.3%
1-1/2"	**$27.76**	$20.65	$7.11	34.4%
2"	**$55.52**	$51.84	$3.68	7.1%
10"	**$640.00**	N/A		

Table 1-14: FY 2025 and FY 2026 Proposed Recycled Water Capital Facility Charges

Meter Size	Proposed FY 2025	Proposed FY 2026
5/8"	$6.95	$8.69
3/4"	$10.42	$13.02
1"	$17.35	$21.69
1-1/2"	$34.70	$43.38

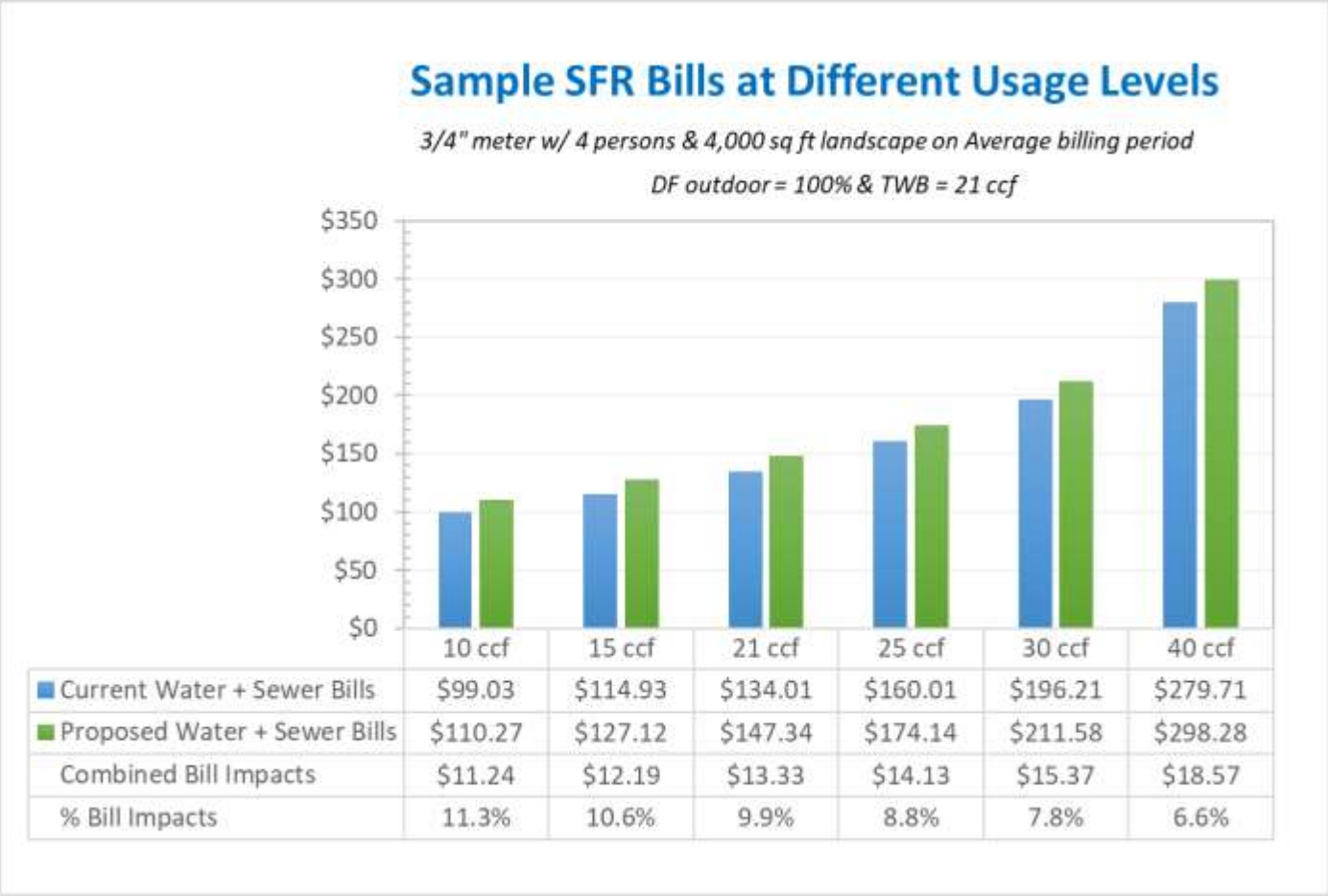
[6] There is no prior year comparison for the 10" recycled meter size, as this is a new meter size addition for FY 2024.
[7] There is no prior year comparison for the 10" recycled meter size, as this is a new meter size addition for FY 2024.

2"	$69.40	$86.75
10”	$800.00	$1,000.00

1.5. Customer Impact Analysis

Figure 1-1 shows a breakdown of water and wastewater bill impacts at various water usage levels for a single-family residential user with four occupants and a 4,000 sq. ft. landscape area serviced by a ¾-in meter at current water and wastewater rates and proposed FY 2024 rates. The combined water and wastewater bill increase would range from $11.24 to $18.57 per month, depending on the monthly billed water usage. The bill impacts resulted from the combination of changes to water and wastewater service and capital charges, cost of service rates, and increased revenue requirements for FY 2024. Recycled water rate impacts are not shown, as residential users do not purchase recycled water.

Figure 1-1: SFR Total Monthly Bills at Different Usage Levels at Current and Proposed Rates



	10 ccf	15 ccf	21 ccf	25 ccf	30 ccf	40 ccf
Current Water + Sewer Bills	$99.03	$114.93	$134.01	$160.01	$196.21	$279.71
Proposed Water + Sewer Bills	$110.27	$127.12	$147.34	$174.14	$211.58	$298.28
Combined Bill Impacts	$11.24	$12.19	$13.33	$14.13	$15.37	$18.57
% Bill Impacts	11.3%	10.6%	9.9%	8.8%	7.8%	6.6%

2. Introduction

2.1. District Background

The El Toro Water District (District), located in the southern portion of Orange County, was formed in 1960 under provisions of California Water District Law, Division 13 of the Water Code of the State of California, commencing with Section 34,000, to provide water and wastewater services to the service area. A publicly elected Board of Directors governs the District. The District is nearly built-out and encompasses the City of Laguna Woods and portions of four other cities: Lake Forest, Aliso Viejo, Laguna Hills, and Mission Viejo.

The District provides water, wastewater, and recycled water services to a population of approximately 48,500 in a service area of approximately 8.5 square miles. The District's water system comprises six reservoirs with a combined capacity of 287 million gallons, in which the District owns 136 million gallons (the remaining capacity is owned by other local water districts), over 170 miles of water lines, and eight booster pump stations with 12 pressure zones to deliver water to approximately 10,000 metered water accounts. The District also participated in a five-agency collaboration to fund and construct a local water treatment plant (the Baker Water Treatment Plant) located in the City of Lake Forest to improve water treatment and water supply reliability for ETWD's customers and South Orange County. The Baker Water Treatment Plant (Baker WTP) allows the participating agencies to purchase untreated water from MWDOC at a lower cost than the treated water, reducing the financial burden on the District's customers.

The District's wastewater system is comprised of 142 miles of collection system pipeline, 3,400 manholes, and 11 pump stations which pump wastewater to the District's treatment plant with a rated capacity of 6 million gallons per day. Much of the District's effluent is reused through recycled water sales. The District completed its Water Recycling Plant (WRP) upgrades to produce higher quality tertiary recycled water in FY 2015. The District also increased its recycled water distribution capacity by adding 19 miles of recycled water distribution pipeline to make recycled water available to more customers. In FY 2019, the District completed further expansion of the recycled distribution system, increasing the total amount of recycled water distribution pipelines to nearly 25 miles. In FY 2024, the District's recycled water budget was based on a total 277 accounts and an estimated average consumption of 1,485 AF of recycled water, the same as in FY 2023.

2.2. Study Background and Objectives

The District engaged Raftelis to conduct a Cost of Service Study (Study) and develop rates for the Water, Recycled Water, and Wastewater enterprises of the District that are equitable and in compliance with California legal requirements, including Proposition 218 requirements.

The major objectives of the Study include the following:

- Determine revenue requirements from water, wastewater, and recycled water rates for FY 2024.
- Update water rates and capital charges to meet the District's goals and objectives, including defensibility, affordability for essential use, and promoting efficiency and conservation.
- Update private fire service charges.
- Update recycled water rates and capital charges.
- Conduct cost of service analysis for water and wastewater services.
- Update wastewater service and capital charges.
- Conduct customer impact analyses for the proposed water and wastewater rates.

This *Water, Recycled Water, and Wastewater Rate Study Report* (Report) summarizes the key findings and recommendations related to developing the respective rates.

2.3. Legal Framework and Rate Setting Methodology

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

2.3.1. CONSTITUTIONAL MANDATES AND STATUTORY AUTHORITY

Article XIII D, Section 6 (Proposition 218), and Article X, Section 2 of the California Constitution govern the principles applicable to this Rate Study. This Rate Study equitably implements and harmonizes these constitutional mandates in concert with the authority and principles outlined in Water Code Section 370 et seq., which govern Allocation-Based Conservation Water Pricing (commonly referred to as "Water Budget Rate Structure"). This Rate Study provides for a water budget based four-tier rate structure designed to implement, in a reasonable manner, the constitutional mandates, statutory authority, and principles referenced above.

2.3.2. CALIFORNIA CONSTITUTION – ARTICLE X, SECTION 2

Article X, Section 2 of the California Constitution (established in 1976) provides as follows:

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

As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage conservation, which this Rate Study achieves.

2.3.3. 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 were reasonable and proportional to the cost of providing service. The principal requirements for fairness of the fees, as they relate to public water and wastewater service, are as follows:

1. Water and wastewater rates shall not exceed the funds required to provide the service.
2. Revenues derived from the charge shall not be used for any other purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of the property.

The rates developed in this Rate Study use a methodology to establish an equitable system of fixed and variable charges that recovers the cost of providing service and fairly apportions costs to each customer as required by Proposition 218.

2.3.4. STATUTORY AUTHORITY – GOVERNMENT CODE SECTION 370 ET SEQ. (ALLOCATION-BASED CONSERVATION WATER PRICING)

In 2000, the California Legislature (AB 2882), consistent with the above-referenced constitutional provisions, adopted a body of law entitled "Allocation-Based Conservation Water Pricing" (Water Code Section 370 et seq.)

Water Code Section 370 provides in part as follows:

The Legislature hereby finds and declares all of the following:

(a) The use of allocation-based conservation water pricing by public entities that sell and distribute water is one effective means by which waste or unreasonable use of water can be prevented and water can be saved in the interest of the people and for the public welfare, within the contemplation of Section 2 of Article X of the California Constitution.

(b) It is in the best interest of the people of California to encourage public entities to voluntarily use allocation-based conservation water pricing, tailored to local needs and conditions, as a means of increasing efficient uses of water, and further discouraging wasteful or unreasonable use of water under both normal and dry-year hydrologic conditions.

Water Code Section 372 provides as follows:

(a) A public entity may employ allocation-based conservation water pricing that meets all of the following criteria.

(1) Billing is based on metered water use.

(2) A basic use allocation is established for each customer account that provides a reasonable amount of water for the customer's needs and property characteristics. Factors used to determine the basic use allocation may include, but are not limited to the number of occupants, the type or classification of use, the size of lot or irrigated area, and the local climate data for the billing period. Nothing in this chapter prohibits a customer of the public entity from challenging whether the basic use allocation established for that customer's account is reasonable under the circumstances. Nothing in this chapter is intended to permit public entities to limit the use of property through the establishment of a basic use allocation.

(3) A basic charge is imposed for all water used within the customer's basic use allocation, except that at the option of the public entity, a lower rate may be applied to any portion of the basic use allocation that the public entity has determined to represent superior or more than reasonable conservation efforts

(4) A conservation charge shall be imposed on all increments of water use in excess of the basic use allocation. The increments may be fixed or may be determined on a percentage or any other basis, without limitation on the number of increments, or any requirement that the increments or conservation charges be sized, or ascend uniformly, or in a specified relationship. The volumetric prices for the lowest through the highest priced increments shall be established in an ascending relationship that is economically structured to encourage conservation and reduce the inefficient use of water, consistent with Section 2 of Article X of the California Constitution.

(b) ---

(1) Except as specified in subdivision (a), the design of an allocation-based conservation pricing rate structure shall be determined at the discretion of the public entity.

(2) The public entity may impose meter charges or other fixed charges to recover fixed costs of water service in addition to the allocation-based conservation pricing rate structure.

(c) A public entity may use one or more allocation-based conservation water pricing structures for any class of municipal or other service that the public entity provides.

As noted in the referenced statutes, "Allocation-Based Conservation Water Pricing Rate Structure" is a form of increasing block rates in which the amount of water within the first block or blocks is based on the estimated efficient water needs of the individual customer. Water-budget rates differ from other metered water rate designs in two key ways. First, the blocks are established based on water budgets representing varying levels of each customer's efficient

water use. Second, water-budget rates require the public agency to set specific standards for what is and is not considered efficient water use for an individual customer.

This Rate Study, in conjunction with ETWD's landscape data for individual customers, establishes a standard for efficient usage and then establishes a budget for each individual customer. This determines how much water is considered efficient for each customer. Customers with usage above this efficient usage budget pay a higher rate for their "inefficient" or "wasteful" usage (in accordance with Section 372 of the Water Code).

This Rate Study conforms to the principles set forth in the enabling statutes for Water Budget Rate Structures.

2.3.5. TIERED RATES

"Inclining" Block-Rate Structures (which are synonymous with "Increasing Block-Rate Structures"), when properly designed and differentiated by customer class (as this Rate Study does), allow a water agency to send consistent price incentives for conservation to customers. For this reason, the heightened interest in water conservation, "Increasing Block-Rates," has been increasingly favored, especially in relatively water-scarce regions such as Southern California.

2.3.6. PROPORTIONALITY – PROPOSITION 218'S REQUIREMENT THAT FEES BE PROPORTIONATE TO THE COST OF SERVICE FOR EACH PARCEL

There is a fair amount of ambiguity in how Proposition 218 was drafted – none more so than the issue of "proportionality." It has taken a succession of court rulings over several years to clarify the substantive requirements of Proposition 218.

In *Griffith v. Pajaro Valley Water Management Agency* (2013) 220 Cal.App.4th 586, the Sixth Appellate District has provided guidance on several important Proposition 218 issues, including the issue of proportionality. The *Pajaro* Court held:

1. *That Pajaro's costs of using supplemental water along the coast to prevent saltwater intrusion benefited all of Pajaro's customers, including inland customers using the groundwater basins.*
2. *That proportionality is not measured on an individual parcel basis but instead is measured collectively, considering all customer classes. As such, the Appellate Court in Pajaro confirmed the common practice of grouping customers into classes with comparable service costs and setting rates by class rather than parcel by parcel met the Prop 218 requirement that fees be proportionate to the cost of providing service to each parcel.*

Under Item 1 noted above, water utilities can reasonably justify that the addition of recycled water to the water resource mix frees up water for potable uses and therefore, potable water customers should share in the costs of recycled water so that recycled water can be put to beneficial use as required by Article X, Section 2. This clarification by the appellate court allows agencies to harmonize the mandates of Proposition 218 and Article X, Section 2.

Under Item 2 noted above, utilities can develop rates by customer class and meet the requirements of Proposition 218, as opposed to the strict interpretation, which would require cost proportionality for each parcel receiving service. This was another significant clarification of Proposition 218 since cost proportionality for individual parcels is almost impossible to achieve in the strict sense.

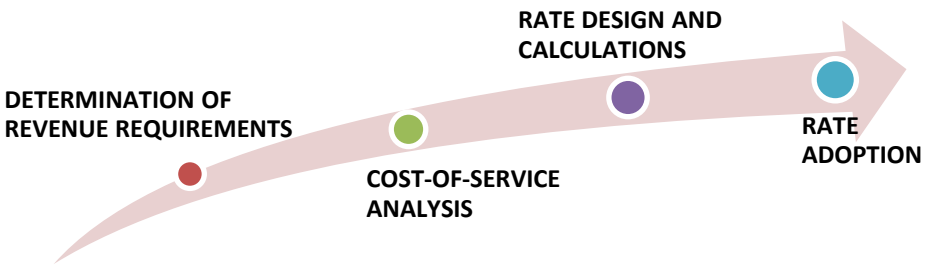
The Pajaro case rulings provided for the harmonizing of the proportionality requirements of Proposition 218 with the efficient use and conservation requirements of Article X, Section 2 by accepting that the supplemental costs of water used by one group of customers should be shared by all users, based on the concept that all users receive benefit from an increase in the overall water resources. In the District's case, recycled water adds a water resource that provides benefit to all users by freeing up potable water, and therefore, the costs of recycled water can be shared by

all inefficient potable water users. Due to non-essential usage's demand on the system, the District allocates the cost of funding the recycled water system development to Tiers 3 and 4 residential/irrigation usage as well as to commercial use at a lower rate based on the assumption that 10 percent of Commercial and Public Authority (CII) water use is inefficient.

2.4. Cost-Based Rate Setting Methodology

As stated in the Manual M1, the methodology put forth by the AWWA Rates and Charges Subcommittee is consistent with the Proposition 218 requirement that "the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." There are four major steps to develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility:

Figure 2-1: Cost-Based Rate Setting Methodology



1. **Determination of Revenue Requirement:** The rate-making process starts with the determination of future revenue requirements to sufficiently fund the utility's operation and maintenance (O&M), capital replacement and refurbishment (R&R), capital improvement and perpetuation of the system, and ensure the preservation of the utility's financial integrity. The basic revenue requirements of a utility include O&M expenses, debt service payments, contributions to specified reserves, and the cost of capital expenditures that are not debt-financed.
2. **Cost-of-Service Analysis:** The annual cost of providing services (cost of service), determined in the development of the financial plan, should be allocated among the customers commensurate with their service requirements. In this step, costs are identified and allocated to cost causation components and distributed to the respective customer classes consistent with industry standards provided in Manual M1 (published by AWWA).
3. **Rate Design and Calculations:** Rates do more than simply recover costs. Within the legal framework and industry standards, properly designed rates should support and optimize a blend of various utility objectives, such as conservation, affordability for essential needs, revenue stability, etc. They should work as a public information tool in communicating these objectives to customers.
4. **Rate Adoption:** In the last step of the rate-making process, to comply with the Proposition 218 requirements, the results of the analyses are documented in a Study Report that identifies the nexus between costs and rates to help educate the public about the proposed changes, the rationale, and justifications behind the changes and their anticipated financial impacts in layperson's terms. At least 45 days after sending out the public notices, the agency shall consider all written protests against the proposed rates at a public hearing. The Board can approve and adopt the new rates if there is no majority protest.

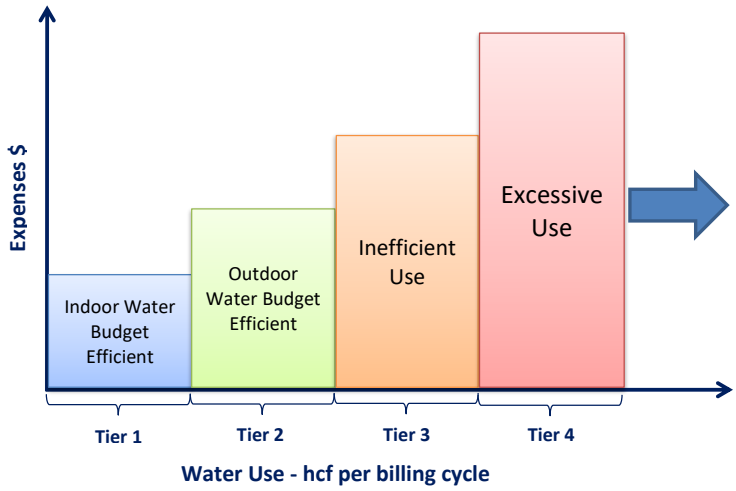
3. Water Budget and Tier Definitions

Since July 1, 2010, the District has implemented a tiered water budget rate structure to incentivize conservation and efficient water use. The description of the allocations to individual customers and the development of water budgets are described here for this report's completeness.

3.1. Water Budget Definitions

The American Water Works Association Journal defines water budget as "the quantity of water required for an efficient level of water use by that customer" *(Source: American Water Works Association Journal, May 2008, Volume 100, Number 5).* Therefore, each customer has their own allocation or water budget, as shown in the following figures. Figure 3-1 illustrates how the tier breaks are set for water budget customers. Tier 1 is defined by the allotment for indoor use, and Tier 2 is defined by the allotment for outdoor use. Tier 3 is set to a percentage of the total water budget (or Tiers 1 and 2) combined. Any use beyond Tier 3 is considered excessive and falls into Tier 4.

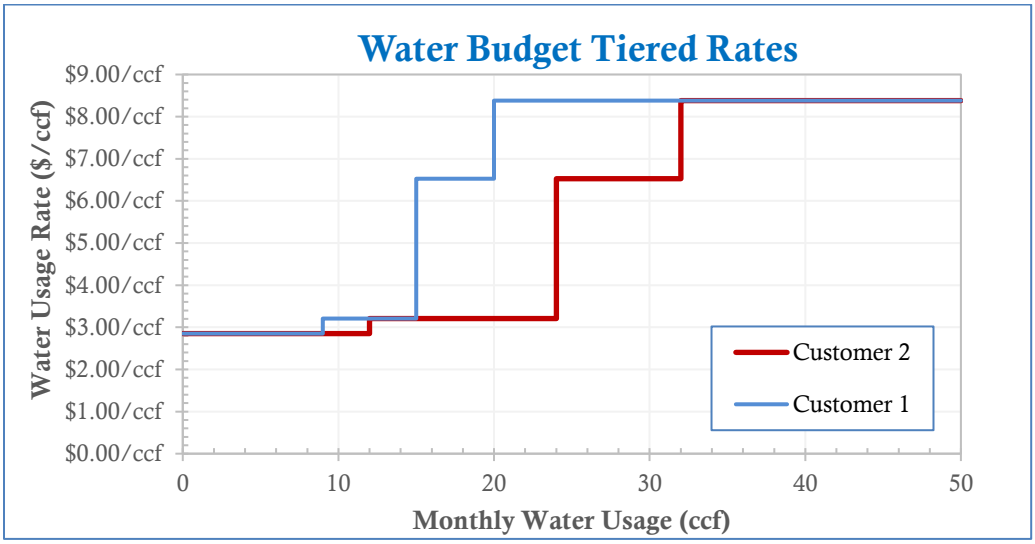
Figure 3-1: Water Budget Tiers



It is worth noting that water budget rate structures are customized for each customer, which results in different tier breaks for different customers. For example, as illustrated by Figure 3-2,[8] which examines the use of two customers of a *hypothetical* water utility. The first 9 units consumed by Customer 1 are charged at Tier 1 rate, whereas Customer 2 has 12 units at Tier 1 rate ($2.85/ccf) for indoor use. The following 6 units (10 – 15 units) consumed by Customer 1 are reserved for outdoor use, which is charged at the Tier 2 rate ($3.21/ccf), and any usage exceeding 20 units[9] will be deemed excessive and charged at the Tier 4 Rate ($8.38/ccf). Similarly, for Customer 2, Tier 2 spans from 13-24 units, and use exceeding 32 units will be charged at the Tier 4 Rate ($8.38/ccf). Customer 2, with a larger indoor and outdoor water budget (or allotment), represents a residential customer with a larger family and a bigger irrigated landscape area than that of Customer 1.

[8] This is for illustrative purposes only and is not based on actual rates of the District.
[9] Tier 3 = 30% of Total Water Budget (TWB) whereas TWB = Indoor WB + Outdoor WB

Figure 3-2: Customized Water Budget Tiers



Like the Water Budget Rate Study in 2010, the District's water budget allocations and tiered rate structure are designed for residential and irrigation accounts only; all other customer types will retain the current uniform rate structure.

3.2. Indoor Water Budget

The indoor water budget (IWB) is determined by a customer's household size and standard consumption per person. The proposed IWB formula is as follows:

$$IWB = \frac{GPCD * Household\ Size * Dwelling\ Units * Days\ of\ Service * DF_{indoor}}{748} + V_{indoor}$$

Where:

- GPCD = Gallons per capita per day.
  - SB x7-7,3F[10] Section 10608 of the Water Code established the provisional standard for indoor residential water use at 55 gallons per capita per day.
- Household Size = Number of residents per dwelling unit. The 2020 census lists the average household size at 3.01 persons, which includes single and multi-family housing. Typically, single-family household size is greater than three persons, and multi-family household size is less than 3.0 persons. The District policy is to provide adequate water for health and sanitation needs and minimize customer complaints and requests for variances. The default values for household size are set based on customer characteristics as follows:
  - Single-Family: Household Size = 4 persons
  - Multi-Family:
    - Restricted: Household Size = 2 persons (senior citizen housing typically 1 to 2 residents per dwelling unit)
    - Unrestricted: Household Size = 3 persons
- Dwelling units – Number of dwelling units served by the meter/account
- Days of Service = The number of days of service varies with each billing cycle for each customer. The actual number of days of service will be applied to calculate each billing cycle's indoor water budget.

[10] The language from SB x7-7 setting the 55 GPCD performance standard: (2) The per capita daily water use that is estimated using the sum of the following performance standards: (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard.

- DF_{indoor} = Indoor drought factor. The percentage of indoor water budget allotted during drought conditions. The drought factor is subject to the approval of the District's Board of Directors. The indoor drought factor is currently set at 100 percent.
- V_{indoor} = Indoor variance. The additional water allotment to be granted for extenuating circumstances is subject to District's approval or the verification as outlined in the District's variance program. Variances can be requested by submitting a "Variance/Adjustment Request Form" found on the District's website.
- 748 is the conversion unit from gallons to the billing unit of hundred cubic feet (ccf).

3.3. Outdoor Water Budget

The outdoor water budget (OWB) is determined by three main variables: irrigable landscape area, weather data, and the evapotranspiration (ET) Adjustment Factor. The irrigable landscape area, measured as square footage of landscape surface on a customer's property, is in some cases established through on-site direct physical measurement and in others estimated using the Orange County Assessors' parcel data for lot size, building size, and number of floors where the actual irrigable landscape area data is not available. The weather data is based on the reference Evapotranspiration[11] (ET_0), which is the amount of water loss to the atmosphere over a given time period under local atmospheric conditions. ET_0 is the amount of water (in inches of water) needed for a hypothetical reference crop to maintain its health and appearance. The ET Adjustment Factor (ETAF) is a coefficient that adjusts ET_0 values based on plant factor and irrigation system efficiency. The updated California Department of Water Resources' Model Water Efficient Landscape Ordinance (Landscape Ordinance) provides the following ETAF for different landscapes:

- Existing landscape (Functional): $ETAF_{Existing}$ = 80%
- New development / redevelopment landscape (Functional)[12]: $ETAF_{New}$ = 70%
- Special landscape (Recreational): $ETAF_{Recreational}$[13] = 100%

The formula to calculate the outdoor water budget is as follows:

$$OWB = \left(\frac{\text{Landscape Area} * ET_0 * \text{ETAF}}{1200} + V_{outdoor} \right) * DF_{outdoor}$$

where

- ET_0 is measured in inches of water during the billing period based on daily data acquired from the California Irrigation Management Information System (CIMIS) Station 75, which is the closest station to the District's service area.
- ETAF (% of ET_0) is defined using the updated Landscape Ordinance as shown above.
- Landscape Area (or Irrigable Landscape Area) (in square feet) is the measured irrigable landscape area served by a customer's meter.
    - Where the measured irrigable landscape area is not available, the landscape area will be estimated by the following formula using the Orange County Assessors' parcel data.
        - $\text{Landscape Area (sq ft)} = 70\% * \left(\text{Lot Size} - \frac{\text{Building Size}}{\text{Number of Floors}} \right)$
    - For accounts dedicated for domestic use only, such as multi-family units, 25 square feet of irrigable landscape area is provided for each dwelling unit for patio plants.

[11] Reference evapotranspiration (ETo) is derived by measuring weather conditions and estimating the ET of a reference plant. In California this is a standardized planted surface of well-maintained cool season turf. ETo data is available online from over 100 weather stations throughout the state of California from the California Irrigation Management Information System (CIMIS). Minute-by-minute weather data is collected and used to calculate hourly, daily, weekly, or monthly ETo.

[12] Functional is essentially aesthetic landscape

[13] Recreational includes golf courses, parks, etc.

- $DF_{outdoor}$ = Outdoor drought factor. The percentage of outdoor water budget allotted during drought conditions. The drought factor is subject to the approval of the District's Board of Directors. The outdoor drought factor is currently set at 100 percent.
- $V_{outdoor}$ = Outdoor variance. The additional water allotment to be granted for extenuating circumstances is subject to District's approval or verification as outlined in the variance program. Outdoor variance is subject to the outdoor drought factor.
- 1,200 is the conversion unit from inch*ft^2 to billing unit of hundred cubic feet (ccf).

3.4. Water Budget Allocations by Customer Type

Table 3-1 summarizes the water budget allocation by customer type. Both Single Family and Multi-Family (restricted and unrestricted) customers will receive an indoor and outdoor water budget. Irrigation accounts will only receive an outdoor budget. Commercial and Public Authority (CII) customers will continue with the current uniform water rate structure.

Table 3-1: Water Budget Allocations by Customer Type

Customer Type	Water Budget Allocations	Default Values
Single Family	IWB + OWB	Household Size = 4 persons; GPCD = 55 $ETAF_{New}$ = 70%; $ETAF_{Existing}$ = 80%; $DF_{outdoor}$ = 100%
Multi-Family – Restricted	IWB + OWB	Household Size = 2 persons; GPCD = 55 $ETAF_{New}$ = 70%; $ETAF_{Existing}$ = 80%; $DF_{outdoor}$ = 100%
Multi- Family – Unrestricted	IWB + OWB	Household Size = 3 persons; GPCD = 55 $ETAF_{New}$ = 70%; $ETAF_{Existing}$ = 80%; $DF_{outdoor}$ = 100%
Irrigation – Non-Functional*	OWB	$ETAF_{New}$ = 70%; $ETAF_{Existing}$ = 80%; $DF_{outdoor}$ = 100%
Irrigation – Recreational**	OWB	$ETAF_{Recreational}$ = 100%; $DF_{outdoor}$ = 100%

**Irrigation – Non-Functional: landscape that is ornamental in nature*
***Irrigation – Recreational: landscape that is used mostly for recreational purposes (schools, parks, golf courses, etc…)*

3.5. Tier Definitions

Based on the information in Table 3-1, the tier definitions are developed as shown in Table 3-2. The main difference between Single-Family/Multi-Family and Irrigation accounts is that Irrigation accounts do not have a Tier 1 allotment that is reserved for indoor use. All three customer types have their Tier 3 allotment defined as 30 percent of their respective total water budget (TWB) and usage exceeding 130% TWB falls in Tier 4.

Table 3-2: Tier Definitions by Customer Types

Tiers	Single Family	Multi-Family	Irrigation
Tier 1 – Indoor Use	100% IWB	100% IWB	N/A
Tier 2 – Outdoor Use	100% OWB	100% OWB	100% OWB
Tier 3 – Inefficient Use	100% to 130% TWB	100% to 130% TWB	100% to 130% OWB
Tier 4 – Excessive Use	Above Tier 3	Above Tier 3	Above Tier 3

TWB = Total Water Budget = IWB + OWB

The tier definitions are tailored to the unique consumption patterns of the District's customers and are subject to the District's policy decisions. The tier definitions are based on Raftelis' water use and impact analyses, as well as numerous policy discussions with the Board. The priority for water use is essential indoor water use for health, safety, and sanitary purposes. Based on the Board's direction, indoor water use is eligible for revenue offsets from miscellaneous and property tax revenues. Maintaining a healthy landscape at efficient water use is non-essential, yet important; thus, efficient outdoor water use is required to pay the Tier 2 rate. The total water budget is the sum of the indoor and outdoor water budgets.

Tier 3 was designed to account for inefficient use and/or customers with non-climate appropriate landscapes. Tier 3 is set to thirty percent (30%) of the total water budget and was determined based on the 2009 analysis, which indicated that a customer with high water use plants would require 30% more water than an identical customer with climate-appropriate plants. Any use beyond Tier 3 is considered excessive and falls into Tier 4. Tiers 3 and 4 allow individuals to use additional water above their total water budget while providing a signal to each customer on their inefficient and excessive water usage. Tier 3 provides use up to 30 percent of the total water budget and use over 130% TWB is considered to be excessive.

Any usage above an efficient level is subject to higher charges to fund conservation programs and any other supplemental water supply program. The current water supply is reserved for efficient water use within the District for indoor, outdoor, and commercial use. The higher Tier 3 rate serves as a signal for conservation and efficient use, whereas excessive use in Tier 4 incurs the highest marginal costs of providing service.

The Commercial class will continue to be billed at a uniform rate; however, this rate will encompass domestic use and inefficient use. Based on SB X7-7 (i.e., Water Conservation Act of 2009), which requires commercial users to reduce their water use by 10 percent, indoor and efficient outdoor (or process) use is defined as 90 percent of total use, and the remaining 10 percent use as inefficient. Additionally, indoor use is defined as 90 percent of the efficient use (90% x 90% = 81%) and the remainder is defined as efficient outdoor use (10% x 90% = 9%). The uniform rate charged to commercial customers will then be a blend of the use defined here.

4. Pass-through Water Supply Cost

The District purchases water from the Municipal Water District of Orange County (MWDOC), a member agency of the Metropolitan Water District of Southern California (MWD). MWD rates are scheduled to increase in January 2024. The MWD rate increases will be included in the blended rates charged to the District. Dividing the total costs in Table 4-1 (Line 7) by the projected water sales (Line 8) results in the unit rate shown in Line 9. See Appendix 1 for detailed breakdown of water supply costs. Table 4-2 and Table 4-3 show that projected water supply rates will increase by an average of $0.19 per ccf.

Table 4-1: Water Supply Revenue Requirements

Line #	Water Supply Unit Rates Development	FY 2024	Notes
1	MWD Fixed Charges		
2	Capacity Reservation Charge	$146,755	Appendix 1
3	Readiness To Serve Charge	$637,457	Appendix 1
4	Total Treated Full Service Annual Cost	$4,228,625	Appendix 1
5	Baker Raw Water Cost	$3,120,450	Appendix 1
6	Baker WTP O&M Annual Cost	$830,501	Appendix 1
7	**Total Water Supply Cost**	**$8,963,788**	
8	Projected Water Sales	2,918,520 ccf	
9	**Water Supply Unit Rate**	**$3.07 /ccf**	**[7] / [8]**

Table 4-2: Current and Projected Water Supply Unit Rate

Fiscal Year (FY)	Water Supply Unit Rate $ / hundred cubic feet (ccf)
FY 2022-23	$2.88
FY 2023-24	$3.07
Increase / Change	**$0.19 / ccf**

Table 4-3: Water Supply Cost Component of the Water Rates ($/ccf)

Tiers	Descriptions	Current FY 2023	Proposed FY 2024
Tier 1 - Essential Use	MWDOC + Baker Blended	$2.88	$3.07
Tier 2 - Efficient Use	MWDOC + Baker Blended	$2.88	$3.07
Tier 3 - Inefficient Use	MWDOC + Baker Blended	$2.88	$3.07
Tier 4 - Excessive Use	MWDOC + Baker Blended	$2.88	$3.07
Uniform – CII Use	MWDOC + Baker Blended	$2.88	$3.07

5. Water Revenue Requirements and Proposed Rates

5.1. Revenue Requirements

Table 5-1 shows the derivation of the revenue requirement of the water rates. Total expenses for the water enterprise are shown in Line 1. Next, other supplementary revenues are subtracted from the expenses, serving as an offset of these costs. For the District, this is encompassed in the Non-Operating Revenues totaled in Line 4. These revenues include cell-site leases, property taxes, investment revenues, and other revenues. The District will use reserves to offset some of the operating expenses and reduce the revenue required from rates for FY 2024 (Line 15). The total revenue required from water service rates is shown in Line 16, excluding capital R&R requirements.

Details of the figures presented in Table 5-1 can be found in Appendix 3, in the Cash Flow Analysis for the Water Funds. The Cash Flow Analysis is part of the Financial Plan developed by District staff to determine the District's long-term financial needs. Raftelis based its determination of the revenue requirements and cost of service for FY 2024 on the Financial Plan developed and budget data provided by District Staff.

Table 5-1: Water Operating Revenue Requirements from Rates

	Water Operating Revenue Requirements [14]	FY 2024	Notes
1	**Water O&M Expenses**	**15,028,000**	**Appendix 3**
2	Purchased Water	8,963,788	Appendix 1
3	Other O&M Expenses	6,064,212	[1] – [2]
4	**Less (-) Non-Operating Revenues**	**-1,154,000**	
5	Funding from Restricted Reserve for Conservation Program	-200,000	Appendix 3
6	Property Taxes - General Fund Revenue	-279,522	Appendix 3
7	Property Taxes (Funds Tier 1 Offset)	-180,478	Appendix 3
8	Miscellaneous Revenue	-39,000	Appendix 3
9	Cellular Site Lease Revenue (Funds Tier 1 Offset)	-230,000	Appendix 3
10	Other Income (R-6 Partners)	-125,000	Appendix 3
11	Investment Income	-100,000	Appendix 3
12	**Plus (+) Other Fundings**	**829,670**	
13	Plus Reserve Funding	200,000	Appendix 3
14	Plus Restricted Reserve Funding	627,301	Appendix 3
15	Plus Operating Reserve Funding	2,369	Appendix 3
16	**Water Operating Service Rev Requirements**	**14,703,670**	Sum of lines 1, 4 & 12

The District separately charges customers for the cost of capital repair and replacement (R&R) for the water and recycled water systems via a fixed charge. Table 5-2 provides the calculation of the Capital Facility revenue

[14] May include some rounding errors

requirement from Capital Facility charges. The District will fund a portion of its capital revenue requirements using restricted reserves for Baker Debt Service (Line 5) and Capital Reserve (Line 6).

Table 5-2: Water Capital Revenue Requirements

Line #	Water Capital Facility Revenue Requirements	FY 2024	Notes
1	**Total Water Capital R&R Expenditures**	**$2,277,562**	**Sum of lines 2 - 4**
2	Capital Replacement & Refurbishment Program	$874,000	Appendix 3
3	Baker WTP Debt Service	$684,262	Appendix 3
4	2022 Rev Bonds Debt Service	$719,300	Appendix 3
5	**Less (-) Restricted Reserve Funding of Baker Debt Service**	**-$184,400**	Appendix 3
6	**Less (-) Capital Reserve Funding**	**-$390,194**	Appendix 3
7	**Water Capital R&R Rev Requirements**	**$1,702,968**	**Line 1 + 5 +6**
8	Current Capital R&R Revenues	$1,362,374	Appendix 3
9	**% Rate Increase**	**25.0%**	

5.2. Cost of Service

Water systems are designed to accommodate peak use of any class or type of customer. Different parts of a water system are designed to handle different peaks, and there are significant costs associated with meeting peak requirements. For example, the District's maximum day usage is estimated to be 1.73 times the average usage, and facilities such as reservoirs are designed 1.73 times as large to ensure that maximum day requirements are met (reservoirs also are designed to meet fire flows). To allocate costs appropriately amongst the different types of usage, an analysis of the peaking costs is provided in Section 5.2.1.

A portion of the costs of fire service are recovered from Private Fire Rates (charged to customers which have separate fire line service as discussed in Tables 5-5 to 5-6 and section 5.3.4 of this report below). However, the costs to maintain public fire flows are included in the cost of service recovered from rates. This reflects that providing water in the volumes and at the pressures required to operate fire hydrants and fire sprinklers in structures is a statutory mandate of public water systems in California, and that such cost recovery is authorized by California Government Code sections 53069.9 and 53750.5. Moreover, charging water users for the portion of the cost of water service associated with fire flows appropriately assigns those costs to those who benefit from them. Sprinklers are within (and serve) structures served by water meters. The California Fire Code requires hydrants near structures, not elsewhere and hydrants serve parcels improved with structures. Thus, those who pay water fees which recover fire flow costs also own or occupy structures protected by fire sprinklers and fire hydrants and therefore benefit from that service. Finally, fire hydrants are used to flush water mains periodically and serve a water system function in addition to the fire suppression function noted here.

5.2.1. PEAKING FACTOR ANALYSIS

In the last year's Rate Study, Raftelis conducted peaking factor analysis for the District's water usage. The analysis utilized the usage from July 2019 to June 2022 for 7,455 accounts (6,107 residential, 563 irrigation and 785 commercial) out of a total 9,528 accounts for the District, which represents approximately 78 percent of the District

customers. A sample of this size approximates the characteristics of the District as a whole. The results are shown in Table 5-3.

Table 5-3: Peaking Factor Analysis for Different Usage Types

Usage	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	FY 2020
Tier 1 - Essential Use	49,411	52,209	52,391	47,651	55,054	40,616	45,240	44,606	39,187	43,246	50,786	50,647	**571,044**
Tier 2 - Efficient Use	81,609	111,923	105,845	72,360	76,117	23,325	17,109	29,387	30,975	17,208	57,674	84,267	**707,799**
Tier 3 - Inefficient Use	4,500	5,969	8,158	7,230	8,601	3,837	2,989	3,416	2,539	1,542	1,843	4,219	**54,843**
Tier 4 - Excessive Use	3,496	4,435	6,025	7,491	11,847	5,478	2,688	4,166	2,876	1,073	1,114	2,726	**53,415**
Uniform - Commercial Use	34,464	38,771	38,047	33,696	39,039	25,389	27,959	28,294	26,862	18,146	22,845	27,632	**361,144**
Total	**173,480**	**213,307**	**210,466**	**168,428**	**190,658**	**98,645**	**95,985**	**109,869**	**102,439**	**81,215**	**134,262**	**169,491**	**1,748,245**

Line	Water Uses	FY 2020 Usage	Max Month Usage	Average Month Usage	Peaking factors (Max/Avg)
		A	B	C	D = [B] / [C]
1	Indoor Use	571,044	55,054	47,587	1.16
2	Outdoor Use	707,799	111,923	58,983	1.90
3	Inefficient Use	54,843	8,601	4,570	1.90
4	Excessive Use	53,415	11,847	4,451	2.66
5	Commercial Use	361,144	39,039	30,095	1.30
6	**Total Usage**	**1,748,245**	**213,307**	**145,687**	**1.46**

The proposed peaking factors for each usage type are shown in Table 5-4.

Table 5-4: Peaking Factors by Usage Class

Tiers	Relative Peaking Factors
Indoor Use	1.16
Outdoor Use	1.90
Inefficient Use	1.90
Excessive Use	2.66
Commercial Use	1.30

The different peaking factors, increasing in the arrow's direction, may be conceptually represented on the scale shown below.

5.2.2. COST OF SERVICE ANALYSIS

Revenue requirements are allocated to the following cost causation categories to allocate costs appropriately to the different usage classes and determine the cost-of-service rates. This methodology is consistent with the Base Extra Capacity methodology of the American Water Works Association (AWWA) *M1 Manual*, *Principles of Water Rates, Fees, and Charges* (M1 Manual):

1. Water supply costs: Imported water supply costs, allocated to all users in proportion to their usage.
2. Fixed costs: fixed costs associated with operating and maintaining water systems to deliver water to meet average demand, including customer service, meter service, administration, and other base fixed costs.
3. Peaking costs: fixed costs associated with operating and maintaining the water system to deliver water to meet peak demand.
4. Recycled Water Funding: The use of recycled water for non-potable needs releases potable supply for inefficient and excessive use. Recycled water is the least expensive supplemental source of water available to the District and offsets supply for potable needs. The revenues collected under this category will be collected in restricted reserves to assist the RW fund to pay debt service costs that finance the RW expansion project completed in FY 2015 and expanded in FY 2019.
5. Conservation: Conservation program cost, allocated to inefficient and excessive use to help conserve water.
6. Revenue Offsets: Property taxes revenue used partially to provide incentive for indoor/domestic use.

The cost causation categories described above are then assigned to each rate component:

Fixed Rate Components (i.e., Monthly Service Charges)

- To recover customer service, meter service, administration and other base fixed costs and a portion of the peaking costs.
- To recover the costs of providing water to fire service to the private fire customers.

Commodity Rate Components

- Water supply: to recover imported water supply costs.
- Delivery/Peaking: to recover remaining peaking costs associated with operating and maintaining water systems to deliver water to meet peak demand. These costs are allocated based on the peaking characteristics of each class of use.
- Recycled Water (RW): to generate supplemental funding sources to pay for RW expansion projects.
- Conservation: to recover the conservation program cost, allocated to inefficient and excessive users, to encourage water conservation.
- Revenue offsets: A portion of the property tax revenues to provide an incentive for indoor/domestic use.

Capital Facility Charges:

- Funds for the capital replacement and refurbishment of the existing water and RW system and debt service payments.

Fire Service Charges:

Fire demands are based on the water system design. Typical fire demands are based on the maximum demand needed for fire service which is 3,000 gpm for two hours. The maximum day and maximum hour demands are determined on this basis and when the potable demands are added to these to determine total maximum day and maximum hour demands. The proportion of the fire demand to total demand is used to prorate the costs that are allocated to be recovered from fire service charges as shown in Table 5-11.

A part of the peaking demand is designed for fire protection, both public and private fire protection. The District has approximately 1,899 public hydrants and 174 private fire services. The fire demand factor for each fire service size is calculated using the line size. Based on the total Fire Demand Units (FDU, calculated by fire demand factor and respective number of services), about 10.7 percent of the District's fire protection is to service private fire protection. Table 5-5 shows the estimated fire demand between public and private fire services.

Table 5-5: Fire Demand Units

Fire Services	# of Services	Fire Demand Factor	Fire Demand Units (FDU)	FDU / yr	Percentage Demand
	A	B = MeterSize^2.63	C = A x B	D = C x 12 bills/yr	
Private Fire Services			**25,331**	**303,970**	**10.7%**
4"	27	38.32	1,035	12,415	
6"	90	111.31	10,018	120,216	
8"	53	237.21	12,572	150,863	
10"	4	426.58	1,706	20,476	
Public Hydrants			**211,379**	**2,536,553**	**89.3%**
6"	1,899	111.31	211,379	2,536,553	
8"		237.21	0	0	
10"		426.58	0	0	
12"		689.04	0	0	
Total	**2,073**		**236,710**	**2,840,524**	**100%**

Table 5-6 shows the fire demand imposed on peaking requirements.

Table 5-6: Water System and Fire Demand Peaking Requirements

Line	Description		Peak Demand	Extra Capacity
		A	B	C
1	Flow	3,000 GPM		
2	Duration	2 hrs		
3	Fire Max Day Demand	360 kgal	481 ccf	
4	Fire Max Hour Demand	3,960 kgal	5,294 ccf	
5	Annual System Demand	2,918,520 ccf		
6	Daily System Demand	7,996 ccf / day		
7	System Max Day	1.73x of Average Demand	13,833 ccf / day	5,837 ccf /day[15]
8	System Max Hour	2.04 of Max Day	16,312 ccf / day	2,479 ccf /day[16]

Table 5-7 shows the peaking factors for the water system provided by the District's Water Master Plan and the allocation of Max Day and Max Hour costs using the Base Extra Capacity approach as outlined in the AWWA Manual M1.

[15] Extra Capacity demand for Max Day = Peak Max Day Demand – Daily Demand
[16] Extra Capacity demand for Max Hour = Peak Max Hour Demand – Peak Max Day Demand

Table 5-7: Peaking Factors for Water System

		Peaking Factors	Base Fixed	Max Day	Max Hour
1	Max Day	1.73	57.8%	42.2%	
2	Max Hour	2.04	49.0%	35.8%	15.2%

The Max Day factor of the District's system is 1.73, which means that Max Day demand is expected to be 173 percent of the average day capacity. Calculating the Max Day allocation of functional costs to the cost causation components results in the following:

$$Base\ Fixed\ Allocation\ for\ Max\ Day = \frac{Base\ Fixed}{Max\ Day} = \frac{1}{1.73} \approx 57.8\%$$

$$Max\ Day\ Allocation = 1 - \frac{Base}{Max\ Day} = 1 - 57.8\% \approx 42.2\%$$

Facilities designed for Max Hour peaks, such as distribution system facilities, are allocated similarly. The Max Hour factor is 2.04, so Max Hour facilities are designed to provide 204 percent of the average day capacity. The allocation of Max Hour facilities is shown below:

$$Base\ Fixed\ Alloction = \frac{Base}{Max\ Hour} = \frac{1}{2.04} \approx 49.0\%$$

$$Max\ Day\ Allocation = \frac{Max\ Day - Base}{Max\ Hour} = \frac{1.73 - 1.00}{2.04} \approx 35.8\%$$

$$Max\ Hour\ Allocation = 1 - 49.0\% - 35.8\% \approx 15.2\%$$

Table 5-8 shows the allocation factors for different water functions to the various cost categories. Source of supply costs will be allocated to water supply based on budgeted purchased water costs (Table 4-1) and the remaining costs will be allocated to base fixed costs. Operations and Administrative cost functions will be allocated between base fixed and billing & customer service (CS) based on staffing levels for the field office and main office. Labor costs are allocated 10% to billing and customer service, as estimated by the District, including management, customer service, and billing field personnel. The remaining 90% of the labor costs are allocated proportionately based on the non-labor and non-supply costs. Transmission facilities are designed for max day requirements and distribution facilities are designed to meet max hour requirements. Transmission and Distribution (T&D) are estimated 50% to transmission and 50% to distribution. Therefore, T&D is allocated 50% to max day demand for transmission (row 1 of Table 5-7) and 50% to max hour demand for distribution (row 2 of Table 5-7). Pumping is designed to meet max hour demand, thus allocated using the max hour demand allocation factors (row 2 in Table 5-7).

$$T\&D\ Base\ Fixed = 50\%\ x\ 57.8\% + 50\%\ x\ 49\% \approx 53.4\%$$

$$T\&D\ Max\ Day = 50\%\ x\ 42.2\% + 50\%\ x\ 35.8\% \approx 39.0\%$$

$$T\&D\ Max\ Hour = 50\%\ x\ 0\% + 50\%\ x\ 15.2\% \approx 7.6\%$$

Table 5-8: Allocation Factors for Different Water Functions

Water Functions	Water Supply	Base Fixed	Max Day	Max Hour	Billing & CS	Notes
Source of Supply	Purchased water cost	remaining				
T&D		53.4%	39.0%	7.6%		50% MD, 50% MH
Pumping		49.0%	35.8%	15.2%		Max hr
Operations		82.5%			17.5%	Staffing levels for field office
Administrative		77.5%			22.5%	Staffing levels for main office
Labor		68.6%	18.3%	5.5%	10%	Proportional based on non-labor costs

Table 5-9 shows the allocations of water O&M expenses using the allocation factors shown in Table 5-8 and O&M breakdown for FY 2024 provided by the District staff (Appendix 2).

Table 5-9: Allocations of Water O&M Expenses by Cost Categories

Water O&M Allocation	FY 2024	Water Supply	Base Fixed	Max Day	Max Hour	Billing & CS
O&M Expenses						
Source of Supply	$9,292,500	$8,963,788	$328,712	$0	$0	$0
Pumping - Water	$502,500	$0	$246,324	$179,816	$76,360	$0
T&D - Water	$540,200	$0	$288,529	$210,626	$41,045	$0
Operations Support	$69,500	$0	$57,338	$0	$0	$12,163
Fleet	$131,600	$0	$108,570	$0	$0	$23,030
Indirect Operating Costs	$71,200	$0	$58,740	$0	$0	$12,460
Information Technology	$210,500	$0	$163,138	$0	$0	$47,363
Indirect Administration Costs	$637,000	$0	$493,675	$0	$0	$143,325
Labor Costs	$3,573,000	$0	$2,366,974	$652,516	$196,210	$357,300
Subtotal O&M Expenses (Excl. Dep & Int)	**$15,028,000**	**$8,963,788**	**$4,111,999**	**$1,042,959**	**$313,615**	**$595,640**

Table 5-10 shows the allocation of revenue requirements to cost categories and Table 5-11 details the allocations of Max Day and Max Hour revenue requirements to Private Fire services.

Table 5-10: Water Revenue Requirements by Cost Categories

Other Rev Requirement Allocations	FY 2024	Water Supply	Base Fixed	Max Day	Max Hour	Billing & CS	RW	Conservation	Rev Offset	Private Fire
O&M Expenses(Excl. Dep & Int)	**$15,028,000**	**$8,963,788**	**$4,111,999**	**$1,042,959**	**$313,615**	**$595,640**				
Less (-) Non-Operating Revenues										
Funding from Restricted Reserve for Conservation Program	-$200,000		-$200,000							
Property Taxes - General Fund Revenue	-$279,522		-$279,522							
Property Taxes (Funds Tier 1 Offset)	-$180,478								-$180,478	
Miscellaneous Revenue	-$39,000								-$39,000	
Cellular Site Lease Revenue	-$230,000		-$178,250			-$51,750				
Other Income (R-6 Partners)	-$125,000		-$125,000							
Investment Income	-$100,000		-$100,000							
Plus (+) Other Fundings										
Plus Funding from Reserves	$200,000							$200,000		
Plus Restricted Reserve Funding	$627,301						$627,301			
Plus Operating Reserve Funding	$2,369		$2,369							
Total Water Service Rev Requirements	**$14,703,670**	**$8,963,788**	**$3,231,596**	**$1,042,959**	**$313,615**	**$543,890**	**$627,301**	**$200,000**	**-$219,478**	**$0**
Reallocation of Private Fire Peaking				-$8,502	-$22,858					$31,360
Total Net Revenue Requirements	**$14,703,670**	**$8,963,788**	**$3,231,596**	**$1,034,457**	**$290,756**	**$543,890**	**$627,301**	**$200,000**	**-$219,478**	**$31,360**

Table 5-11: Allocations of Peaking Costs to Private Fire Services

Allocation of Peaking Costs to Fire Protection		Max Day	Max Hour	Total
Revenue Requirements (Table 5-10)		**$1,042,959**	**$313,615**	
Fire Demand (Table 5-6, rows 3-4)	ccf	481	5,294	
Extra Capacity Demand (Table 5-6, rows 7-8)	ccf	5,837	2,479	
Total Extra Capacity Demand plus Fire	**ccf**	**6,318**	**7,773**	
Unit Cost of Service	$ / ccf	$165.07	$40.35	
	$/ kgal	$220.68	$53.94	
Fire Demand	kgal	360	3,960	
Fire Protection Costs		**$79,445**	**$213,604**	**$293,049**
Private Fire	10.7%	$8,502	$22,858	$31,360
Public Fire	89.3%	$70,943	$190,746	$261,689

The AWWA M1 Manual describes a cost-of-service approach to setting water rates that results in the distribution of costs to each customer or customer class based on the costs that each incurs. A dual set of fees—fixed and variable—is an extension of this cost causation theory. For example, a utility incurs some of the costs with serving customers irrespective of the amount or rate of water they use, such as, billing and customer service costs. These costs are referred to as customer-related costs and are typical costs that would be recovered through a fixed monthly service charge. These costs are usually recovered on each meter. Regardless of the level of a customer's consumption, a customer will be charged this minimum amount on each bill.

Utilities invest in and continue to maintain facilities to provide capacity to meet all levels of desired consumption, including the peak demand plus fire protection. These costs must be recovered regardless of the amount of water used during a given period. Thus, capacity or peaking costs, along with base costs, are generally considered fixed water system costs. Ideally, an agency could recover 100% of the fixed costs in the fixed charges, therefore providing revenue stability; however, this approach foregoes affordability for essential use and heavily impacts small users. A portion of the base costs and peaking costs are recovered in the fixed charges, along with the customer-related costs and meter-related costs to balance between affordability and revenue stability. Revenue requirements for the District's

fixed monthly service charges include 100 percent of base fixed costs, inclusive of billing and customer service costs and other fixed costs to meet average demand, as well as a portion of the peaking costs. The remaining peaking costs are recovered in the delivery rate component of the commodity rates.

The rate structure remains unchanged and consists of the monthly fixed service and the volumetric commodity rates, which are allocated as follows in Table 5-12:

- The monthly service charge includes customer service, fixed base costs, and a portion of the peaking costs.
- The volumetric water commodity rates include water supply (to recover total purchased water costs from MWDOC and Baker Water Treatment Plant water costs), delivery/peaking (to recover the District's remaining peaking costs), RW funding, conservation, and revenue offsets components.

Table 5-12: Cost Categories and Water Rate Structure

Cost Components	Service Charges	Tier 1 Essential Use	Tier 2 Efficient Use	Tier 3 Inefficient Use	Tier 4 Excessive Use	Commercial Use
Billing & Cust. Service	x					
Meters	x					
Fixed Base Costs	x					
Delivery Peaking Costs	x	x	xx	xxx	xxx	x
Water Supply		x	x	x	x	x
RW Program Funding				xx	xxx	x
Conservation				x	x	x
Rev Offset		x				x

Unit Component Cost Derivation

Our end goal is to proportionately distribute the cost causation components to each user class. To do so we must calculate the cost causation component unit costs, which starts by assessing the total service units demanded by each class for each cost causation component. Extra capacity costs representing the demand placed on the system are related to the capacity of the meters. The capacity of the meters is determined by comparing the hydraulic capacity of the meters to the smallest meter in the system, which is assigned a capacity of one. Thus, a 1-inch meter that can continuously deliver 50 gallons per minute (gpm) is considered to have a capacity of 2.5 when compared to the 5/8-inch meter which can deliver 20 gpm. Because of the unique characteristics of the District's service area, the maximum of the hydraulic capacity or the actual usage characteristics was used to determine the capacity of the meters. For example, a 2-inch meter, on average, uses 10 times the water of the 5/8-inch meter. The meter capacity ratios representing the maximum of the hydraulic ratio or the actual usage are used to calculate the equivalent meter units to recover the meter service & capacity costs (based on ETWD *Cost of Service Study Report for Water, Wastewater and Recycled Water prepared in April 2009*). The calculation of the bills per year and the equivalent meter units (EMU) is shown in

Table 5-13 below.

Table 5-13: Units of Service for Monthly Service Charges

Potable Water Meters	Meter Counts	Meter Ratio	Bills / yr	EMUs / yr
	A	B	C = A x 12	D = C x B
5/8"	2,380	1.00	28,560	28,560
3/4"	4,854	1.50	58,248	87,372
1"	452	2.50	5,424	13,560
1-1/2"	702	5.00	8,424	42,120
2"	1,126	10.00	13,512	135,120
Private Fire[17]	174	1.00	2,088	2,088
Total	**9,514**		**114,168**	**308,820**

Table 5-14 below shows the calculation for the remaining units of service. The capacity or peaking factor for each customer class is taken from Table 5-4.

Table 5-14: Water Units of Service Derivation

		Peaking		RW		Conservation		Revenue Offset		Service & Capacity	Billing & CS	Fire Service
Water Usage	Water Sales (ccf)	Peaking Factors	Extra Capacity	RW Funding	RW Service Units	Conservation Funding	Conservation Service Units	Offset Factor	Rev Offset Service Units	No. of Meters (Equiv.)	No. of Bills	FDU/yr
		Table 5-4								Table 5-13	Table 5-13	Table 5-5
[A]	[B]	[C]	[D] = [B] x [C]	[E]	[F] = [B] x [E]	[G]	[H] = [G] x [A]	[I]	[J] = [I] x [A]			
Tier 1 - Essential Use	1,459,129	1.16	228,956	0.00	-	0.00	0	1.00	1,459,129			
Tier 2 - Efficient Use	913,013	1.90	819,465	0.00	-	0.00	0	0.00	0			
Tier 3 - Inefficient Use	90,201	1.90	80,959	1.00	90,201	1.00	90,201	0.00	0			
Tier 4 - Excessive Use	72,696	2.66	120,784	1.74	126,428	1.00	72,696	0.00	0			
Uniform - Commercial Use	383,481	1.30	113,962	0.14	52,520	0.10	38,348	0.81	310,620			
Total	**2,918,520**		**1,364,126**		**269,149**		**201,245**		**1,769,749**	**308,820**	**114,168**	**303,970**

Table 5-15 allocates the water revenue requirement cost categories (Table 5-10) to rate components for FY 2024.

[17] Private Fire bills are combined with the account customer bill for potable services

Table 5-15: Water Rate Components

Water Service Revenue Requirements	FY 2024	Monthly Service Charges			Water Commodity Rates				
		Billing & CS	Meters & Capacity	Private Fire	Water Supply	Delivery	RW	Conservation	Revenue Offset
Water Supply	$8,963,788				$8,963,788				
Base Fixed	$3,231,596		$3,231,596						
Peaking (Max Day + Max Hour)	$1,325,214		$875,214			$450,000			
Billing & CS	$543,890	$543,890							
RW	$627,301						$627,301		
Conservation	$200,000							$200,000	
Rev Offset	-$219,478								-$219,478
Private Fire	$31,360			$31,360					
Total Water Service Charges	**$14,703,670**	**$543,890**	**$4,106,810**	**$31,360**	**$8,963,788**	**$450,000**	**$627,301**	**$200,000**	**-$219,478**

Table 5-16 summarizes the water revenue requirements (Table 5-10) for FY 2024 by rate components and shows the calculation of unit costs.

Table 5-16: Unit Cost Calculation

Water Rev Requirements	FY 2024	Monthly Service Charge			Water Commodity Rates				
		Billing & CS	Service & Capacity	Fire Service	Water Supply	Peak Delivery	RW	Conservation	Rev Offset
Water Supply	$8,963,788				$8,963,788				
Base Fixed	$3,231,596		$3,231,596						
Peaking	$1,325,214		$875,214			$450,000			
RW	$627,301						$627,301		
Conservation	$200,000							$200,000	
Rev Offset	-$219,478								-$219,478
Billing & CS	$543,890	$543,890							
Private Fire	$31,360			$31,360					
Total	**$14,703,670**	**$543,890**	**$4,106,810**	**$31,360**	**$8,963,788**	**$450,000**	**$627,301**	**$200,000**	**-$219,478**
Units of Service		114,168	308,820	303,970	2,918,520	1,364,126	269,149	201,245	1,769,749
		bills / yr	EMUs / yr	FDU/yr	ccf / yr	ccf / yr	ccf / yr	ccf / yr	ccf / yr
Unit Rate		**$4.76**	**$13.30**	**$0.10**	**$3.07**	**$0.33**	**$2.33**	**$0.99**	**-$0.12**

Monthly Service Charge Derivation

The monthly service charge calculations are shown in Table 5-17 below based on the unit costs shown in Table 5-16.

Table 5-17: Proposed Monthly Service Charges Calculations

Meter Size	Billing & Customer Service	Meter Service & Capacity[18]	Proposed Rates	Current Rates	$ Impact	% Impact
	A (Table 5-15)	B	C = A+ B	D	E = C - D	F = E / D
5/8"	$4.76	$13.30	**$18.07**	$17.46	$0.61	3.5%
3/4"	$4.76	$19.95	**$24.72**	$23.62	$1.10	4.7%
1"	$4.76	$33.25	**$38.02**	$35.93	$2.09	5.8%
1-1/2"	$4.76	$66.50	**$71.27**	$66.70	$4.57	6.9%
2"	$4.76	$132.99	**$137.76**	$128.25	$9.51	7.4%

Capital Facility Charges Derivation

Table 5-2 shows the required revenue increases for FY 2024 at an overall 25%. Table 5-20 shows the unit calculation of Capital Facility charges for water service from

[18] Service and Capacity component can be calculated by using the unit cost (Table 5-16) multiplied by the appropriate meter ratio (Table 5-13)

Table 5-18 (units of service) and Table 5-19 (unit cost of service).

Table 5-18: Units of Service for Water Capital Facility Charges

Potable Water Meters	Meter Counts	Meter Ratio	EMUs / yr
5/8"	2,380	1.00	28,560
3/4"	4,854	1.50	87,372
1"	452	2.50	13,560
1 1/2"	702	5.00	42,120
2"	1,126	10.00	135,120
Total	**9,514**		**306,732**

Table 5-19: Calculated Unit Cost of Service for Water Capital Facility Charges

	Capital Facility Charges
Revenue Requirements (Table 5-2)	**$1,702,968**
Units of Service (Table 5-18)	306,732
Unit Cost of Service	**$5.55**

Table 5-20: FY 2024 Proposed Water Monthly Capital Facility Charges

Meter Size	Meter Ratio	Proposed FY 2024	Current FY 2023	$ Change	% Change
	A (Table 5-18)	**B = 6.37 x A**	C	D = B - C	E = D/C
5/8"	1.00	**$5.56**	$5.09	$0.47	9.2%
3/4"	1.50	**$8.33**	$5.09	$3.24	63.7%
1"	2.50	**$13.88**	$8.50	$5.38	63.3%
1 1/2"	5.00	**$27.76**	$20.65	$7.11	34.4%
2"	10.00	**$55.52**	$51.84	$3.68	7.1%

Commodity Rate Derivation

Peak Delivery rates (

Table 5-21) are applied to all rates based on peaking characteristics for each usage class (shown in Table 5-4). Indoor or domestic use has the lowest peaking factor; consequently, all indoor use (residential and commercial) is assigned a lower peak delivery cost. Outdoor irrigation is associated with higher peaking factors, so outdoor use comprising residential irrigation and the current dedicated irrigation classes (both functional and recreational) will have higher peak delivery costs. Inefficient and excessive use has even higher peaking factors and is assigned the highest peak delivery costs.

Table 5-21: Peak Delivery Rate Calculations

Line	Water Usage3 and	Budgeted Water Sales	Peaking Factor	Peak Usage	Peak Rate ($/ccf)
		A	B (Table 5-4)	C = A x (B-1)	D = [A7] x C/A
1	Tier 1 - Essential Use	1,459,129	1.16	228,956	$0.05
2	Tier 2 - Efficient Use	913,013	1.90	819,465	$0.30
3	Tier 3 - Inefficient Use	90,201	1.90	80,959	$0.30
4	Tier 4 - Excessive Use	72,696	2.66	120,784	$0.55
5	Uniform - Commercial Use	383,481	1.30	113,962	$0.10
6	**Total**	**2,918,520**		**1,364,126**	
7	Unit Rate, $/ccf [19]	$0.33			

The RW program is associated with offsetting the demands of inefficient and excessive use and RW program costs are therefore allocated to inefficient and excessive use only (usage in Tiers 3 and 4 and 10 percent of commercial use, which is considered inefficient and is allocated at the same rate as average of residential inefficient and excessive usage). The RW program provides recycled water and offsets potable water use which is then available for Tiers 3 and 4. To determine the recycled water costs to be assigned to Tiers 3 and 4, Raftelis obtained the recycled water system's costs from the District based on Updated RW Expansion Capital Cost provided in March 2022. Phase 1 cost is $1,150/AF and Phase 2 RW expansion cost is $2,000/AF in today's dollars, which gives a ratio of 1:1.74. Phase 2 was developed to offset the excessive use in Tier 4. Therefore, this ratio is utilized for the RW Program funding ratio between Tier 3 and Tier 4 to reflect that Tier 4, excessive usage, should carry the burden of the higher costs to fund the more extensive RW program. Tier 4 therefore pays more to fund this alternative source of water required to offset Tier 4 demands. Revenues from this cost component are collected in a restricted reserve used to meet the debt service requirements associated with the recycled water system, which provides supplemental water and frees up valuable potable water resources to offset the demand imposed by inefficient and excessive use. The rates for the recycled water program to Tiers 3 and 4 are shown in Table 5-22.

Table 5-22: RW Program Funding for Potable Water Rate Calculations

Water Usage	Budgeted Water Sales	Equivalent Factor	Equivalent Usage	Unit Rate ($/ccf)[20]
Tier 1 - Essential Use	1,459,129	0.00	0	$0.00
Tier 2 - Efficient Use	913,013	0.00	0	$0.00
Tier 3 - Inefficient Use	90,201	1.00	90,201	$2.33
Tier 4 - Excessive Use	72,696	1.74	126,428	$4.05
Uniform - Commercial Use	383,481	0.14[21]	52,520	$0.32
Total	**2,918,520**	**$0**	**269,149**	
Unit RW Program Rate[22]	$2.33 / ccf			

[19] Rounded to the nearest cent. Calculation of Unit Costs shown in Table 5-16.
[20] Rounded to the nearest cent.
[21] Equivalent factor for commercial use = 10% x (1.00+1.74)/2 = 0.14
[22] Rounded to the nearest cent. Calculation of Unit Costs shown in Table 5-16.

Conservation programs are targeted to meet the demands of inefficient and excessive use and therefore conservation costs are applied only to inefficient and excessive use, as shown in Table 5-23. There is no good rationale to differentiate the costs and therefore the unit conservation cost per unit of water in Tiers 3 and 4 is the same.

Table 5-23: Conservation Program Funding (aka Conservation) Rate Calculations

Water Usage	Budgeted Water Sales	Equivalent Factor	Equivalent Usage	Unit Rate ($/ccf)[23]
Tier 1 - Essential Use	1,459,129	0.00	0	$0.00
Tier 2 - Efficient Use	913,013	0.00	0	$0.00
Tier 3 - Inefficient Use	90,201	1.00	90,201	$0.99
Tier 4 - Excessive Use	72,696	1.00	72,696	$0.99
Uniform - Commercial Use	383,481	0.10	38,348	$0.10
Total	**2,918,520**	**$0**	**201,245**	
Unit Conservation Rate[24]	$0.99 / ccf			

Finally, Table 5-24 shows the offset applied per the District's current policy objective to provide rate incentives for essential and efficient indoor use, miscellaneous revenues and a portion of the property taxes received by the District are used to offset the essential and efficient usage rate. The offset applies to indoor/domestic use in Tier 1 and commercial indoor use.

- To minimize customer impacts and provide incentives for essential and efficient use, miscellaneous revenues and a portion of property tax revenues are used to provide a revenue offset for efficient indoor and efficient commercial indoor use.
- Note that it is assumed that efficient usage for commercial is 90 percent of total use, and of that 90 percent, the indoor usage is 90 percent. Therefore, indoor usage is 81 percent (90 percent x 90 percent) of the total commercial use. The revenue offset is applied to 81 percent of total commercial use to determine the revenue offset for the commercial class.
- Note that $0.12 /ccf is applied to the efficient indoor use in Tier 1; and, since commercial rates are uniform, the incentive becomes $0.10 /ccf when applied to the full commercial use. Cell site leasing revenue and the remaining property tax revenue is used to offset revenue requirements for fixed service charges. Note that all user classes benefit from this offset. Most irrigation customers have associated domestic usage which also benefits from the revenue offset.

[23] Rounded to the nearest cent.
[24] Rounded to the nearest cent. Calculation of Unit Costs shown in Table 5-16.

Table 5-24: Revenue Offset Rate Calculations

Water Usage	Budgeted Water Sales	Equivalent Factor	Equivalent Usage	Unit Rate ($/ccf)[25]
Tier 1 - Essential Use	1,459,129	1.00	1,459,129	-$0.12
Tier 2 - Efficient Use	913,013	0.00	0	$0.00
Tier 3 - Inefficient Use	90,201	0.00	0	$0.00
Tier 4 - Excessive Use	72,696	0.00	0	$0.00
Uniform - Commercial Use	383,481	0.81	310,620	-$0.10
Total	**2,918,520**	**$0**	**1,769,749**	
Unit Rev Offset Rate[26]	-$0.12 / ccf			

In summary, the cost allocation methodology developed herein allocates the costs to customers, meters, and usage. Customer costs are the same for each account and other base fixed costs and a portion of peaking costs are allocated proportionally to the capacity of each meter. The remaining costs are allocated to each usage class in accordance with the demand they place on the system. The usage of each customer class is defined and the costs associated with the usage of each customer type provides the revenue to be recovered from that customer class. The rationale for allocating conservation costs and supplemental water costs allows the development of inclining tiered rates to provide incentives for conservation in the inefficient and excessive water usage tiers identified within each customer class. This methodology meets the requirements of Proposition 218 and Article X of the California Constitution.

Table 5-25 shows the total rates derived from the individual rate components shown in Table 4-3, and

[25] Rounded to the nearest cent.
[26] Rounded to the nearest cent. Calculation of Unit Costs shown in Table 5-16.

Table 5-21 to Table 5-24.

Table 5-25: Proposed Commodity Rate Calculation

Water Usage Rates	Water Supply	Peak Delivery	RW	Conservation	Rev Offset	Proposed Rates
Tier 1 - Essential Use	$3.07	$0.05	$0.00	$0.00	-$0.12	**$3.00**
Tier 2 - Efficient Use	$3.07	$0.30	$0.00	$0.00	$0.00	**$3.37**
Tier 3 - Inefficient Use	$3.07	$0.30	$2.33	$0.99	$0.00	**$6.70**
Tier 4 - Excessive Use	$3.07	$0.55	$4.05	$0.99	$0.00	**$8.67**
Uniform - Commercial Use	$3.07	$0.10	$0.32	$0.10	-$0.10	**$3.49**

5.3. Proposed Rates

5.3.1. MONTHLY SERVICE CHARGES

Based on the revenue requirements shown in Table 5-1 and the Monthly Service Charge calculations in Table 5-17, the proposed Monthly Service Charges for FY 2024 are shown in Table 5-26 below. All rates and charges are rounded up to the nearest cent to ensure adequate cost recovery.

Table 5-26: FY 2024 Monthly Water Service Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change
5/8”	**$18.07**	$17.46	$0.61	3.5%
3/4”	**$24.72**	$23.62	$1.10	4.7%
1”	**$38.02**	$35.93	$2.09	5.8%
1-1/2”	**$71.27**	$66.70	$4.57	6.9%
2”	**$137.76**	$128.25	$9.51	7.4%

The monthly service charges in FY 2025 and FY 2026 will be increased based on the “CPI for Urban Wage and Clerical Workers (CPI-W)” for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the service charge increase will be used to calculate the rates.

5.3.2. CAPITAL FACILITY CHARGES

Table 5-27 shows the proposed Capital Facility Charges as derived in Table 5-20 to recover costs of treatment plant improvements, debt service and replacement and refurbishment of the system. Table 5-28 shows the proposed Capital Facility Charges for FY 2025 and FY 2026. Increases to Capital Facility Charges for FY 2025 and FY 2026 are based on District projections of revenue necessary to meet required capital expenditures and represent annual increases of 25%.[27]

[27] See Appendix 7 for detailed Capital Projects Budget.

Table 5-27: FY 2024 Monthly Water Capital Facility Charges

Meter Size	Proposed FY 2024	Current FY 2023	$ Change	% Change
5/8"	**$5.56**	$5.09	$0.47	9.2%
3/4"	**$8.33**	$5.09	$3.24	63.7%
1"	**$13.88**	$8.50	$5.38	63.3%
1-1/2"	**$27.76**	$20.65	$7.11	34.4%
2"	**$55.52**	$51.84	$3.68	7.1%

Table 5-28: FY 2025 and FY 2026 Monthly Water Capital Facility Charges

Meter Size	Proposed FY 2025	Proposed FY 2026
5/8"	$6.95	$8.69
3/4"	$10.42	$13.02
1"	$17.35	$21.69
1-1/2"	$34.70	$43.38
2"	$69.40	$86.75

5.3.3. COMMODITY RATES

Based on the revenue requirements shown in Table 5-1 and the calculated Commodity Rate components summarized in Table 5-25, a comparison of the current and proposed commodity rates for FY 2024 are shown in Table 5-29 below. Table 5-30 shows the proposed Commodity Rate for FY 2025 and FY 2026. The FY 2025 and FY 2026 rates reflect only the pass through of the projected Metropolitan Water District rates as well as inflationary impacts on O&M costs at the Baker Water Treatment Plant.

Table 5-29: FY 2024 Proposed Water Commodity Rates

Water Usage Rates	Proposed FY 2024	Current FY 2023	$ Impact	% Impact
Tier 1 - Essential Use	**$3.00**	$2.82	$0.18	6.4%
Tier 2 - Efficient Use	**$3.37**	$3.18	$0.19	6.0%
Tier 3 - Inefficient Use	**$6.70**	$6.50	$0.20	3.1%
Tier 4 - Excessive Use	**$8.67**	$8.35	$0.32	3.8%
Uniform - Commercial Use	**$3.49**	$3.31	$0.18	5.4%

Table 5-30: FY 2025 and FY 2026 Proposed Water Commodity Rates

Meter Size	Proposed FY 2025	Proposed FY 2026
Tier 1 - Essential Use	$3.18	$3.39
Tier 2 - Efficient Use	$3.55	$3.76
Tier 3 - Inefficient Use	$6.88	$7.09
Tier 4 - Excessive Use	$8.85	$9.06

Uniform - Commercial Use	$3.67	$3.88

5.3.4. PRIVATE FIRE RATES

The proposed Private Fire Rates are shown in
Table 5-32 and reflect the changes to the fixed charges for the fire demand component at each fire line size.
Table 5-31 shows the private fire demand revenue requirement from Table 5-11. In addition, all private fire services have a 5/8-in meter attached to each that also requires maintenance and replacement services. In addition to the fire demand component, private fire services also share the service and capacity component equivalent for the 5/8-in meter as shown in
Table 5-32. The proposed rates for FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the private fire rate increase will be used to calculate the rates.

Table 5-31: Fire Demand Rate Calculation

Private Fire Service	FY 2024
Revenue Requirements for Peaking (Table 5-16)	$31,360
Units of Service (Table 5-5)	303,970 FDUs
Unit Cost of Service	**$0.103 / FDU**

Meter Size	Accounts	Fire Demand Factor	Fire Demand Rate[28]
	A	B (Table 5-5)	C = $0.103 x B
4"	27	38.32	$3.96
6"	90	111.31	$11.49
8"	53	237.21	$24.48
10"	4	426.58	$44.01

Table 5-32: FY 2024 Proposed Private Fire Service Rates

Meter Size	Accounts	Fire Demand	Service & Capacity	Proposed Rates	Current Rates	$ Change	% Change
	A	B (Table 5-31)	B (Table 5-16)	C = A + B	D	E = C - D	F = E / D
4"	27	$3.96	$13.30	$17.26	$16.15	$1.11	6.9%
6"	90	$11.49	$13.30	$24.79	$23.45	$1.34	5.7%
8"	53	$24.48	$13.30	$37.78	$36.04	$1.74	4.8%
10"	4	$44.01	$13.30	$57.31	$54.97	$2.34	4.3%
Total	**174**	**$31,374**	**$27,767**	**$59,144**	**$56,119**	**$3,025.80**	**5.4%**

[28] Rounded to the nearest cent

6. Wastewater Revenue Requirements and Proposed Rates

6.1. Wastewater (WW) Revenue Requirements

The total revenue requirement (net of miscellaneous revenue credits) is, by definition, the net cost of providing service. This cost of service is then used as the basis to develop unit rates for the wastewater parameters and to allocate costs to the various user classes. The concept of proportionate allocation to user classes implies that allocations should take into consideration the quantity of wastewater a user contributes as well as the strength (i.e., treatment requirements) of the wastewater.

The cost of service analysis and rate calculations consist of the following steps:

- Determination of the total costs to be recovered from rates (cost of service);
- Determination of the wastewater loadings for each customer class, to ensure costs are allocated to each class proportionately;
- Allocation of the cost of service to the loading parameters – Flow, Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS);
- Calculation of unit costs for the three parameters, and the costs to serve the various user classes based on their loadings;
- Calculation of rates for each user class.

This section of the report discusses the allocation of operating and capital costs to the Flow, Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) parameters, the determination of unit rates, and the calculation of user class cost responsibility.

Table 6-1 shows the Operating and Capital Wastewater Revenue Requirements which will be the basis to calculate the COS rates for FY 2024. Table 6-2 and Table 6-3 show the required revenue increases for Wastewater Service Charges and Wastewater Capital Facility Charges in FY 2024. Please refer to Appendix 2 and Appendix 5 for details of the figures shown.

Table 6-1: FY 2024 Wastewater Revenue Requirements

Wastewater Revenue Requirements	FY 2024	Operating	Capital
O&M Expenses (excl. Interest & Depreciation)			
Pumping – Sewer	$489,500	$489,500	$0
Treatment Plant	$2,492,600	$2,492,600	$0
T&D – Sewer	$214,000	$214,000	$0
Operations Support	$90,600	$90,600	$0
Fleet	$178,800	$178,800	$0
Indirect Operating Costs	$35,400	$35,400	$0
Administration	$0	$0	$0
Information Technology	$273,800	$273,800	$0
Indirect Administration Costs	$814,020	$814,020	$0
Labor Costs	$5,505,860	$5,505,860	$0
Subtotal O&M Expenses (excl. Interest & Depreciation)	**$10,094,580**	**$10,094,580**	**$0**
Other Revenue Requirements			
Debt Service	$525,001	$0	$525,001
Capital Improvement Program	$1,856,100	$0	$1,856,100
Subtotal Other Revenue Requirements	$2,381,101	**$0**	$2,381,101
***Less* Other Revenues**			
Property Taxes – General Fund Revenue	-$600,000	-$600,000	$0
Investment Income	-$160,600	-$160,600	$0
Subtotal Other Revenues	**-$760,600**	**-$760,600**	**$0**
***Plus* Funding Operating Reserve**	$12,724	$12,724	$0
***Less* Funding from Capital Reserve**	-$198,199	$0	-$198,199
NET REV REQUIREMENTS FROM FY 2024 RATES	**$11,529,606**	**$9,346,704**	**$2,182,902**

Table 6-2: FY 2024 WW Operating Revenue Requirements

WW Operating Rev Req	FY 2024	Notes
WW O&M Expenses	$10,094,580	Appendix 5
Less (-) Non-Operating Revenues	-$760,600	Appendix 5
Plus (+) Operating Reserve Funding	$12,724	Appendix 5
Total WW Operating Revenue Requirements	$9,346,704	
Current WW Revenues	$8,535,803	Appendix 5
Revenue Increase	**9.50%**	

Table 6-3: FY 2024 WW Capital Revenue Requirements

WW Capital Revenue Requirements	FY 2024	Notes
Capital Improvement Program	$1,856,100	Appendix 5
Plus Debt Service	$525,001	Appendix 5
Less Funding from Capital Reserve	-$198,199	Appendix 5
Total WW Capital Revenue Requirements	**$2,182,902**	
Current WW Revenues	$1,746,321	Appendix 5
Revenue Increase	**25.0%**	

6.2. Wastewater Cost of Service

6.2.1. CUSTOMER CLASSIFICATION

Non-residential customers are classified into 4 groups: low strength, medium strength, high strength, and Restaurants. The strength data for each current customer class is based primarily on Los Angeles County Sanitation District (LACSD) data reported in its Revenue Program (with a few exceptions based on the District's understanding of its customer characteristics). For example, restaurants are assumed to have the same strength as residential given the strict regulations of Fats, Oils and Grease (FOG) program for restaurants within the District's service area. Table 6-4 summarizes the proposed customer classification groupings. There are 3 groups of residential customers: single family residential, multi-family unrestricted and multi-family restricted. Laguna Woods Village accounts have restricted and unrestricted units. Restricted units refer to households that have a size restriction of a maximum of two occupants per unit.

Table 6-4: Customer Classifications

Customer Classes	BOD (mg/L)	TSS (mg/L)	Total Strength	Notes
Single Family Residential	282	272	554 mg / L	LACSD data[29]
Multi-Family Restricted	282	272	554 mg / L	LACSD data
Multi-Family Unrestricted	282	272	554 mg / L	LACSD data
Low Strength Commercial	0-150	0-150	≤ 300 mg / L	LACSD data
Medium Strength Commercial	150-300	150-300	301- 600 mg / L	LACSD data
High Strength Commercial	> 300	> 300	> 600 mg / L	LACSD data
Restaurants	282	272	554 mg / L	Same as Residential[30]

Raftelis also reviewed the residential household density, persons per household (PPH), within the District's service area using Census data. Refer to Appendix 6 for details. Table 6-5 shows the estimated residential household size to be used to estimate wastewater flows for residential customers.

[29] LACSD Revenue Program Report Table 3

[30] Restaurant strengths are assumed to be the same as residential, given the strict regulations of FOG program for restaurants within the District service area.

Table 6-5: District's Residential Household Density

	Dwelling Units	Average Household Size	Notes
Single Family Residential	7,059 DU	3.01 PPH	See Appendix 6 (ETWD)
Multi-Family Restricted	12,736 DU	1.43 PPH	See Appendix 6 (Laguna Woods)
Multi-Family Unrestricted	5,152 DU	2.20 PPH	See Appendix 6 (ETWD)

6.2.2. WASTEWATER LOADINGS

Residential Wastewater Flows

Combining the strengths and household density in Table 6-4 and Table 6-5, Table 6-6 summarizes the residential wastewater flow characteristics. Using the conversion formulas (shown below), Table 6-7 summarizes the estimated residential wastewater flows. The water use inside the dwelling unit is estimated at 55 gal per day per capita (gpcd) based on the State standard.

Table 6-6: Residential Wastewater Flow Characteristics

	Dwelling Units	Average Household Size	BOD (mg/L)	TSS (mg/L)
	A	B	C	D
Residential Unrestricted	7,059 DU	3.01 PPH	282 mg/L	272 mg/L
Multi-Family Restricted	12,736 DU	1.43 PPH	282 mg/L	272 mg/L
Multi-Family Unrestricted	5,152 DU	2.20 PPH	282 mg/L	272 mg/L

$$Est.WW\ Flow = \frac{Dwelling\ Units\ x\ Household\ Size\ x\ 55\ GPCD\ x\ 365\ days}{748\ gallons/ccf}$$

$$BOD(lbs/day) = \frac{Flows\ (ccf) x\ BOD(mg/L) x\ 8.345404374\ (lbs/gallon) x 748\ gallons/ccf}{365\ days\ x\ 10^6(mg/L)}$$

$$TSS(lbs/day) = \frac{Flows\ (ccf) x\ TSS(mg/L) x\ 8.345404374\ (lbs/gallon) x 748\ gallons/ccf}{365\ days\ x\ 10\text{^}6\ (mg/L)}$$

Table 6-7: Estimated Residential Wastewater (WW) Flows

	Est. WW Flow (ccf)	BOD (lbs/day)	TSS (lbs/day)
	A	B	C
Residential Unrestricted	570,248 ccf	2,750	2,653
Multi-Family Restricted	488,791 ccf	2,357	2,274
Multi-Family Unrestricted	304,195 ccf	1,467	1,415
Total	**1,363,234 ccf**	**6,575**	**6,342**

Non-Residential Strengths & Flows

Table 6-8 summarizes the current customer classes with estimated wastewater strength characteristics and its corresponding class grouping.

Table 6-8: Non-Residential Wastewater Flow Characteristics

Non-Residential Classes	BOD (mg/L)	TSS (mg/L)	Combined Strengths	Notes
Low Strength	150 mg/L	150 mg/L	<300 mg/L	LACSD data
Medium Strength	258 mg/L	280 mg/L	<600 mg/L	LACSD data
High Strength	800 mg/L	800 mg/L	<1,600 mg/L	LACSD data
Restaurants	282 mg/L	272 mg/L	554 mg/L	Same as residential[31]

Table 6-9 summarizes the estimated wastewater flows and loadings contributed by both residential and non-residential customer classes.

Table 6-9: Estimated Wastewater System Flows and Loadings

Customer Classes	Flows (ccf)	BOD (lbs/day)	TSS (lbs/day)	Dwelling Units	# of Accts
Residential					
Residential Unrestricted	570,248 ccf	2,750	2,653	7,059 DU	6,681
Multi-Family Restricted	488,791 ccf	2,357	2,274	12,736 DU	1,020
Multi-Family Unrestricted	304,195 ccf	1,467	1,415	5,152 DU	562
Total Residential	1,363,234 ccf	6,575	6,342	24,947 DU	8,263
Non-Residential					
Low St. Commercial	4,244 ccf	11	11	17 DU	17
Medium St. Commercial	244,819 ccf	1,079	1,146	703 DU	605
High St. Commercial	8,181 ccf	112	112	7 DU	7
Restaurants	34,747 ccf	168	162	88 DU	88
Total Non-Residential	291,991 ccf	1,369	1,430	815 DU	717
TOTAL WW SERVICES	**1,655,225 ccf**	**7,944**	**7,772**	**25,762 DU**	**8,980**

6.2.3. ALLOCATIONS OF COST OF SERVICE

The cost of providing service is primarily based on the flow and strength of wastewater. The three main cost allocation parameters are Flow, BOD, and TSS. BOD and TSS constitute the strength components of the wastewater discharge. Costs are assigned based on the parameters that dictate the design of each process. The allocation of costs to the three parameters involves:

[31] Restaurants strengths are assumed to be the same as residential, given the strict regulations of FOG program for restaurants within the District service area.

- Detailed breakdown of O&M costs
- Itemization of the capital costs by functions such as collection, treatment, outfall, etc.
- Allocation of the functional costs to the wastewater parameters

Based on a detailed breakdown of fixed assets by process, the treatment plant costs are allocated to flow, BOD, and TSS at 40 percent, 30 percent, and 30 percent, respectively. This allocation is representative of other secondary treatment plants. Pipelines, outfall, and pumping stations costs are all allocated to flow. Labor costs are allocated based on the combined non-labor operating cost, at 38 percent, 17 percent, 17 percent, and 28 percent to Flow, BOD, TSS, and General, respectively. Costs that could not be specifically identified were classified as general costs. General costs are ultimately reallocated based on the proportions of other costs—in this study, general costs are allocated to flow, BOD, and TSS at 54 percent, 23 percent, and 23 percent, respectively (see Table 6-12 below). The allocation of operating costs is shown in Table 6-10.

The cost of service allocations in this study are based on Raftelis' experience with secondary treatment plants and are consistent with the revenue program guidelines of the State Water Resources Control Board (SWRCB) and the Water Environment Federation (WEF).

Table 6-10: Allocation of WW O&M Expenses

O&M Expenses	FY 2024	Flows	BOD	TSS	General
Pumping - Sewer	**$489,500**	100%			
Treatment Plant	**$2,492,600**	40%	30%	30%	
T&D - Sewer	**$214,000**	100%			
Operations Support	**$90,600**	70%	15%	15%	
Fleet	**$178,800**	0%			100%
Indirect Operating Costs	**$35,400**	0%			100%
Information Technology	**$273,800**				100%
Indirect Administration Costs	**$814,020**				100%
Labor Costs	**$5,505,860**	38%	17%	17%	28%
Total O&M	**$10,094,580**	**$3,880,480**	**$1,674,914**	**$1,674,914**	**$2,864,273**

Table 6-11 summarizes the allocations of wastewater revenue requirements to cost components, such as flow, BOD, TSS, and General using the allocation of O&M expenses in Table 6-10. In FY 2024, debt service is allocated to capital. The revenue requirements are offset by property tax (which is allocated using the same as non-labor O&M allocations).

Table 6-11: Allocations of FY 2024 WW Revenue Requirements

Revenue Requirements	FY 2024	Flow	BOD	TSS	General	Capital
WW O&M Expenses	**$10,094,580**	$3,880,480	$1,674,914	$1,674,914	$2,864,273	$0
Other Rev Requirements						
Debt Service	**$525,001**	$0	$0	$0	$0	$525,001
Capital R&R Program	**$1,856,100**	$0	$0	$0	$0	$1,856,100
Subtotal Other Rev Requirements	**$2,381,101**	**$0**	**$0**	**$0**	**$0**	**$2,381,101**
Less Other Revenues						
Property Taxes	**-$600,000**	-$230,647	-$99,553	-$99,553	-$170,246	$0
Other Misc. Income	**-$160,600**	$0	$0	$0	-$160,600	$0
Subtotal Other Revenues	**-$760,600**	**-$230,647**	**-$99,553**	**-$99,553**	**-$330,846**	**$0**
+ Operating Reserve Funding	**$12,724**	$4,891	$2,111	$2,111	$3,610	$0
+ Capital Reserve Funding	**($198,199)**	$0	$0	$0	$0	($198,199)
REV REQ FROM RATES	**$11,529,606**	**$3,654,724**	**$1,577,472**	**$1,577,472**	**$2,537,037**	**$2,182,902**

Table 6-12: Reallocation of General Costs

Cost Categories	FY 2024	Reallocation of General	Reallocated General Costs	FY 2024
Flows	$3,654,724	54%	$1,361,619	$5,016,342
BOD	$1,577,472	23%	$587,709	$2,165,181
TSS	$1,577,472	23%	$587,709	$2,165,181
General	$2,537,037	-100%	-$2,537,037	$0
Capital	$2,182,902			$2,182,902
REV REQ FROM RATES	**$11,529,606**			**$11,529,606**

6.2.4. DEVELOPMENT OF UNIT COST

Combining the resulting cost allocations in Table 6-12 and the units of service from Table 6-9, the unit cost of service Flows, BOD, and TSS are calculated in

Table 6-13.

Table 6-13: Development of FY 2024 Operating WW Unit Cost of Service

Operating Rev Req	FY 2024	Units of service		Unit Cost of Service
	A (Table 6-12)	B (Table 6-9)		C = A / B
Flows	$5,016,342	1,655,225	ccf / yr	$3.03
BOD	$2,165,181	7,944	lbs / day	$272.56
TSS	$2,165,181	7,772	lbs / day	$278.60
Total	**$9,346,704**			

6.2.5. ALLOCATION OF COSTS TO CUSTOMER CLASSES

$$Flows\ Cost = \$3.03/ccf\ x\ Flows\ (ccf)$$
$$BOD\ Cost = \$272.56/lbs\ x\ BOD\ (lbs)$$
$$TSS\ Cost = \$278.60/lbs\ x\ TSS\ (lbs)$$

Using the flows and strengths in Table 6-9 with the unit cost of service calculated in

Table 6-13, Table 6-14 shows the allocated cost of service responsibility of each customer class.

Table 6-14: Allocation of FY 2024 Cost of Service to Customer Classes

Customer Classes	Flows (CCF)	BOD (lbs/day)	TSS (lbs/day)	Dwelling Units	# of Accts	Flows $3.03 $ / CCF	BOD $272.56 $ / lbs	TSS $278.60 $ / lbs	Total COS
Residential									
Residential Unrestricted	570,248 ccf	2,750	2,653	7,059 DU	6,681	$1,728,200	$749,606	$739,033	**$3,216,839**
Multi-Family Restricted	488,791 ccf	2,357	2,274	12,736 DU	1,020	$1,481,336	$642,529	$633,466	**$2,757,330**
Multi-Family Unrestricted	304,195 ccf	1,467	1,415	5,152 DU	562	$921,897	$399,872	$394,232	**$1,716,002**
Total Residential	**1,363,234 ccf**	**6,575**	**6,342**	**24,947 DU**	**8,263**	**$4,131,432**	**$1,792,007**	**$1,766,732**	**$7,690,171**
Non-Residential									
Low St. Commercial	4,244 ccf	11	11	17 DU	17	$12,862	$2,967	$3,033	**$18,863**
Medium St. Commercial	244,819 ccf	1,079	1,146	703 DU	605	$741,951	$294,024	$319,202	**$1,355,177**
High St. Commercial	8,181 ccf	112	112	7 DU	7	$24,792	$30,507	$31,182	**$86,481**
Restaurants	34,747 ccf	168	162	88 DU	88	$105,305	$45,676	$45,032	**$196,012**
Total Non-Residential	**291,991 ccf**	**1,369**	**1,430**	**815 DU**	**717**	**$884,910**	**$373,174**	**$398,449**	**$1,656,533**
TOTAL WW SERVICES	1,655,225 ccf	7,944	7,772	25,762 DU	8,980	$5,016,342	$2,165,181	$2,165,181	$9,346,704

6.3. Wastewater COS Rate Design and Proposed Rates

6.3.1. WASTEWATER SERVICE CHARGES

Residential customers will be assessed a monthly wastewater service charge based on the number of dwelling units. Total cost of service allocated to each customer class from Table 6-14 will be divided by the units to get the COS rate in Table 6-15. The wastewater rates in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the wastewater rate increase will be used to calculate the rates.

Table 6-15: Development of FY 2024 Wastewater Service Charges

Customer Classes	Total Cost of Service	Flows (CCF)	Dwelling Units	Proposed FY 2024
Residential				
Residential Unrestricted	$3,216,839		7,059 DU	**$37.98 / DU**
Multi-Family Restricted	$2,757,330		12,736 DU	**$18.05 / DU**
Multi-Family Unrestricted	$1,716,002		5,152 DU	**$27.76 / DU**
Total Residential	**$7,690,171**		**24,947 DU**	
Non-Residential				
Low St. Commercial	$18,863	4,244 ccf		**$4.45 / ccf**
Medium St. Commercial	$1,355,177	244,819 ccf		**$5.54 / ccf**
High St. Commercial	$86,481	8,181 ccf		**$10.58 /ccf**
Restaurants	$196,012	34,747 ccf		**$5.65 / ccf**
Total Non-Residential	**$1,656,533**	**291,991 ccf**		

6.3.2. CAPITAL FACILITY CHARGES

The Capital Improvement Program Revenue Requirements (in Table 6-3) are allocated to each customer class based on the allocation of O&M revenue requirement. The proposed Capital Facility Charges for FY 2024 are shown in

Table 6-16 below and are required for replacement and refurbishment of existing infrastructure and debt service payments. Increases to Capital Facility Charges for FY 2025 and FY 2026 are based on District projections of revenue necessary to meet required capital expenditures. [32]

Table 6-17 shows the proposed Capital Facility Charges for FY 2025 and FY 2026.

Table 6-16: Development of FY 2024 Capital Facility Charges

	FY 2024	O&M Rev Req	%	Capital Facility Rev Req	Units of Services	Unit Capital Facility charges
		A (Table 6-15)	B = A / [A11]	C = [C11] x B	D (Table 6-9)	E = C / D
1	**Residential**				**EDUs**	
2	Residential Unrestricted	$3,216,839	34.42%	$751,286	7,059 EDU	**$8.87 / DU**
3	Multi-Family Restricted	$2,757,330	29.50%	$643,968	12,736 EDU	**$4.21 / DU**
4	Multi-Family Unrestricted	$1,716,002	18.36%	$400,768	5,152 EDU	**$6.48 / DU**
5						
6	**Non-Residential**				**Billed sewer flows (ccf)**	
7	Low St. Commercial	$18,863	0.20%	$4,405	4,244 ccf	**$1.04 / ccf**
8	Medium St. Commercial	$1,355,177	14.51%	$316,499	244,819 ccf	**$1.29 / ccf**
9	High St. Commercial	$86,481	0.91%	$20,197	8,181 ccf	**$2.47 / ccf**
10	Restaurants	$196,012	2.10%	$45,778	34,747 ccf	**$1.32 / ccf**
11	**Total**	**$9,346,704**	**100.00%**	**$2,182,902**		

Table 6-17: FY 2025 and FY 2026 Proposed Capital Facility Charges

Wastewater Capital Facilities Charges	Proposed FY 2025	Proposed FY 2026
Residential ($/EDU)		
Residential Unrestricted	$11.09	$13.86
Multi-Family Restricted	$5.27	$6.59
Multi-Family Unrestricted	$8.11	$10.13
Commercial Use ($/ccf)		
Low St. Commercial	$1.30	$1.63
Medium St. Commercial	$1.62	$2.02
High St. Commercial	$3.09	$3.86
Restaurants	$1.65	$2.07

[32] See Appendix 7 for detailed Capital Projects Budget.

6.4. Wastewater Customer Impacts

To understand the impacts on customers due to the COS revision, Raftelis calculated a series of customer impacts as shown in

Table 6-18.

Table 6-18 shows the impacts of FY 2024 from current rates (including the required revenue increases for FY 2024).

Table 6-18: Customer Impacts of Revenue Increases in FY 2024

Wastewater Service Charges	FY 2023	FY 2024	Impact from Current Rates	
	Current	Proposed	$ Increase	% Increase
Residential ($/EDU)				
Residential Unrestricted	$34.67	**$37.98**	$3.31	9.5%
Multi-Family Restricted	$16.47	**$18.05**	$1.58	9.6%
Multi-Family Unrestricted	$25.34	**$27.76**	$2.42	9.6%
Commercial Use ($/ccf)				
Low St. Commercial	$4.10	**$4.45**	$0.35	8.5%
Medium St. Commercial	$5.07	**$5.54**	$0.47	9.3%
High St. Commercial	$9.49	**$10.58**	$1.09	11.5%
Restaurants	$5.15	**$5.65**	$0.50	9.7%

7. Recycled Water Revenue Requirements and Proposed Rates

7.1. Recycled Water System

In FY 2015, the District completed the expansion of its recycled water system, including water recycling plant (WRP) upgrades to tertiary treatment processes and recycled water distribution system pipeline expansion. In FY 2019, the District completed the Phase II expansion of the Recycled Water Distribution System. With the Recycled Water Expansion Project's completion, all recycled water customers (existing and converted customers) are now supplied with high quality tertiary recycled water. The following sources financed the recycled water expansion capital cost for both phases: State Revolving Fund (SRF) Loan, grants, and the restricted reserve (revenues from Tier 3 and Tier 4 potable usage dedicated to recycled water expansion) and recycled water charges from recycled water customers.

7.2. Projected Recycled Water Sales

The District has completed the Phase II Recycled Water Retrofit Project and anticipates serving 277 Recycled Water accounts in FY 2024. The projected recycled water sales for FY 2024 are estimated at 1,485 AF, which is consistent with FY 2023 sales.

7.3. Revenue Requirement and Proposed Rates

In FY 2015, the District began separating recycled water costs into an independent Recycled Water Enterprise Fund.

Table 7-1 summarizes the recycled water revenue requirements from rates for FY 2024. Recycled water O&M expenses and supply (Line 1) and Debt Service (Line 2) will be partially offset by restricted reserve funding (Line 5), capital charges (Line 6), MWD LRP Rebates (Line 7), and several other sources of revenues (Lines 8, 9, 10). The remaining revenue requirement to be recovered from recycled water rates is shown in Line 14. The line items shown below are further detailed in Appendix 4 – Cash Flow Analysis for Recycled Water Funds, developed by District Staff and provided to Raftelis as the basis for the cost of service analysis.

Recycled water is supplemented with potable water when adequate recycled water is insufficient to meet demand. Therefore, the meter service charges and capital facility charges for potable and recycled water are the same.

Table 7-1: Recycled Water Revenue Requirement from Rates

Line No	Recycled Water Rev Requirements	FY 2024	Note
1	Recycled Water O&M Expenses	$1,901,380	Appendix 4
2	Debt Service	$2,087,450	Appendix 4
3			
4	**Less (-) Other Revenues**		
5	Restricted Reserves Funding of Debt Service	-$882,880	Appendix 4
6	Recycled Water Meter Capital Charge Funding of Debt	-$210,468	Appendix 4
7	MWD Rebates	-$360,000	Appendix 4
8	MNWD Payment for RW Service to Golf Course	-$11,000	Appendix 4
9	Misc. Revenue	-$22,000	Appendix 4
10	Property Taxes	-$95,000	Appendix 4
11	**Subtotal Less (-) Other Revenues**	**-$1,581,348**	
12			
13	**Less (-) Operating Reserve Funding**	**-$2,068**	
14	**Total Revenue Requirements from Recycled Water Rates**	**$2,405,415**	

All recycled water customers connected to the recycled water distribution system will be assessed the same Monthly Service Charges (Table 7-2) and Capital Facility Charges (Table 7-4) as potable customers to recover the customer service, meter service, a portion of capacity, and other recycled water related fixed costs and to pay for capital improvements to the expanded recycled water system. Recycled water customers benefit from supplemental potable water, and therefore the meter service and capital facility charges are equivalent to potable water. The monthly service charges in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the service charge increase will be used to calculate the rates. Table 7-4 shows the proposed Monthly Service Charges and Capital Facility Charges for FY 2025 and FY 2026. Increases to Capital Facility Charges for FY 2025 and FY 2026 are based on District projections of revenue necessary to meet required capital expenditures and debt service payments.[33]

[33] See Appendix 7 for detailed Capital Projects Budget.

Table 7-2: FY 2024 Proposed Monthly Service Charges

Meter Size	# of RW accounts	FY 2024 Proposed	FY 2023 Current	$ Change	% Change[34]
5/8"		**$18.07**	$17.46	$0.61	3.5%
3/4"		**$24.72**	$23.62	$1.10	4.7%
1"	1	**$38.02**	$35.93	$2.09	5.8%
1-1/2"	28	**$71.27**	$66.70	$4.57	6.9%
2"	247	**$137.76**	$128.25	$9.51	7.4%
10”	1	**$1,360.00**	N/A		

Table 7-3: FY 2024 Proposed RW Capital Facility Charges

Meter Size	# of RW accounts	FY 2024 Rates	FY 2023 Rates	$ Change	% Change[35]
5/8”		**$5.56**	$5.09	$0.47	9.2%
3/4”		**$8.33**	$5.09	$3.24	63.7%
1”	1	**$13.88**	$8.50	$5.38	63.3%
1-1/2”	28	**$27.76**	$20.65	$7.11	34.4%
2”	247	**$55.52**	$51.84	$3.68	7.1%
10”	1	**$640.00**	N/A		

Table 7-4: FY 2025 and FY 2026 Proposed Recycled Water Capital Facility Charges

Meter Size	Proposed FY 2025	Proposed FY 2026
5/8"	$6.95	$8.69
3/4"	$10.42	$13.02
1"	$17.35	$21.69
1-1/2"	$34.70	$43.38
2"	$69.40	$86.75
10”	$800.00	$1,000.00

Table 7-5 derives the revenue required from the recycled water commodity rate (Line 3) by subtracting the Monthly Service Charge Revenue (Line 2) shown in Table 7-2 from the Total Revenue Requirements (Line 1). The unit recycled water commodity rate is calculated using the net revenue requirements from recycled water commodity rates (Line 3) divided by projected recycled water sales (Line 4). The recycled water commodity rate for FY 2024 is $3.03 / ccf or $1,320 / AF, which is 90% of the Tier 2 potable water commodity rate for FY 2024 and provides an

[34] There is no prior year comparison for the 10” recycled meter size, as this is a new meter size addition for FY 2024.
[35] There is no prior year comparison for the 10” recycled meter size, as this is a new meter size addition for FY 2024.

economic incentive for irrigation customers to convert to recycled water. Table 7-6 shows the proposed recycled water commodity rates for FY 2025 and FY 2026.

Table 7-5: FY 2024 Recycled Water Commodity Rate Calculation

Line #	Description	FY 2024
1	Total Revenue Requirements from Recycled Water Rates	$2,405,415
2	Less (-) Monthly Service Charges (Table 7-2)	-$449,044
3	**Net Revenue Requirements from Recycled Water Usage Rate**	**$1,956,371**
4	Projected Recycled Water Sales (ccf)	646,865
5	**Unit Recycled Water Usage Rate ($/ccf)**	**$3.03**
6	Unit Recycled Water Usage Rate ($/AF)	$1,320
7	% of Tier 2 Potable Rate	89.9%

Table 7-6: FY 2025 and FY 2026 Proposed Recycled Water Commodity Rate

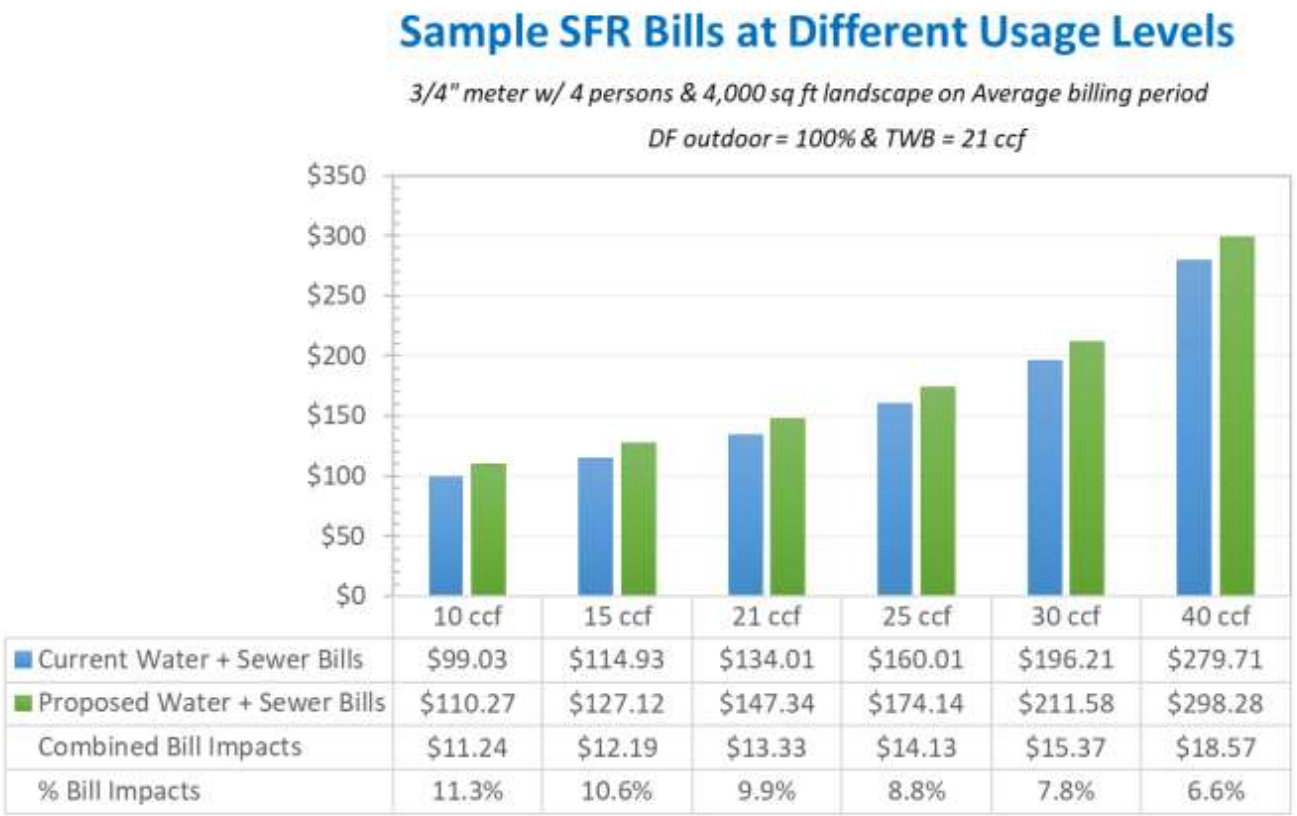
Recycled Water Variable Charges		Proposed FY 2025	Proposed FY 2026
		$3.20	$3.38

8. Customer Impact Analysis

8.1.1. FY 2023 CURRENT RATES TO FY 2024 RATES

Figure 8-1 shows a breakdown of water and wastewater bills at various water usage levels for a single-family residential user with four occupants and a 4,000 sq. ft. landscape area serviced by a ¾-in meter at current water and wastewater rates compared to proposed FY 2024 rates. The combined water and wastewater bill increase would range from $11.24 to $18.57 per month, depending on the monthly billed water usage. The bill impacts shown are from changes in water and wastewater service and capital charges. Recycled water rate impacts are not shown, as residential users do not purchase recycled water.

Figure 8-1: SFR Total Monthly Bills at Different Usage Levels at Current and Proposed FY 2024 Rates



	10 ccf	15 ccf	21 ccf	25 ccf	30 ccf	40 ccf
Current Water + Sewer Bills	$99.03	$114.93	$134.01	$160.01	$196.21	$279.71
Proposed Water + Sewer Bills	$110.27	$127.12	$147.34	$174.14	$211.58	$298.28
Combined Bill Impacts	$11.24	$12.19	$13.33	$14.13	$15.37	$18.57
% Bill Impacts	11.3%	10.6%	9.9%	8.8%	7.8%	6.6%

APPENDICES

APPENDIX 1: PASS-THROUGH WATER SUPPLY COST

Source: Purchased Water.2324.xlsx sent by Dennis Cafferty 4/27/23

		2022/23 Budget		2023/24 Budget		2024/25 Budget		2025/26 Budget	
		Jul 2022	Jan 2023	Jul 2023	Jan 2024	Jul 2024	Jan 2025	Jul 2025	Jan 2026
1	Total Period Demand (AF)	4,000	3,000	4,000	3,000	4,000	3,000	4,000	3,000
2	Total Annual Demand (AF)		7,000		7,000		7,000		7,000
3	MWD Period Demand (AF)	2,225	1,225	2,225	1,225	2,225	1,225	2,225	1,225
4	MWD Annual Demand (AF)		3,450		3,450		3,450		3,450
5	**MWD Untreated Commodity Rates**								
6	System Access Rate	389.00	368.00	368.00	389.00	389.00	410.00	410.00	432.00
7	System Power Rate	167.00	166.00	166.00	182.00	182.00	198.00	198.00	208.00
8	MWD Tier 1 Rate	243.00	321.00	321.00	332.00	332.00	364.00	364.00	397.00
9	**Subtotal Untreated Full Service**	**799.00**	**855.00**	**855.00**	**903.00**	**903.00**	**972.00**	**972.00**	**1,037.00**
10	Treatment Surcharge	344.00	354.00	354.00	353.00	353.00	380.00	380.00	407.00
11	**Total Treated Full Service Rate**	**1,143.00**	**1,209.00**	**1,209.00**	**1,256.00**	**1,256.00**	**1,352.00**	**1,352.00**	**1,444.00**
12	**Total Treated Full Service Annual Cost**	**2,543,175**	**1,481,025**	**2,690,025**	**1,538,600**	**2,794,600**	**1,656,200**	**3,008,200**	**1,768,900**
13	**MWD Fixed Charges**								
14	Capacity Reservation Charge	83,391	68,328	71,358	75,397	75,397	87,514	87,514	93,573
15	Readiness To Serve Charge	242,420	272,837	299,564	337,893	337,893	337,893	337,893	337,893
16	**Total MWD Fixed Charges**		**666,976**		**784,212**		**838,697**		**856,873**
17	**Total MWD Cost**		**4,691,176**		**5,012,837**		**5,289,497**		**5,633,973**
18	**Total MWD Unit Cost ($/AF)**		**1,360**		**1,453**		**1,533**		**1,633**
19	**Baker Water Treatment Plant**								
20	Period Demand (AF)	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775
21	Annual Demand (AF)		3,550		3,550		3,550		3,550
22	**Baker Raw Water Cost**	**1,418,225**	**1,517,625**	**1,517,625**	**1,602,825**	**1,602,825**	**1,725,300**	**1,725,300**	**1,840,675**
23	Baker O&M Unit Cost (per AF)	210	210	225	225	231	231	238	238
24	SCP Surcharge	8.38	8.38	8.38	8.38	8.64	8.64	8.90	8.90
25	SAC Surcharge	1.00	1.00	1.02	1.02	1.05	1.05	1.08	1.08
26	**Baker O&M Annual Cost**	**389,407**	**389,407**	**415,250**	**415,250**	**427,225**	**427,225**	**440,165**	**440,165**
27	Baker Capital Cost (Debt Service)								
28	**Total Period Baker Water Treatment Plant Cost**	**1,807,632**	**1,907,032**	**1,932,875**	**2,018,075**	**2,030,050**	**2,152,525**	**2,165,465**	**2,280,840**
29	**Total Annual Baker Water Treatment Plant Cost**		**3,714,664**		**3,950,951**		**4,182,575**		**4,446,304**
30	**Baker Water Treatment Plant Unit Cost($/AF)**		**1,046**		**1,113**		**1,178**		**1,252**
31	**Capital Charge Revenue Funding**								
32	**Total Baker Water Treatment Plant Cost**		**3,714,664**		**3,950,951**		**4,182,575**		**4,446,304**
33	**Total Purchased Water Cost**								
34	MWD		4,691,176		5,012,837		5,289,497		5,633,973
35	MWDOC								
36	Baker		3,714,664		3,950,951		4,182,575		4,446,304
37	**Total Purchased Water Cost**		**8,405,840**		**8,963,788**		**9,472,072**		**10,080,277**
38	Percent Increase Budget to Budget per Unit				6.64%		5.67%		6.42%
39	**Overall Imported Water Effective Rate**								
40	Fiscal Year Cost per Acre Foot Purchased		**1,201**		**1,281**		**1,353**		**1,440**
41	Fiscal Year Cost per CCF Purchased		**2.76**		**2.94**		**3.11**		**3.31**
42	Fiscal Year Rate per CCF Sold		**2.88**		**3.07**		**3.25**		**3.46**

APPENDIX 2: O&M EXPENSES ALLOCATIONS TO WATER, RECYCLED WATER AND WASTEWATER FUNDS FOR FY 2024

Source: 2023-24 Budget Worksheets.xlsx sent by Jason Hayden 4/5/2023

	FY 2024	Water	Sewer	Recycled Water	Total
Source of Supply	9,292,500	9,292,500	-	-	9,292,500
Treatment – Water	-	-	-	-	-
Pumping – Water	502,500	502,500	-	-	502,500
T&D – Water	540,200	540,200	-	-	540,200
Customer Accounts	-	-	-	-	-
Pumping – Sewer	489,500	-	489,500	-	489,500
Treatment Plant	2,492,600	-	2,492,600	-	2,492,600
Outside Treatment	-	-	-	-	-
T&D – Sewer	214,000	-	214,000	-	214,000
Tertiary Plant	492,200	-	-	492,200	492,200
T&D – Recycled	15,200	-	-	15,200	15,200
Operations Support	173,800	69,500	90,600	13,700	173,800
Fleet	336,800	131,600	178,800	26,400	336,800
Indirect Operating Costs	110,300	71,200	35,400	3,700	110,300
Administration	-	-	-	-	-
Information Technology	528,300	210,500	273,800	44,000	528,300
Indirect Administration Costs	1,577,000	637,000	814,020	125,980	1,577,000
Depreciation & Amortization	4,163,100	814,100	1,805,000	1,544,000	4,163,100
Interest Costs	2,184,000	950,400	361,600	872,000	2,184,000
Labor Costs	10,259,060	3,573,000	5,505,860	1,180,200	10,259,060
Total	33,371,060	16,792,500	12,261,180	4,317,380	33,371,060
Total Expenses (Less Depreciation & Interest)	**27,023,960**	**15,028,000**	**10,094,580**	**1,901,380**	**27,023,960**

APPENDIX 3: CASH FLOW ANALYSIS FOR WATER FUND

Source: 23-24 Budget Cash Flow.xlsx sent by Jason Hayden 4-7-2023

Water Cash Flow			FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
BEGINNING RESERVE BALANCES			**$7,152,400**	**$6,168,113**	**$5,780,287**	**$5,795,918**	**$6,266,240**	**$7,258,011**
OPERATIONS & MAINTENANCE CASH FLOW								
O&M REVENUES				$9,208,367				
Revenues under current rates			**$13,081,821**	**$13,081,821**	**$13,081,821**	**$13,081,821**	**$13,081,821**	**$13,081,821**
Fixed Service Charges			$4,364,154	$4,364,154	$4,364,154	$4,364,154	$4,364,154	$4,364,154
Fire Service Charges / Flood Meters			$63,819	$63,819	$63,819	$63,819	$63,819	$63,819
Unrestricted Commodity Rates			$8,653,848	$8,653,848	$8,653,848	$8,653,848	$8,653,848	$8,653,848
Additional Fixed Revenue Required			**$0**	**$240,028**	**$470,238**	**$711,957**	**$965,763**	**$1,258,908**
Fiscal Year	**Adjustments**	**Effective Months**						
FY 2024	5.50%	12		$240,028	$240,028	$240,028	$240,028	$240,028
FY 2025	5.00%	12			$230,209	$230,209	$230,209	$230,209
FY 2026	5.00%	12				$241,720	$241,720	$241,720
FY 2027	5.00%	12					$253,806	$253,806
FY 2028	5.50%	12						$293,145
MWD Pass-through Rev Projections			**$0**	**$554,519**	**$1,079,852**	**$1,692,742**	**$2,276,446**	**$2,918,520**
FY 2024				$554,519	$554,519	$554,519	$554,519	$554,519
FY 2025					$525,334	$525,334	$525,334	$525,334
FY 2026		6.408%				$612,889	$612,889	$612,889
FY 2027							$583,704	$583,704
FY 2028								$642,074
Total Unrestricted Water Service Rate Revenue			**$13,081,821**	**$13,876,369**	**$14,631,911**	**$15,486,520**	**$16,324,030**	**$17,259,250**
Other Sources of Cash								
Funding from Restricted Reserve for Conservation Program			$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
Property Taxes - General Fund Revenue			$272,522	$279,522	$279,522	$291,522	$303,522	$315,522
Property Taxes (Funds Tier 1 Offset)			$175,478	$180,478	$180,478	$180,478	$180,478	$180,478
Operating Grants & Reimbursements			$400	$0	$400	$400	$400	$400
Miscellaneous Revenue			$31,000	$31,000	$31,000	$31,000	$31,000	$31,000
Cellular Site Lease Revenue (Funds Tier 1 Offset)			$235,000	$230,000	$230,000	$230,000	$230,000	$230,000
Other Non-operating Revenue			$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
Other Income (R-6 Partners)			$123,000	$125,000	$125,000	$125,000	$125,000	$125,000
Investment Income			$40,000	$100,000	$100,000	$100,000	$100,000	$100,000
Subtotal Other Sources of Cash			**$1,085,400**	**$1,154,000**	**$1,154,400**	**$1,166,400**	**$1,178,400**	**$1,190,400**
TOTAL O&M REVENUES (Unrestricted)			**$14,167,221**	**$15,030,369**	**$15,786,311**	**$16,652,920**	**$17,502,430**	**$18,449,650**
O&M REVENUE REQUIREMENTS								
Water Purchased Costs			$8,405,840	$8,963,788	$9,472,072	$10,080,277	$10,678,883	$11,308,911
Other Operating Expenses			$5,852,880	$6,064,212	$6,334,056	$6,594,946	$6,907,122	$7,203,497
Subtotal Other Sources of Cash			**$14,258,720**	**$15,028,000**	**$15,806,128**	**$16,675,223**	**$17,586,005**	**$18,512,407**
OPEB (115 Trust)								
TOTAL O&M REVENUE REQUIREMENTS			**$14,258,720**	**$15,028,000**	**$15,806,128**	**$16,675,223**	**$17,586,005**	**$18,512,407**
OTHER REV REQUIREMENTS								
Restricted Reserves Funding of Conservation Program			$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
Restricted Reserves Funding of RW Conversion Program			$627,301	$627,301	$627,301	$627,301	$627,301	$627,301
Total Transfer to Restricted Reserves			-$827,301	-$827,301	-$827,301	-$827,301	-$827,301	-$827,301
ANNUAL O&M SURPLUS (DEFICIT)			**-$91,499**	**$2,369**	**-$19,817**	**-$22,303**	**-$83,575**	**-$62,757**

Water Cash Flow			FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
CAPITAL REPLACEMENT & REFURBISHMENT PROGRAM								
CAPITAL PROGRAM REVENUE								
Revenue from Existing Capital Charge			$1,362,374	$1,362,374	$1,362,374	$1,362,374	$1,362,374	$1,362,374
Capital Charge Revenue Increase			$0	$340,594	$766,336	$1,298,513	$1,963,735	$2,296,346
Fiscal Year	**Adjustments**	**Effective Months**						
FY 2024	25.00%	12		$340,594	$340,594	$340,594	$340,594	$340,594
FY 2025	25.00%	12			$425,742	$425,742	$425,742	$425,742
FY 2026	25.00%	12				$532,178	$532,178	$532,178
FY 2027	25.00%	12					$665,222	$665,222
FY 2028	10.00%	12						$332,611
Subtotal Capital Charge Revenue			**$1,362,374**	**$1,702,968**	**$2,128,710**	**$2,660,888**	**$3,326,109**	**$3,658,720**
Restricted Reserve Funding of Baker Debt Service			$184,200	$184,400	$184,300	$109,300	$26,800	$507
TOTAL CAPITAL REVENUE			**$1,546,574**	**$1,887,368**	**$2,313,010**	**$2,770,188**	**$3,352,909**	**$3,659,227**
CAPITAL EXPENDITURES								
Capital Replacem	15%		$874,000	$874,000	$874,000	$874,000	$874,000	$874,000
Baker WTP Debt Service			$684,263	$684,262	$684,263	$684,262	$684,263	$684,263
2022 Rev Bonds Debt Service			$881,100	$719,300	$719,300	$719,300	$719,300	$719,300
TOTAL CAPITAL EXPENDITURES			**$2,439,363**	**$2,277,562**	**$2,277,563**	**$2,277,562**	**$2,277,563**	**$2,277,563**
ANNUAL CAPITAL SURPLUS (DEFICIT)			**-$892,788**	**-$390,194**	**$35,447**	**$492,625**	**$1,075,346**	**$1,381,665**
TOTAL ANNUAL RESERVE IMPACT			**-$984,287**	**-$387,826**	**$15,630**	**$470,322**	**$991,771**	**$1,318,907**
ENDING RESERVE BALANCES			**$6,168,113**	**$5,780,287**	**$5,795,918**	**$6,266,240**	**$7,258,011**	**$8,576,918**

APPENDIX 4: CASH FLOW ANALYSIS FOR RECYCLED WATER FUND

Source: 23-24 Budget Cash Flow.xlsx sent by Jason Hayden 4-7-2023

BEGINNING RESERVE BALANCES			**$1,430,480**	**$1,170,969**	**$1,173,037**	**$3,159,387**	**$5,258,437**	**$7,491,322**
OPERATIONS & MAINTENANCE CASH FLOW								
O&M REVENUES								
Revenues under current rates			**$2,254,303**	**$2,270,623**	**$2,270,623**	**$2,270,623**	**$2,270,623**	**$2,270,623**
Fixed Service Charges			$402,975	$419,295	$419,295	$419,295	$419,295	$419,295
Commodity Rates			$1,851,328	$1,851,328	$1,851,328	$1,851,328	$1,851,328	$1,851,328
Additional Fixed Service Revenue Required			**$0**	**$23,061**	**$45,179**	**$68,403**	**$92,788**	**$120,952**
Fiscal Year	**Adjustments**	**Effective Months**						
FY 2024	5.50%	12		$23,061	$23,061	$23,061	$23,061	$23,061
FY 2025	5.00%	12			$22,118	$22,118	$22,118	$22,118
FY 2026	5.00%	12				$23,224	$23,224	$23,224
FY 2027	5.00%	12					$24,385	$24,385
FY 2028	5.50%	12						$28,165
RW Commodity Increase Required			**$0**	**$115,866**	**$219,364**	**$342,268**	**$458,704**	**$588,077**
Year	**Rate Action**							
FY 2024	RW Commodity Increase			$115,866	$115,866	$115,866	$115,866	$115,866
FY 2025	RW Commodity Increase				$103,498	$103,498	$103,498	$103,498
FY 2026	RW Commodity Increase					$122,904	$122,904	$122,904
FY 2027	RW Commodity Increase						$116,436	$116,436
FY 2028	RW Commodity Increase							$129,373
Total Unrestricted RW Service Rate Revenue			**$2,254,303**	**$2,409,550**	**$2,535,166**	**$2,681,294**	**$2,822,115**	**$2,979,652**
Other Sources of Cash								
Restricted Reserves Funding of Debt Service			$712,996	$882,880	$825,050	$760,600	$702,900	$642,650
Recycled Water Meter Capital Charge Funding of Debt			$160,694	$210,468	$263,085	$328,856	$411,070	$452,177
MWD LRP Rebate			$345,300	$360,000	$326,000	$287,000	$248,000	$209,000
MNWD Payment for RW Service to Golf Course			$11,000	$11,000	$11,000	$11,000	$11,000	$11,000
JPIA Refund			$10,600	$22,000	$22,000	$22,000	$22,000	$22,000
Property Taxes			$89,600	$95,000	$100,000	$105,000	$110,000	$115,000
Subtotal Other Sources of Cash			**$1,330,190**	**$1,581,348**	**$1,547,135**	**$1,514,456**	**$1,504,970**	**$1,451,827**
TOTAL O&M REVENUES (Unrestricted)			**$3,584,493**	**$3,990,898**	**$4,082,301**	**$4,195,750**	**$4,327,084**	**$4,431,479**
O&M REVENUE REQUIREMENTS								
General & Administrative			$407,030	$422,080	$439,936	$456,148	$480,892	$500,743
Operations & Maintenance			$1,308,820	$1,455,300	$1,527,990	$1,604,292	$1,676,852	$1,760,203
Other Operating Expenses (Cash Outlays)			$25,000	$24,000	$25,400	$26,900	$28,500	$30,200
Subtotal O&M			**$1,740,850**	**$1,901,380**	**$1,993,326**	**$2,087,340**	**$2,186,244**	**$2,291,146**
OPEB (115 Trust)								
DEBT SERVICE								
Recycled Phase I			$1,602,958					
Recycled Phase II - SRF			$409,046					
2022 Refunded SRF Bonds			$1,814,800	$2,074,750	$2,078,750	$2,079,500	$2,077,000	$2,076,250
2022 Project Financing Bonds			$17,200	$12,700	$17,200	$17,200	$17,200	$17,200
Subtotal Debt Service			**$3,844,004**	**$2,087,450**	**$2,095,950**	**$2,096,700**	**$2,094,200**	**$2,093,450**
TOTAL O&M REVENUE REQUIREMENTS			**$3,844,004**	**$3,988,830**	**$2,095,950**	**$2,096,700**	**$2,094,200**	**$2,093,450**
ANNUAL O&M SURPLUS (DEFICIT)			**-$259,511**	**$2,068**	**$1,986,351**	**$2,099,050**	**$2,232,884**	**$2,338,029**
TOTAL ANNUAL RESERVE IMPACT			**-$259,511**	**$2,068**	**$1,986,351**	**$2,099,050**	**$2,232,884**	**$2,338,029**
ENDING RESERVE BALANCES			**$1,170,969**	**$1,173,037**	**$3,159,387**	**$5,258,437**	**$7,491,322**	**$9,829,351**

APPENDIX 5: CASH FLOW ANALYSIS FOR WW FUND

Source: 23-24 Budget Cash Flow.xlsx sent by Jason Hayden 4-7-2023

Sewer Cash Flow			FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
BEGINNING RESERVE BALANCES			**$9,298,120**	**$8,548,095**	**$8,362,620**	**$8,745,176**	**$9,783,231**	**$11,692,566**
OPERATIONS & MAINTENANCE CASH FLOW								
O&M REVENUES								
Revenues under current rates			**$8,535,803**	**$8,535,803**	**$8,535,803**	**$8,535,803**	**$8,535,803**	**$8,535,803**
Fixed Service Charges			$8,535,803	$8,535,803	$8,535,803	$8,535,803	$8,535,803	$8,535,803
Additional Service Revenue Required			**$0**	**$810,901**	**$1,278,237**	**$1,719,868**	**$2,283,930**	**$2,824,917**
Year	**Adjustments**	**Effective Months**						
FY 2024	9.50%	12		$810,901	$810,901	$810,901	$810,901	$810,901
FY 2025	5.00%	12			$467,335	$467,335	$467,335	$467,335
FY 2026	4.50%	12				$441,632	$441,632	$441,632
FY 2027	5.50%	12					$564,062	$564,062
FY 2028	5.00%	12						$540,987
Total Sewer Service Rate Revenue			**$8,535,803**	**$9,346,704**	**$9,814,040**	**$10,255,671**	**$10,819,733**	**$11,360,720**
Other Sources of Cash								
Property Taxes - General Fund Revenue			$582,400	$600,000	$612,000	$624,200	$636,700	$649,400
Grants, Rebates, Reimbursements			$0	$0	$0	$0	$0	$0
Mis. Operating Income			$20,800	$20,200	$20,600	$21,000	$21,400	$21,800
Other Non-Operating Revenue			$10,400	$10,400	$10,400	$10,400	$10,400	$10,400
Investment Income			$52,000	$130,000	$130,000	$130,000	$130,000	$130,000
Subtotal Other Sources of Cash			**$665,600**	**$760,600**	**$773,000**	**$785,600**	**$798,500**	**$811,600**
TOTAL O&M REVENUES (Unrestricted)			**$9,201,403**	**$10,107,304**	**$10,587,040**	**$11,041,271**	**$11,618,233**	**$12,172,320**
O&M USES OF CASH REQUIREMENTS								
Wastewater System Operations & Maintenance Expenses								
General & Administrative			$2,645,090	$2,729,480	$2,838,797	$2,944,351	$3,103,664	$3,231,885
Operations & Maintenance			$6,516,760	$7,209,100	$7,554,313	$7,917,998	$8,305,314	$8,711,848
Other Operating Expenses			$167,000	$156,000	$165,400	$175,300	$185,800	$196,900
Utilization of O&M Cash for Debt Service Activities			$0	$0	$0			
O&M Expenses			**$9,328,850**	**$10,094,580**	**$10,558,510**	**$11,037,649**	**$11,594,778**	**$12,140,633**
OPEB (115 Trust)								
TOTAL O&M REVENUE REQUIREMENTS			**$9,328,850**	**$10,094,580**	**$10,558,510**	**$11,037,649**	**$11,594,778**	**$12,140,633**
NET OPERATING CASH CHANGES			**-$127,447**	**$12,724**	**$28,530**	**$3,622**	**$23,455**	**$31,687**
Replenishment/(Utilization) of Reserve Balances								
Replenish/(Utilize) Working Capital Reserve			-$127,447				$23,455	$31,687
Replenish/(Utilize) Rate Stabilization Reserve				$12,724	$28,530	$3,622		
Replenish/(Utilize) Operations Reserve								
NET IMPACT ON RESERVES BALANCES FROM O&M			**-$127,447**	**$12,724**	**$28,530**	**$3,622**	**$23,455**	**$31,687**

Sewer Cash Flow			FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
CAPITAL REPLACEMENT & REFURBISHMENT PROGRAM								
CAPITAL PROGRAM REVENUE								
Utilization of O&M Cash for Debt Service Activities			$0	$0	$0	$0	$0	$0
Revenue from Existing Capital Charge			$1,746,321	$1,746,321	$1,746,321	$1,746,321	$1,746,321	$1,746,321
Capital Charge Revenue Increase			$0	$436,580	$982,306	$1,664,463	$2,517,159	$2,943,507
Fiscal Year	**Adjustments**	**Effective Months**						
FY 2024	25.00%	12		$436,580	$436,580	$436,580	$436,580	$436,580
FY 2025	25.00%	12			$545,725	$545,725	$545,725	$545,725
FY 2026	25.00%	12				$682,157	$682,157	$682,157
FY 2027	25.00%	12					$852,696	$852,696
FY 2028	10.00%	12						$426,348
Subtotal Capital Char	*Source: 2023-24 Budget Cash Flow 3-23-20*		**$1,746,321**	**$2,182,902**	**$2,728,627**	**$3,410,784**	**$4,263,480**	**$4,689,828**
TOTAL CAPITAL REVENUE			**$1,746,321**	**$2,182,902**	**$2,728,627**	**$3,410,784**	**$4,263,480**	**$4,689,828**
CAPITAL EXPENDITURES								
Annual Projected Cash Outlays		15%	$1,856,100	$1,856,100	$1,856,100	$1,856,100	$1,856,100	$1,856,100
TOTAL CAPITAL EXPENDITURES			**$1,856,100**	**$1,856,100**	**$1,856,100**	**$1,856,100**	**$1,856,100**	**$1,856,100**
DEBT SERVICE PAYMENTS								
2010 SRF Loan Payments			$0	$0	$0	$0	$0	$0
Principal Payments								
Interest Expense								
2022 Revenue Bonds (SRF Refunded)			$239,000	$251,250	$244,750	$246,500	$247,750	$248,500
Principal Payments			*$145,000*	*$160,000*	*$165,000*	*$175,000*	*$185,000*	*$195,000*
Interest Expense			*$94,000*	*$91,250*	*$79,750*	*$71,500*	*$62,750*	*$53,500*
2022 Revenue Bonds (New Money)			$273,800	$273,751	$273,751	$273,751	$273,751	$273,751
Principal Payments			*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Interest Expense			*$273,800*	*$273,751*	*$273,751*	*$273,751*	*$273,751*	*$273,751*
TOTAL DEBT SERVICE PAYMENTS			**$512,800**	**$525,001**	**$518,501**	**$520,251**	**$521,501**	**$522,251**
ANNUAL CAPITAL SURPLUS (DEFICIT)			**-$622,579**	**-$198,199**	**$354,026**	**$1,034,433**	**$1,885,879**	**$2,311,477**
Replenishment/(Utilization) of Reserve Balances								
Replenish/(Utilize) Capital Construction Reserve								
TOTAL ANNUAL RESERVE IMPACT			**-$750,025**	**-$185,475**	**$382,556**	**$1,038,056**	**$1,909,335**	**$2,343,164**
ENDING RESERVE BALANCES			**$8,548,095**	**$8,362,620**	**$8,745,176**	**$9,783,231**	**$11,692,566**	**$14,035,730**

APPENDIX 6: RESIDENTIAL HOUSEHOLD DATA

Source: Census data B25124: TENURE BY HOUSEHOLD SIZE BY UNITS IN STRUCTURE
https://data.census.gov/cedsci/table?q=B25124%3A%20TENURE%20BY%20HOUSEHOLD%20SIZE%20BY%20UNITS%20IN%20STRUCTURE&g=1600000US0648256&y=2019&d=ACS%205-Year%20Estimates%20Detailed%20Tables
2019 ACS 5 Year Estimates Detailed Tables

Aliso Viejo		
Density Analysis	**SFR**	**MFR**
Number of people	38,285	12,239
Number of households	12,506	6,009
Household density	3.06	2.04

Laguna Hills		
Density Analysis	**SFR**	**MFR**
Number of people	24,935	6,683
Number of households	8,213	2,824
Household density	3.04	2.37

Lake Forest		
Density Analysis	**SFR**	**MFR**
Number of people	65,338	18,389
Number of households	21,072	8,266
Household density	3.10	2.22

Mission Viejo		
Density Analysis	**SFR**	**MFR**
Number of people	83,861	10,919
Number of households	28,702	4,865
Household density	2.92	2.24

ETWD (excl. Laguna Woods)		
Density Analysis	**SFR**	**MFR**
Number of people	212,419	48,230
Number of households	70,493	21,964
Household density	**3.01**	**2.20**

Density Analysis	Total Laguna Woods
Number of people	15,720
Number of households	11,003
Household density	**1.43**

APPENDIX 7: CAPITAL PROJECTS BUDGET

Seven Year Capital Replacement & Refurbishment Program
F.Y. 2023/24 - 2027/28

ITEM #	DESCRIPTION	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	TOTAL	WATER	SEWER
	Source of Supply / Storage Projects										
1	JRWSS Capital Budget	13,114	17,070	4,822	1,248	1,248	5,000	5,000	47,502	47,502	
2	Baker WTP Replacement Fund	56,200	56,200	56,200	56,200	56,200	56,200	56,200	393,400	393,400	
3	Direct Potable Reuse Feasibility Study		417,000						417,000	417,000	
3	Direct Potable Reuse Feasibility Study (Assumed Grant Funding)		(417,000)						(417,000)	(417,000)	
	Total Source of Supply / Storage Projects	69,314	73,270	61,022	57,448	57,448	61,200	61,200	440,902	440,902	0
	Pumping (Water) Projects										
1	Water Stations PLC Upgrade to Control Logix	25,000	25,000	25,000	25,000	25,000	25,000	25,000	175,000	175,000	
1	Water Stations PLC Upgrade to Control Logix (Carryover)	(25,000)	(25,000)	(1,533)					(51,533)	(51,533)	
2	R-6 Seepage Recovery Control Panel Rehabilitation			53,000					53,000	53,000	

Seven Year Capital Replacement & Refurbishment Program
F.Y. 2023/24 - 2027/28

ITEM #	DESCRIPTION	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	TOTAL	WATER	SEWER
	Pumping (Sanitation) Projects										
1	Sewer Stations PLC Upgrade to Control Logix	25,000	25,000	25,000	25,000	25,000	25,000	25,000	175,000		175,000
1	Sewer Stations PLC Upgrade to Control Logix (Carryover)	(25,000)	(25,000)	(25,000)	(18,294)				(93,294)		(93,294)
2	Delta Lift Station Coating Rehabilitation				106,000				106,000		106,000
3	Freeway Lift Station Coating Rehabilitation							128,000	128,000		128,000
4	Surcharge Capacity Repair on Gowdy Avenue	52,000							52,000		52,000
5	Surcharge Capacity Repair on Swan Drive/Gowdy Avenue						66,000		66,000		66,000
6	Surcharge Capacity Repair on Swan Street						66,000		66,000		66,000
7	Surcharge Capacity Repair on McCoy Road						195,000		195,000		195,000
8	Northline Coating Improvement Project	91,000							91,000		91,000
9	Northline Overflow Hatch Replacement			112,000					112,000		112,000
10	Northline Pipeline Repair Project		91,000						91,000		91,000
11	Northline Odor Control Project				122,000				122,000		122,000
	Total Pumping (Sanitation) Projects	143,000	91,000	112,000	234,706	25,000	352,000	153,000	1,110,706	0	1,110,706
	Pumping (Sanitation) Equipment										
1	Aliso Creek Pump Station Rehabilitation Project	826,000							826,000		826,000
1	Aliso Creek Pump Station Rehabilitation Project (Carryover)	(357,099)							(357,099)		(357,099)
2	Westline Main Switchboard Replacement		97,000						97,000		97,000
3	Freeway Electrical Equipment Replacement	110,000							110,000		110,000
4	Sewer Station HMI Replacement	14,000	14,000	14,000	14,000	14,000	14,000	14,000	98,000		98,000
	Total Pumping (Sanitation) Equipment	592,901	111,000	14,000	14,000	14,000	14,000	14,000	773,901	0	773,901
	Treatment (Sanitation) Projects										
1	Secondary Clarifier and WAC Rehabilitation	649,000	4,430,000	2,003,000					7,082,000		7,082,000
1	Secondary Clarifier Rehabilitation (Carryover)		(162,922)						(162,922)		(162,922)
1	Secondary Clarifier Rehabilitation (Revenue Bond)	(649,000)	(3,788,230)						(4,437,230)		(4,437,230)
2	DAF Unit #2 Rehabilitation	94,000							94,000		94,000
2	DAF Unit #2 (Carryover)	(75,359)							(75,359)		(75,359)
3	Holding Pond West Side Drainage					151,000	417,000		568,000		568,000
3	Holding Pond West Side Drainage (Carryover)					(68,250)			(68,250)		(68,250)
4	Coarse Screen Rehabilitation	2,277,000							2,277,000		2,277,000
4	Coarse Screen Rehabilitation (Carryover)	(575,000)							(575,000)		(575,000)
4	Coarse Screen Rehabilitation (Revenue Bond)	(1,702,000)							(1,702,000)		(1,702,000)
5	Grit Chamber Rehabilitation Project	861,861							861,861		861,861
5	Grit Chamber Rehabilitation Project (Carryover)	(340,120)							(340,120)		(340,120)
5	Grit Chamber Rehabilitation Project (Revenue Bond)	(521,741)							(521,741)		(521,741)
6	Fine Screen Rehabilitation Project			574,000	3,980,400	2,653,600			7,208,000		7,208,000
6	Fine Screen Rehabilitation Project (Carryover)			(67,152)					(67,152)		(67,152)
7	Standby Blower Replacement						964,000		964,000		964,000
	Total Treatment (Sanitation) Projects	18,641	478,848	2,509,848	3,980,400	2,736,350	1,381,000	0	11,105,087	0	11,105,087

Seven Year Capital Replacement & Refurbishment Program
F.Y. 2023/24 - 2027/28

ITEM #	DESCRIPTION	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	TOTAL	WATER	SEWER
	Treatment (Sanitation) Equipment										
1	Aeration Basin Diffusers		292,000				316,000		608,000		608,000
2	DAF Unit 1 MCC Replacement					135,000			135,000		135,000
3	WRP Security Cameras				90,000				90,000		90,000
4	Additional Tertiary Filter Disks			94,000					94,000		94,000
4	Additional Tertiary Filter Disks (Recycled Water Reserves)			(94,000)					(94,000)		(94,000)
5	PRV for WRP Recycled Water Use		34,000						34,000		34,000
5	PRV for WRP Recycled Water Use (Recycled Water Reserves)		(34,000)						(34,000)		(34,000)
6	WRP SCADA Upgrade				290,000				290,000		290,000
6	WRP SCADA Upgrade (Carryover)				(32,500)				(32,500)		(32,500)
	Total Treatment (Sanitation) Equipment	0	292,000	0	347,500	135,000	316,000	0	1,090,500	0	1,090,500
	Laboratory Equipment										
1	Benchtop Deionized Water Generator				23,000				23,000	11,500	11,500
	Total Laboratory Equipment	0	0	0	23,000	0	0	0	23,000	11,500	11,500
	Outside Treatment (SOCWA)										
1	SOCWA Capital Budget	414,836	826,089	1,241,796	1,765,740	1,931,222	2,355,290	1,631,920	10,166,893		10,166,893
	Reserve Funding			(1,241,796)	(1,765,740)	(153,482)	(383,763)		(3,544,781)		(3,544,781)
1	Bond Funding		(545,000)						(545,000)		(545,000)
	Total Treatment (SOCWA)	414,836	281,089	0	0	1,777,740	1,971,527	1,631,920	6,077,112	0	6,077,112
	Collection Equipment										
1											
	Total Collection Equipment	0	0	0	0	0	0	0	0	0	0
	Vehicles/Vehicle Equipment										
1	Vehicle Replacement	125,000	86,704	125,000	125,000	150,000	150,000	150,000	911,704	455,852	455,852
1	Vehicle Replacement (Carryover)		(25,000)						(25,000)	(12,500)	(12,500)
2	Hydro Excavator			644,000					644,000	644,000	
3	F-550 w/ Valve Maintenance Skid		192,000						192,000	192,000	
5	Electrical Vehicle Charger		15,000						15,000	7,500	7,500
	Total Vehicles/Vehicle Equipment	125,000	268,704	769,000	125,000	150,000	150,000	150,000	1,737,704	1,286,852	450,852
	General Building Projects										
1	Additional Diesel Storage Facility						727,000		727,000	363,500	363,500
2	Administration Building Rehabilitation		441,000						441,000	220,500	220,500
	Total General Building Projects	0	441,000	0	0	0	727,000	0	1,168,000	584,000	584,000

Seven Year Capital Replacement & Refurbishment Program
F.Y. 2023/24 - 2027/28

ITEM #	DESCRIPTION	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	TOTAL	WATER	SEWER
	IT and EI&C										
1	Core Switch Replacement	63,000							63,000	31,500	31,500
2	EOC Technology Upgrades	16,000							16,000	8,000	8,000
3	System-Wide Security Camera Implementation	50,000							50,000	25,000	25,000
4	System-Wide Security Access Panel Replacement						138,000		138,000	69,000	69,000
5	Office Phone System Replacement				50,000				50,000	25,000	25,000
6	Data Center Hardware Replacement					202,000			202,000	101,000	101,000
7	Water Distribution and Sewer Collection System SCADA Upgrade			290,000					290,000	145,000	145,000
7	Water Distribution and Sewer Collection System SCADA Upgrade (Carryover)			(39,000)					(39,000)	(19,500)	(19,500)
8	P-1, Warehouse, P-4, Freeway, and Main Yard ATS Replacement	42,000							42,000	21,000	21,000
8	P-1 and Warehouse ATS Replacement (Carryover)	(10,000)							(10,000)	(5,000)	(5,000)
	Total IT and EI&C	161,000	0	251,000	50,000	202,000	138,000	0	802,000	401,000	401,000
	Other Studies										
1	Asset Management	120,000	90,000						210,000	105,000	105,000
2	System-Wide Arc Flash and Coordination Study	180,000							180,000	90,000	90,000
	Total Other Studies	300,000	90,000	0	0	0	0	0	390,000	195,000	195,000
	Contingency										
1	Contingency					929,205	735,387	2,652,105	4,316,697	2,158,349	2,158,349
	Total Contingency	0	0	0	0	929,205	735,387	2,652,105	4,316,697	2,158,349	2,158,349
	Total Capital Budget	1,990,792	3,293,911	3,894,337	4,992,054	6,073,743	6,469,114	6,895,225	33,609,175	9,651,169	23,958,006
	Total Capital Projects	1,013,891	2,366,207	2,759,337	4,297,554	5,550,743	5,354,114	6,153,225	27,495,071	6,264,818	21,230,253
	WATER	287,414	1,249,770	137,489	82,448	547,051	918,394	3,042,253	6,264,818	6,264,818	
	SEWER	726,477	1,116,437	2,621,848	4,215,106	5,003,693	4,435,721	3,110,973	21,230,253		21,230,253
	Total Capital Equipment	976,901	927,704	1,135,000	694,500	523,000	1,115,000	742,000	6,114,104	3,386,352	2,727,753
	WATER	241,000	486,352	933,000	234,000	198,000	641,000	653,000	3,386,352	3,386,352	
	SEWER	735,901	441,352	202,000	460,500	325,000	474,000	89,000	2,727,753		2,727,753
	Total Capital Budget	1,990,792	3,293,911	3,894,337	4,992,054	6,073,743	6,469,114	6,895,225	33,609,175	9,651,169	23,958,006
	WATER	528,414	1,736,122	1,070,489	316,448	745,051	1,559,394	3,695,253	9,651,169	9,651,169	
	SEWER	1,462,378	1,557,789	2,823,848	4,675,606	5,328,693	4,909,721	3,199,973	23,958,006		23,958,006

ATTACHMENT 2

2023/24 Proposition 218 Notice

2023 Proposition 218 Notice

EL TORO WATER DISTRICT

SERVING THE PUBLIC, RESPECTING THE ENVIRONMENT

NOTICE OF PUBLIC HEARING ON PROPOSED WATER, SEWER AND RECYCLED WATER RATE/CHARGE INCREASE

PUBLIC HEARING

Thursday, July 27, 2023, at 7:00 P.M.

ATTEND IN PERSON

El Toro Water District Board Room
24251 Los Alisos Blvd.,
Lake Forest, CA 92630

ATTEND VIRTUALLY

https://zoom.us
Meeting ID: 870 5663 7760

The El Toro Water District Board of Directors invites you to attend and participate in this public hearing. The Board of Directors will consider adopting the proposed water, sewer and recycled water rate/charge increases.

COMMUNITY INFORMATIONAL MEETINGS

July 12, 2023, 5:30 p.m.

Zoom: https://zoom.us
Meeting ID: 849 2397 5659

July 19, 2023, 7:00 p.m.

Zoom: https://zoom.us
Meeting ID: 899 4122 8892

MEETING LOCATION

El Toro Water District Boardroom
24251 Los Alisos Blvd.
Lake Forest, CA 92630

ETWD will answer customer questions and share information about the rate study and the proposed rate increases at two community meetings.

KEEPING PACE WITH RISING COSTS

Proposed Rate Increases

In compliance with Proposition 218, the District is notifying all customers about proposed changes to the District's water, sewer and recycled water rates and charges. You are receiving this notice because you are a customer of the El Toro Water District.

Each year the District's Board of Directors adopts an annual operating budget. Part of the budgeting process is to assess the adequacy of the District's rates and charges. Of utmost importance is the effort to minimize costs (including rates) while maintaining the integrity and reliability of the District's infrastructure and the District's financial stability. To assist the District in this endeavor, the District retains an independent outside financial consultant who specializes in Cost of Service analysis and rate setting. The District is proposing adopting new rates and charges, beginning August 1, 2023, with future adjustments on July 1, 2024, and July 1, 2025.

The proposed rate increases to support the cost of operations are due to the following cost drivers:

- ELECTRICITY
- THE COST TO PURCHASE AND TREAT WATER
- WATER TREATMENT CHEMICALS
- DISPOSAL OF TREATED WASTEWATER AND BIO-SOLIDS
- CONSTRUCTION OF CAPITAL INFRASTRUCTURE IMPROVEMENTS NEEDED FOR AGING WATER, SEWER AND RECYCLED WATER SYSTEMS
- DISTRICT LABOR NECESSARY TO MAINTAIN THE OPERATIONS OF THE DISTRICT
- ONGOING MAINTENANCE OF VITAL INFRASTRUCTURE

THE PROPOSED 2023/2024 FISCAL YEAR BUDGET CAN BE FOUND ON THE DISTRICT'S WEBSITE WWW.ETWD.COM, UNDER THE GOVERNANCE TAB. FOR ASSISTANCE IN DETERMINING THE IMPACT OF THE PROPOSED RATE INCREASE ON YOUR MONTHLY BILL, YOU MAY ACCESS A WATER BUDGET CALCULATOR ON THE DISTRICT'S WEBSITE UNDER THE CUSTOMER SERVICE TAB, OR CALL OUR CUSTOMER SERVICE REPRESENTATIVES AT (949) 837-0660.

WATER AND SEWER OPERATIONS AND MAINTENANCE CHARGES

The District administers an ongoing operations and maintenance program to responsibly maintain and preserve its water, sewer and recycled water systems, meet stringent regulatory requirements and ensure high quality and reliable services are provided to its customers. As an industry best practice, and to minimize financial impacts to customers and fairly and equitably distribute these costs, the District commissioned an independent Cost of Service Study Report. The District proposes to increase the Water, Wastewater, and Recycled Water Operations and Maintenance Charges to offset significant cost increases associated with operating and maintaining the water, sewer, and recycled water systems. If approved, the proposed Water, Sewer, and Recycled Water Operations and Maintenance (O&M) Charges will become effective with the first full billing period after August 1, 2023.

PROPOSED FY 2025-2026 CHARGES - CPI INDEX

The monthly service charges in FY 2025 and FY 2026 will be increased based on the "CPI for Urban Wage and Clerical Workers (CPI-W)" for the Los Angeles-Long Beach-Anaheim area published by the Bureau of Labor Statistics. The most recent CPI figure available prior to the implementation of the service charge increase will be used to calculate the rates. The service charge increases will take effect on July 1, 2024 and July 1, 2025. For more information on the CPI Index, please visit: https://www.bls.gov/cpi/.

WATER/RECYCLED WATER (Monthly)

METER SIZE	2022-23 CURRENT CHARGE	2023-24 PROPOSED CHARGE	2024-25 PROPOSED CHARGE	2025-26 PROPOSED CHARGE
5/8"	$17.46	$18.07	CPI Index	CPI Index
3/4"	$23.62	$24.72	CPI Index	CPI Index
1"	$35.93	$38.02	CPI Index	CPI Index
1-1/2"	$66.70	$71.27	CPI Index	CPI Index
2"	$128.25	$137.76	CPI Index	CPI Index
10"	N/A	$1,360.00	CPI Index	CPI Index

SEWER - RESIDENTIAL (Monthly)

METER SIZE	2022-23 CURRENT CHARGE	2023-24 PROPOSED CHARGE	2024-25 PROPOSED CHARGE	2025-26 PROPOSED CHARGE
Single Family	$34.67	$37.98	CPI Index	CPI Index
Multi-family Restricted (1)	$16.47	$18.05	CPI Index	CPI Index
Multi-family Unrestricted (2)	$25.34	$27.76	CPI Index	CPI Index

(1) Restricted - Attached home (i.e., condominium or townhouse with age restrictions).
(2) Unrestricted - Attached home (i.e., condominium or townhouse).

SEWER - COMMERCIAL (Monthly)

STRENGTH	2022-23 CURRENT CHARGE	2023-24 PROPOSED CHARGE	2024-25 PROPOSED CHARGE	2025-26 PROPOSED CHARGE
Low Strength	$4.10	$4.45	CPI Index	CPI Index
Medium Strength	$5.07	$5.54	CPI Index	CPI Index
High Strength	$9.49	$10.58	CPI Index	CPI Index
Restaurants	$5.15	$5.65	CPI Index	CPI Index

DESCRIPTION	STRENGTH
Animal Kennel/Hospital	Medium Strength
Car Wash	Medium Strength
Department/Retail Store	Medium Strength
Dry Cleaner	Medium Strength
Golf Course/Camp/Park	Medium Strength
Health Spa	Medium Strength
Hospital/Convalescence Home	Medium Strength
Hotel	Medium Strength
Market	High Strength
Mortuary	High Strength
Nursery/Greenhouse	Medium Strength
Professional/Financial Office	Medium Strength
Public Institution	Medium Strength
Repair/Service Station	Medium Strength
Restaurant	Restaurant
School	Medium Strength
Theater	Medium Strength
Warehouse/Storage	Low Strength
Basic Commercial	Medium Strength

RECYCLED WATER USAGE RATES

To recover the cost of producing and delivering recycled water for irrigation purposes, the uniform Recycled Water Usage Rate ($2.86/ccf) is proposed to increase by $0.17/ccf to $3.03/ccf. If approved, the Recycled Water Usage Rate will become effective with the first full billing period after August 1, 2023. The proposed charges for 2024-2025 and 2025-2026 will take effect July 1, 2024, and July 1, 2025.

2022-23 CURRENT RECYCLED WATER USAGE RATE	2023-24 PROPOSED RATE ($/CCF*)	2024-25 PROPOSED RATE ($/CCF*)	2025-26 PROPOSED RATE ($/CCF*)
$2.86	$3.03	$3.20	$3.38

**1 Billing Unit or "ccf" = 748 gallons*

PRIVATE FIRE OPERATIONS AND MAINTENANCE CHARGE

The District provides water service to private entities that have a fire suppression system (usually sprinklers) in their places of business. The District proposes to increase the Private Fire Operations and Maintenance Charge rates to account for the extra capacity demand necessary to fight an average fire in the District. The proposed Private Fire Operations and Maintenance Charge rates, shown below, reflect the proposed changes to the fixed charges, which consider the effective capacity at each fire meter or fire line. This also includes a fire demand rate component calculation to share peaking costs with other water system services. The proposed changes for 2023-2024 in the Private Fire Operations and Maintenance Charge rates reflected below will become effective with the first full billing period after August 1, 2023. The Private Fire Operations and Maintenance Charge increase for 2024-2025 and 2025-2026 will take effect on July 1, 2024 and July 1, 2025.

METER SIZE	2022-23 CURRENT CHARGE ($/MONTH)	2023-24 PROPOSED CHARGE ($/MONTH)	2024-25 PROPOSED CHARGE ($/MONTH)	2025-26 PROPOSED CHARGE ($/MONTH)
4”	$16.15	$17.26	CPI Index	CPI Index
6”	$23.45	$24.79	CPI Index	CPI Index
8”	$36.04	$37.78	CPI Index	CPI Index
10”	$54.97	$57.31	CPI Index	CPI Index

CAPITAL REPLACEMENT AND REFURBISHMENT CHARGE

The District maintains approximately $500 million of water, wastewater and recycled water infrastructure. The majority of the infrastructure is several decades old, with portions over 60 years old. The District’s capital improvement program, which reinvests in or replaces aging facilities and assets, is essential to ensuring the reliability and integrity of the water, wastewater and recycled water services the District provides to its customers. The capital program is funded by the Capital Replacement and Refurbishment Charge. The proposed changes for 2023-2024 in the Capital Replacement and Refurbishment Charge reflected below will become effective with the first full billing period after August 1, 2023. The proposed charges for 2024-25 and 2025-26 will take effect July 1, 2024, and July 1, 2025.

POTABLE AND RECYCLED WATER CAPITAL REPLACEMENT AND REFURBISHMENT CHARGE

METER SIZE	2022-23 CURRENT CHARGE ($/MONTH)	2023-24 PROPOSED CHARGE ($/MONTH)	2024-25 PROPOSED CHARGE ($/MONTH)	2025-26 PROPOSED CHARGE ($/MONTH)
5/8”	$5.09	$5.56	$6.95	$8.69
3/4”	$5.09	$8.33	$10.42	$13.02
1”	$8.50	$13.88	$17.35	$21.69
1-1/2”	$20.65	$27.76	$34.70	$43.38
2”	$51.84	$55.52	$69.40	$86.75
10”	N/A	$640.00	$800.00	$1,000.00

SEWER CAPITAL REPLACEMENT AND REFURBISHMENT CHARGE

USER CATEGORY	2022-23 CURRENT CHARGE ($/MONTH)	2023-24 PROPOSED CHARGE ($/MONTH)	2024-25 PROPOSED CHARGE ($/MONTH)	2025-26 PROPOSED CHARGE ($/MONTH)
Single Family	$7.09	$8.87	$11.09	$13.86
Multi-Family Restricted (1)	$3.37	$4.21	$5.27	$6.59
Multi-Family Unrestricted (2)	$5.18	$6.48	$8.11	$10.13
COMMERCIAL (FLOW CHARGE $/CCF)				
Low Strength	$0.84	$1.04	$1.30	$1.63
Medium Strength	$1.04	$1.29	$1.62	$2.02
High Strength	$1.93	$2.47	$3.09	$3.86
Restaurant	$1.05	$1.32	$1.65	$2.07

(1) Restricted - Attached home (i.e., condominium or townhouse with age restrictions). *(2) Unrestricted - Attached home (i.e., condominium or townhouse).*

POTABLE WATER BUDGET CALCULATION · RESIDENTIAL CUSTOMERS

A per-meter, customer-specific water budget is calculated to meet the efficient demands for indoor domestic water use as well as outdoor irrigation under normal operating and water supply conditions. In emergencies or water supply shortage conditions, the District may use a Drought Factor ("DF") to reduce water budgets and further encourage conservation. A water budget is the sum of the indoor and outdoor water budgets.

INDOOR WATER BUDGET

55 GALLONS PER PERSON PER DAY × NUMBER OF PEOPLE PER HOUSEHOLD × NUMBER OF DAYS IN BILLING CYCLE × INDOOR DROUGHT FACTOR ÷ 748 GALLONS TO BILLING UNIT CONVERSION FACTOR

The indoor water budget is calculated in hundred cubic feet (ccf). 1 billing unit of water is equal to 100 cubic feet, or 748 gallons. The current Drought Factor is set to 100% meaning that there is no current reduction in the indoor water budget due to drought conditions. Household sizes are assumed as follows:

- **SINGLE-FAMILY RESIDENTIAL DETACHED HOMES: 4 PEOPLE**
- **APARTMENTS: 2 PEOPLE**
- **ATTACHED TOWNHOME OR CONDOMINIUM: 3 PEOPLE**
- **ATTACHED TOWNHOME OR CONDOMINIUM WITH AGE RESTRICTIONS: 2 PEOPLE**

OUTDOOR WATER BUDGET

WEATHER DATA × LANDSCAPE AREA × EVAPOTRANSPIRATION ADJUSTMENT FACTOR/1200 × OUTDOOR DROUGHT FACTOR

The **outdoor water budget allocation** is calculated in ccf.

- Weather data is measured by the reference EvapoTranspiration (ET_0) data in inches of water per billing cycle. ET is the amount of water that is lost by plants through evaporation and transpiration, and needs to be replaced for the plants to remain healthy. ET_0 data is obtained from California Irrigation Management Information System (CIMIS) Station 75 established by the State of California Department of Water Resources, Office of Water Use Efficiency;
- The landscape area for multi-family accounts, including apartments, condominiums and mobile homes, is 25 square feet of landscape per dwelling unit plus any dedicated landscape area associated with the account;
- The landscape area for single-family detached homes is calculated by taking the building area and dividing it by the number of floors and subtracting that from the parcel area. The result is then multiplied by 70% to obtain the landscape area as follows:
- Landscape area = (lot size - [building area /number of floors]) X 70%
- ET Adjustment Factor (ETAF) is a coefficient that adjusts the EvapoTranspiration (ET_0) values based on type of plants and irrigation system efficiency. Based on the updated Model Water Efficient Landscape Ordinance developed by the California Department of Water Resources, any landscape installed before January 1, 2010, has an ETAF of 0.8, and new landscape has an ETAF of 0.7. New landscape is defined as new or re-developments. Any new construction installed after 1/1/2019 will be assigned an ETAF of 0.55.
- 1200 is the conversion factor from inches of water (derived from weather data) X square feet (landscape area) to ccf (outdoor water budget).
- $DF_{outdoor}$ is the outdoor drought factor set by the Board of Directors. The current drought factor is set to 100% meaning that there is no current reduction in the outdoor water budget due to drought conditions. This factor is not necessarily the same as the DF for indoor.

Under normal water supply conditions and circumstances, customers may request a variance/adjustment to provide an equitable water budget for special circumstances, such as occupancy greater than the assumed baseline, medical needs, establishing new landscaping and changes in irrigation landscape area. In emergency or water supply shortage conditions, variances/ adjustments may be limited.

The indoor water budget, as determined above, will be billed at Tier I ("Indoor - Efficient") rates. The outdoor water budget, as determined above, will be billed at Tier II ("Outdoor - Efficient") rates. Water use in excess of the Tier I and II water budget would be deemed inefficient and/or excessive. Tier III ("Inefficient") water use would be usage between 100% and 130% of the Tier I and II water budget (or Total Water Budget) and Tier IV ("Excessive") usage would be consumption over 130% of Total Water Budget.

POTABLE IRRIGATION CUSTOMERS

Potable Irrigation customers fall into one of two categories: Recreational or Non-Functional. Recreational irrigation customers are those whose landscape is used mostly for recreational purposes (i.e., parks, golf courses, soccer fields, etc.), while Non-Functional irrigation customers will be those whose landscape is ornamental in nature (greenbelts, medians, etc.).

The irrigation water budget for dedicated irrigation customers in ccf is calculated as follows:

- (Weather data X Landscape area X ETAF/1200) X $DF_{outdoor}$
- Weather data (ET_0) as described in the section above,
- Landscape area is assumed to be the lesser of 100% of total parcel area or 100% of the measured landscape area served by each meter, ET adjustment factor (ETAF) is equal to 0.8 for Non-Functional irrigation and 1 for Recreational irrigation customers based on the updated Model Water Efficient Landscape Ordinance, and $DF_{outdoor}$ is the outdoor drought factor (set by the Board of Directors). The current drought factor is set to 100% meaning that there is no current reduction in the outdoor water budget due to drought conditions. This factor is not necessarily the same as the DF for indoor.

All of an irrigation customer's Water Budget will be at Tier II ("Outdoor - Efficient"). Water use in excess of the Tier II water budget would be deemed inefficient and/or excessive. Tier III ("Inefficient") water usage would be between 100% and 130% of the Tier II budget and Tier IV ("Excessive") water usage would be consumption over 130% of the Tier II budget.

POTABLE IRRIGATION CUSTOMERS' BUDGET

POTABLE WATER USAGE RATES

Given the lack of available groundwater supply, the District purchases 100% of its potable (drinking) water supply to meet residential, potable irrigation, commercial/public authority and fire protection demands from its wholesale water provider, the Municipal Water District of Orange County (MWDOC). MWDOC purchases water from the Metropolitan Water District of Southern California (MWD). MWDOC/MWD's costs to import water from Northern California and the Colorado River are driven by continued investment in regional water treatment and delivery system infrastructure, increased water importation costs, securing higher cost water supplies and water storage arrangements due to Northern California Bay-Delta (Bay-Delta) regulatory exportation restrictions and increased funding to pursue long term Bay-Delta solutions (The Delta Conveyance Project) and other water supply projects that will ensure a greater degree of future water supply reliability to Orange County and Southern California more generally.

To diversify and improve water treatment reliability for South Orange County, the District and four other water agencies partnered to fund and construct the Baker Water Treatment Plant in Lake Forest. The Baker plant provides increased water reliability from a diversity of water sources, including imported untreated water from MWD and local surface water from Irvine Lake.

The cost of purchased water includes what the District pays MWDOC for wholesale imported water treated by MWD, the amount the District pays MWDOC for untreated imported water supplied to the Baker Water Treatment Plant and what the District pays Irvine Ranch Water District for Operations and Maintenance (O&M) costs associated with the treatment and delivery of water from the Baker Water Treatment Plant. The amount the District pays for the purchase of water delivered to its customers is the amount "passed through" to the District's customers and is part of the Potable Water Usage Charge. The indoor Tier I and Uniform Commercial Usage rates are reduced by an offsetting credit (funded by non-rate revenue) to recognize that the highest and best use of potable water is for indoor health, safety and sanitation purposes. Tier II rates are applied to usage in volumes typically used outside the home for landscape irrigation. Tiers III and IV rates are applied to usage exceeding the combined Tier I indoor and Tier II outdoor efficient water use budgets. Tiers III and IV rates include the actual costs to purchase and deliver water from the District's wholesale water provider plus charges to fund the District's conservation and alternative supply development programs. The Potable Water Usage Rate Increase will become effective with the first full billing period after August 1, 2023. The proposed charges for 2024-25 and 2025-26 will take effect July 1, 2024, and July 1, 2025.

PROPOSED MONTHLY TIERED WATER USAGE RATES

WATER USAGE RATES	2022-23 CURRENT RATE ($/CCF*)	2023-24 PROPOSED RATE ($/CCF*)	2024-25 PROPOSED RATE ($/CCF*)	2025-26 PROPOSED RATE ($/CCF*)
Tier I - Indoor Efficient	**$2.82**	**$3.00**	**$3.18**	**$3.39**
Tier II - Outdoor Efficient	**$3.18**	**$3.37**	**$3.55**	**$3.76**
Tier III - Inefficient	**$6.50**	**$6.70**	**$6.88**	**$7.09**
Tier IV - Excessive	**$8.35**	**$8.67**	**$8.85**	**$9.06**
Commercial, Institutional and Industrial ("CII")	**$3.31**	**$3.49**	**$3.67**	**$3.88**

**1 Billing Unit or "ccf" = 748 gallons*

El Toro Water District
24251 Los Alisos Blvd.
Lake Forest, CA 92630

NOTICE OF PUBLIC HEARING ON PROPOSED WATER, SEWER AND RECYCLED WATER RATE/CHARGE INCREASE

PUBLIC HEARING AND PROTEST PROCEEDING

PUBLIC HEARING

The Governing Board of the El Toro Water District will conduct a public hearing on **July 27, 2023, at 7:00 p.m.** The purpose of the hearing will be to consider adoption of the proposed Potable Water Usage Rate increase, the proposed Recycled Water Usage Rate increase, the proposed Water, Sewer, Recycled Water, and Private Fire Operations and Maintenance Charge increases, and the Water, Sewer, and Recycled Water Capital Replacement & Refurbishment Charges increase.

HOW TO SUBMIT A WRITTEN PROTEST

Property (parcel) owners or customers of record may comment and file a written protest (one vote per parcel) on the proposed increases. California law prohibits the District from increasing charges if protests are filed from a majority of the affected parcels before the end of the public hearing. Written protests must be mailed to the District at **P.O. Box 4000, Laguna Hills, CA 92654**, emailed to the District at **District@etwd.com** or personally submitted on or before the end of the public hearing, which is scheduled for **7:00 p.m. on July 27, 2023.** Each protest must identify the affected property and include the signature of a record property owner unless the protest is emailed, in which case no signature is required. Oral protests at the public hearing will not qualify as a protest, unless accompanied by a written protest. The District's Board of Directors welcomes input from the public during the public hearing. California law (Government Code Section 53759) provides a 120-day statute of limitations for judicially challenging the adoption of the rates and charges which are the subject of this notice.

STAFF REPORT

To: Board of Directors **Meeting Date: May 22, 2023**

From: Jason Hayden, Chief Financial Officer

Subject: April Cash Sheet for Approval and Monthly Financial Report

Attached for Board approval is the Cash Sheet report for the month of April, 2023 which presents checks that were paid during the month that exceeded $50,000 in value. Also attached is the monthly financial report for April, 2023.

Presented below for your consideration are some notes about the financial report:

- The Statement of Net Position indicates an increase in Net Position from the prior month as the Net Investment in Capital Assets and Unrestricted Net Position increased. This is a result of the District utilizing the 2022 Revenue Bond Proceeds for the designated projects and recognizing the related construction expenses as Construction in Progress. The Unrestricted Net Position is positive at the end of April as the District received reimbursements from the R-6 Partners which had a positive impact on the District's cash position.
- The Statement of Revenues, Expenses, and Changes in Net Position indicates the District currently has a positive Change in Net Position of $5,471,136 through the end of April. The District has received more than 100% of revenues and incurred 77.7% of expenses (with April being the 10th month of the year, revenues and expenses should be around 83% of budget if the budget is an accurate forecast). Revenues are higher than budgeted due to the reimbursements from the R-6 Partners which are currently recognized as revenue.
- The Cash and Investments report shows a total of $19,054,428 in Operating Cash (LAIF, CAMP, and Checking accounts) at the end of the month. Operating cash and investments are available to meet the operational needs of the District and equal Reserve Balances. The 2022 Bond Proceeds cash and investments equaled $19,239,875, the same as at the end of March as not disbursements occurred in April. The improvement in the market values of the District's investments continued in April, albeit at a more subdued pace.
- The Cash Sheet includes eight checks greater than $50,000, with the total equal to $3,655,312.30. The very large invoice to Layfield USA Corporation was a payment for construction services related to the R-6 Project. These expenses exceed the General Manager's purchase authority and Staff recommends the Board approve these checks. In addition, $638,265 in payroll expenses occurred in April, District employees were reimbursed for $2,275.31 in travel expenses, and Directors were reimbursed $90.48 in travel expenses.

Attachment 1

Cash Sheet for the Month ending April 30, 2023

EL TORO WATER DISTRICT
Cash Sheet
For the month ending April 30, 2023

CHECK NUMBER	PAYMENT DATE	VENDOR NAME	PAYMENT AMOUNT
1049	04/06/2023	Layfield USA Corp	1,489,533.50
1079	04/25/2023	Layfield USA Corp	1,008,995.00
1055	04/06/2023	Municipal Water District of Orange County	388,006.20
1180	04/25/2023	South Orange County Wastewater Authority	264,553.00
1151	04/25/2023	J.R. Filanc Construction Company Inc	206,779.39
1026	04/06/2023	ACWA JPIA	125,564.49
1115	04/13/2023	Southern California Edison Company	121,441.72
1119	04/25/2023	Alicia Air Conditioning & Heating, Inc.	50,439.00
		TOTAL CHECKS OVER $50,000	**$ 3,655,312.30**
		TOTAL CHECKS IN REGISTER	**$ 4,482,823.80**

DEBIT TRANSFERS

	04/07/2023	PAYROLL DIRECT DEPOSIT	161,588.50
	04/07/2023	FEDERAL DEPOSIT LIABILITY	34,814.84
	04/07/2023	SDI & STATE TAX	13,928.43
	04/07/2023	WAGE GARNISHMENTS	282.50
	04/07/2023	PRUDENTIAL (401K)	62,744.63
	04/07/2023	PRUDENTIAL (457)	18,934.09
	04/07/2023	HEALTH SAVINGS ACCOUNT	394.61
	04/14/2023	PAYROLL BOARD OF DIRECTOR	5,845.48
	04/14/2023	SS, MEDICARE, SDI & STATE TAX	492.67
	04/14/2023	PRUDENTIAL (457)	2,795.53
	04/14/2023	HEALTH SAVINGS ACCOUNT	493.00
	04/21/2023	PAYROLL DIRECT DEPOSIT	172,312.90
	04/21/2023	FEDERAL DEPOSIT LIABILITY	39,831.92
	04/21/2023	SDI & STATE TAX	15,438.34
	04/21/2023	WAGE GARNISHMENTS	282.50
	04/21/2023	PRUDENTIAL (401K)	84,478.43
	04/21/2023	PRUDENTIAL (457)	19,699.98
	04/21/2023	HEALTH SAVINGS ACCOUNT	394.61
	04/30/2023	BANK FEES	3,512.04
		TOTAL INTERBANK WIRES / DEBIT TRANSFERS	**$ 638,265.00**
		TOTAL DISBURSEMENTS	**$ 5,121,088.80**

REIMBURSEMENTS TO ETWD EMPLOYEES

CHECK NUMBER	PAYMENT DATE	PAYEE (DESCRIPTION)	PAYMENT AMOUNT
1167	04/25/2023	Paul Giordano (Workboots)	237.04
1050	04/06/2023	Marc Avila, Jr. (Mileage)	230.56
1051	04/06/2023	Mark Bastia (Mileage)	222.70
1136	04/25/2023	Daniel Orozco (Workboots)	215.49
1183	04/25/2023	Steve Sanchez (CWEA Dues)	215.00
1137	04/25/2023	David Hayden (Service on Unit 91)	199.41
1069	04/06/2023	Steven Aguilar (Mileage)	157.20
1130	04/25/2023	Christopher Magill (Certificate Renewal)	120.00
1155	04/25/2023	Michael Miazga (Laptop Backback)	106.99
1116	04/13/2023	Steve Wingen (Certificate Renewal)	105.00
1135	04/25/2023	Daniel Lopez (Fingerprints)	86.50
1060	04/06/2023	Rick Brown (Background Check)	86.50
1039	04/06/2023	Daniel Orozco (Workboots)	84.51
1057	04/06/2023	Oscar Hernandez (Cell Phne)	60.00
1164	04/25/2023	Oscar Hernandez (Cell Phne)	60.00
1173	04/25/2023	Rory Harnisch (Fire Tags & Mileage)	51.77
1107	04/13/2023	Judy Wilson (Tax Forms)	36.64
		TOTAL CHECKS TO EMPLOYEES	**$ 2,275.31**

REINBURSEMENTS TO ETWD DIRECTORS

CHECK NUMBER	PAYMENT DATE	PAYEE (DESCRIPTION)	PAYMENT AMOUNT
1108	04/13/2023	Kathryn Freshley (Travel Expenses)	60.22
1110	04/13/2023	Michael Gaskins (Travel Expenses)	30.26
		TOTAL CHECKS TO DIRECTORS	**$ 90.48**

Attachment 2

Statement of Net Position for the April, 2023

El Toro Water District
Interim Statement of Net Position for the Month of April, 2023

	6/30/2022 Ending	3/31/2023 Interim	4/30/2023 Interim	Change
Assets				
Current Assets				
Cash & Cash Equivalents	8,571,792	8,260,938	9,853,681	1,592,743
Investments	9,310,156	20,513,014	20,375,175	(137,840)
Accounts Receivable	4,039,853	2,886,862	3,598,193	711,331
Materials & Supply Inventory	782,349	782,349	782,349	-
Prepaid Expenses	256,087	256,087	256,087	-
Restricted - Cash & Cash Equivalents	26,797,887	8,065,448	8,065,448	-
Current Assets - Sub-total	49,758,124	40,764,698	42,930,933	2,166,234
Non-Current Assets				
Lease Receivable	432,962	432,962	432,962	-
Land & Easements	7,451,585	7,451,585	7,451,585	-
Capacity Rights	342,382	342,382	342,382	-
Capital Assets				
Water System	36,908,024	36,908,024	36,908,024	-
Wastewater System	56,969,901	56,969,901	56,969,901	-
Recycled System	55,454,389	55,454,389	55,454,389	-
Combined Assets	14,541,459	14,541,459	14,541,459	-
Construction in Progress	4,714,756	16,341,230	19,425,028	3,083,798
Accumulated Depreciation	(88,231,945)	(90,849,244)	(91,137,055)	(287,811)
Non-Current Assets - Sub-total	88,583,513	97,592,688	100,388,675	2,795,987
Total Assets	**138,341,637**	**138,357,386**	**143,319,608**	**4,962,221**
Deferred Outflows of Resources				
OPEB Deferred Outflow of Resources	4,564,293	4,564,293	4,564,293	-
Liabilities				
Current Liabilities				
Accounts Payable & Accrued Expenses	3,092,683	3,386,681	3,288,891	(97,790)
Accrued Salaries & Related Payables	111,062	212,610	315,380	102,770
Customer Deposits	54,147	58,347	76,597	18,250
Accrued Interest Payable	614,910	263,681	263,681	-
Long Term Liabilities - Due in One Year		-	-	-
Compensated Absences	197,729	30,969	79,091	48,122
Loans Payable	1,557,454	1,111,180	1,111,180	-
Current Liabilities - Sub-total	5,627,985	5,063,468	5,134,820	71,352
Non-Current Liabilities				
Compensated Absences	1,314,487	1,314,487	1,314,487	-
Other Post-Employment Benefits Liability	20,031,266	20,031,266	20,031,266	-
Loans Payable	55,678,799	55,678,799	55,678,799	-
Non-Current Liabilities - Sub-total	77,024,552	77,024,552	77,024,552	-
Total Liablities	**82,652,537**	**82,088,020**	**82,159,372**	**71,352**
Deferred Inflows of Resources				
Deferred Amounts from Leases	636,695	636,695	636,695	-
Deferred Amounts from OPEB	953,259	953,259	953,259	-
Total Deferred Inflows of Resources	1,589,954	1,589,954	1,589,954	-
Net Position				
Net Investment in Capital Assets	30,402,906	40,802,709	43,598,696	2,795,987
Restricted - Capital Projects	2,895	2,895	2,895	-
Restricted - Debt Service	26,794,992	19,239,875	19,239,875	-
Unrestricted	1,462,646	(1,045,021)	1,293,108	2,338,130
Total Net Position	**58,663,439**	**59,000,458**	**64,134,575**	**5,134,117**

Attachment 3

Statement of Revenues, Expenses, and Changes in Net Position
for April, 2023

Statement of Revenues, Expenses, and Changes in Net Position for the Month of April, 2023

	District		Water System		Wastewater System		Recycled System		Capital Improvments	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Operating Revenues										
Commodity Supply Charges	$ 11,306,200	$ 7,887,138	$ 9,456,200	$ 6,795,122	$ -	$ -	$ 1,850,000	$ 1,092,016	$ -	$ -
Service Provision Charges	13,346,700	10,953,303	4,449,000	3,657,062	8,495,200	6,965,062	402,500	331,179	-	-
Capital Facilities Charge	3,262,600	2,679,122	-	-	-	-	-	-	3,262,600	2,679,122
Charges for Services	123,000	3,975	123,000	3,975	-	-	-	-	-	-
Miscellaneous Operating Income	52,800	27,178	31,000	13,546	20,800	13,632	1,000	-	-	-
Grants, Rebates, Reimbursements	356,700	6,940,676	400	-	-	-	356,300	278,953	-	6,661,723
Total Operating Revenues	28,448,000	28,491,392	14,059,600	10,469,705	8,516,000	6,978,694	2,609,800	1,702,148	3,262,600	9,340,845
Operating Expenses										
General & Administrative	5,087,300	4,266,899	2,033,010	1,788,606	2,647,490	2,115,647	406,800	362,646	-	-
Operations & Maintenance	19,867,260	14,728,907	12,041,680	8,697,852	6,516,760	5,043,290	1,308,820	987,765	-	-
Operating Capital Expenses	477,531	882,014	-	-	-	-	-	-	477,531	882,014
Other Operating Expenses	320,000	196,175	128,000	78,471	167,000	102,011	25,000	15,694	-	-
Depreciation & Amortization	4,195,500	2,905,110	-	-	-	-	-	-	4,195,500	2,905,110
Total Operating Expenses	29,947,591	22,979,106	14,202,690	10,564,929	9,331,250	7,260,947	1,740,620	1,366,105	4,673,031	3,787,124
Operating Income/(Loss)	(1,499,591)	5,512,286	(143,090)	(95,224)	(815,250)	(282,253)	869,180	336,043	(1,410,431)	5,553,721
Non-operating Revenues										
Property Taxes	1,120,000	933,330	448,000	373,330	582,400	485,330	89,600	74,670	-	-
Investment Earnings	100,000	728,836	40,000	242,130	52,000	173,700	8,000	29,733	-	283,273
Miscellaneous Revenue	255,000	197,930	243,000	197,827	10,400	102	1,600	1	-	-
Interest Expense	(2,062,300)	(1,901,247)	-	-	-	-	-	-	(2,062,300)	(1,901,247)
Net Non-Operating Revenues	(587,300)	(41,151)	731,000	813,286	644,800	659,132	99,200	104,404	(2,062,300)	(1,617,973)
Income/(Loss) before Contributions & Transfers	(2,086,891)	5,471,136	587,910	718,062	(170,450)	376,878	968,380	440,447	(3,472,731)	3,935,748
Transfers										
Transfers In	1,817,700	1,514,740	-	-	-	-	-	-	1,817,700	1,514,740
Transfers Out	(1,817,700)	(1,514,740)	(848,550)	(707,120)	-	-	(969,150)	(807,620)	-	-
Net Transfers	-	-	(848,550)	(707,120)	-	-	(969,150)	(807,620)	1,817,700	1,514,740
Capital Contributions										
Donations & Contributions	-	-	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-	-	-
Change in Net Position	(2,086,891)	5,471,136	(260,640)	10,942	(170,450)	376,878	(770)	(367,173)	(1,655,031)	5,450,488
Beginning Net Position	58,663,439	58,663,439								
Ending Net Position	$ 56,576,548	$ 64,134,575								

Attachment 4

Summary of Revenues and Expenses for the April, 2023

Summary of Revenues and Expenses for the Month of April, 2023

Account - Description	Month Actual	YTD Actual	2022-2023 Budgeted	Budget Remaining	% of Budget Remaining
Summary of Total District Revenues					
District Totals					
Commodity Supply Charges	512,622	7,887,138	11,306,200	3,419,062	30.2%
Service Charges	1,089,711	10,953,303	13,346,700	2,393,397	17.9%
Capital Facility Charges	268,511	2,679,122	3,262,600	583,478	17.9%
Charges for Services	-	3,975	123,000	119,025	96.8%
Miscellaneous Revenue	24,355	225,006	307,800	82,794	26.9%
Grants, Rebates, Reimbursements	595,184	6,940,676	356,700	(6,583,976)	-1845.8%
Property Taxes	93,333	933,330	1,120,000	186,670	16.7%
Investment Income	141,963	728,836	100,000	(628,836)	-628.8%
Donations & Capital Contributions	-	-	-	-	N/A
Total Revenue	2,725,678	30,351,386	29,923,000	(428,386)	-1.4%
Summary of Total District Expenses					
Salary Expenses					
Directors Fees	10,950	106,653	131,400	24,747	18.8%
Exempt Salaries	95,009	1,125,114	1,260,270	135,156	10.7%
Non-exempt Salaries	422,085	4,159,382	5,074,150	914,768	18.0%
Other Salary Payments	-	-	189,400	189,400	100.0%
Overtime	15,406	140,701	230,000	89,299	38.8%
Overtime - On-call	6,750	41,716	72,800	31,084	42.7%
Stipends/Allowances	4,800	26,050	74,900	48,850	65.2%
Employee Service Awards	750	3,050	5,000	1,950	39.0%
Salary Expenses Sub-total	555,749	5,602,666	7,037,920	1,435,254	20.4%
Benefit Expenses					
Medical Insurance	87,202	853,278	1,131,500	278,222	24.6%
HSA Contributions	-	-	4,500	4,500	100.0%
Dental Insurance	4,663	45,574	61,000	15,426	25.3%
Vision Insurance	990	9,867	13,300	3,433	25.8%
Life Insurance	3,849	23,905	36,600	12,695	34.7%
Disability Insurance	-	54,864	39,590	(15,274)	-38.6%
Long-term Care Insurance	96	3,814	11,600	7,786	67.1%
Workers Compensation Insurance	10,747	110,948	128,900	17,952	13.9%
State Unemployment Insurance	-	-	3,000	3,000	100.0%
401k Retirement Contributions	49,156	505,687	594,300	88,613	14.9%
401k Matching Contributions	29,589	304,412	-	(304,412)	N/A
457b Matching Contributions	8,910	90,769	456,200	365,431	80.1%
Medicare Insurance	7,591	78,840	100,600	21,760	21.6%
FICA	105	3,150	-	(3,150)	N/A
Retiree Medical Insurance Payments	-	-	-	-	N/A
Benefit Expenses Sub-total	202,899	2,085,109	2,581,090	495,981	19.2%
Commodity Purchased for Resale					
Water Purchases - MWDOC	97,445	2,124,352	4,024,200	1,899,848	47.2%
Water Purchases - MWDOC Fixed	59,538	556,468	667,000	110,532	16.6%
Water Purchases - AMP/SAC	267	22,256	9,000	(13,256)	-147.3%
Regional Water Supply Expenses	389	6,181	-	(6,181)	N/A
Water Purchases - Baker WTP	230,252	2,329,438	2,881,760	552,322	19.2%
Water Purchases - Baker O&M	-	397,829	778,900	381,071	48.9%
Water Purch - Other Agencies	33,783	229,033	-	(229,033)	N/A
MWDOC Service Connect Charge	-	116,224	125,000	8,776	7.0%
Commodity Purchased for Resale Sub-total	421,673	5,781,781	8,485,860	2,704,079	31.9%

Summary of Revenues and Expenses for the Month of April, 2023

Account - Description	Month Actual	YTD Actual	2022-2023 Budgeted	Budget Remaining	% of Budget Remaining
Contracted/Purchased Services					
Consultants	1,558	37,372	75,000	37,628	50.2%
Engineering Services	5,733	19,910	52,000	32,090	61.7%
Audit & Accounting Services	4,525	22,875	28,600	5,725	20.0%
Technology Consultants	3,729	67,790	60,000	(7,790)	-13.0%
Contractors	249,212	1,077,634	1,189,200	111,566	9.4%
Contracted Employees	28,305	67,274	-	(67,274)	N/A
Legal Svcs - General Counsel	15,977	64,414	110,000	45,586	41.4%
Legal Svcs - Specialty Counsel	377	5,727	5,000	(726)	-14.5%
Other Legal Services	-	3,601	-	(3,601)	N/A
Employee Recruitmnt/Compliance	16,026	33,175	5,000	(28,175)	-563.5%
Employee Health & Wellness	1,797	21,588	17,000	(4,588)	-27.0%
Employee Relations Expenses	1,058	16,075	2,000	(14,075)	-703.8%
Professional Services	329	19,029	-	(19,029)	N/A
Landscaping Services	23,828	130,931	166,900	35,969	21.6%
Janitorial Contracts	6,418	32,296	45,000	12,704	28.2%
Equipment Rental	203	9,115	17,000	7,885	46.4%
Uniform Rental	1,688	11,512	20,000	8,488	42.4%
Laboratory Services	1,724	26,888	42,000	15,112	36.0%
Disposal Services	14,819	81,469	34,000	(47,469)	-139.6%
Security Services	3,901	20,780	24,800	4,020	16.2%
Insurance	-	348,702	344,000	(4,702)	-1.4%
Financial Service Fees	8,256	32,722	55,000	22,278	40.5%
Printing & Reproduction	4,826	25,341	23,000	(2,341)	-10.2%
Advertising & Publicity Svcs	335	2,676	11,000	8,324	75.7%
Postage	3,273	7,768	20,000	12,232	61.2%
Community Relations/Education	23,007	117,640	190,600	72,960	38.3%
Licenses & Permits	52,613	157,142	189,200	32,058	16.9%
Software Maintenance/Licenses	14,637	208,301	217,900	9,599	4.4%
Electrical Power	122,330	1,257,656	1,508,500	250,844	16.6%
Natural Gas	982	6,492	4,500	(1,992)	-44.3%
Cable Service	691	3,314	11,500	8,186	71.2%
Telecommunications	3,362	18,476	20,000	1,524	7.6%
Mobile Telecommunications	3,448	29,155	35,000	5,845	16.7%
Data Access	7,754	46,238	65,000	18,762	28.9%
Equipment Maintenance & Repair	20,802	147,943	100,800	(47,143)	-46.8%
Pump Maintenance & Repair	29,271	99,073	103,500	4,427	4.3%
Motor Maintenance & Repair	-	15,462	81,500	66,038	81.0%
Electrical Maintenance/Repair	7,552	35,607	136,400	100,793	73.9%
Meter Maintenance & Repair	-	40,088	14,800	(25,288)	-170.9%
Structure Maintenance & Repair	13,425	49,142	23,000	(26,142)	-113.7%
Asphalt Maintenance & Repair	32,293	97,664	58,600	(39,064)	-66.7%
Contracted/Purchased Services Sub-total	730,063	4,516,056	5,107,300	591,244	11.6%
Commodities					
Repair Parts & Materials	16,833	257,473	389,500	132,027	33.9%
Tools & Small Equipment	3,424	51,197	66,700	15,503	23.2%
Safety Equipment	333	15,175	38,000	22,825	60.1%
Employee Tools/Safety Equip	3,602	14,163	23,960	9,797	40.9%
Laboratory Tools & Small Equip	618	6,395	-	(6,395)	N/A
Technology Tools/Small Equip	134	35,118	35,000	(118)	-0.3%
Chemicals	11,530	180,250	259,200	78,950	30.5%
Gasoline & Oil	14,604	99,664	160,000	60,336	37.7%
Operating Supplies/Accessories	11,440	52,783	49,500	(3,283)	-6.6%
Office Supplies & Accessories	3,844	15,411	23,900	8,489	35.5%
Technology Supplies/Components	1,712	39,827	30,000	(9,827)	-32.8%
Meeting/Event Supplies & Food	9,825	35,340	28,000	(7,340)	-26.2%
Water Use Efficiency Supplies	-	1,340	15,000	13,660	91.1%
Commodities Sub-total	77,900	804,137	1,118,760	314,623	28.1%

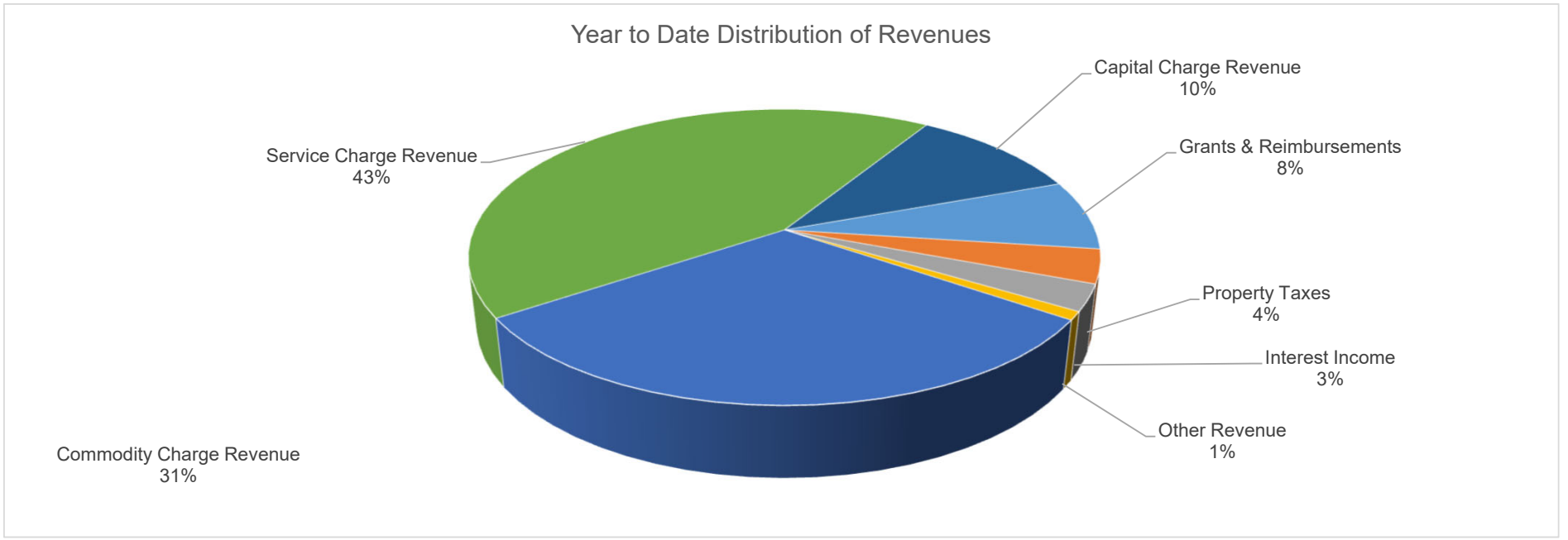
Summary of Revenues and Expenses for the Month of April, 2023

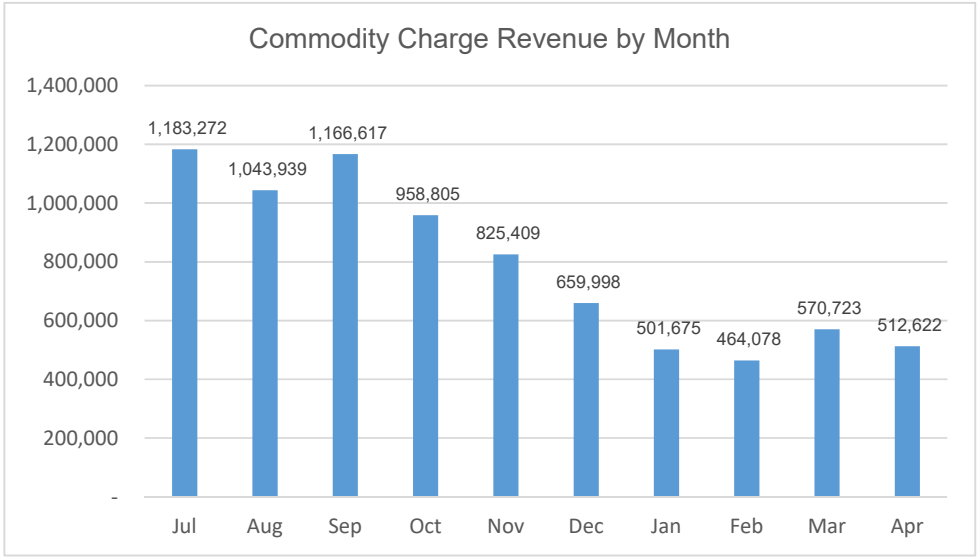
Account - Description	Month Actual	YTD Actual	2022-2023 Budgeted	Budget Remaining	% of Budget Remaining
Professional Development					
Education & Training	13,870	34,124	46,940	12,816	27.3%
Education/Training - Directors	-	-	-	-	N/A
Dues & Memberships	1,949	48,413	42,080	(6,333)	-15.1%
Dues & Memberships - Directors	3,802	49,014	63,120	14,106	22.3%
Meetings & Conferences	120	5,608	15,880	10,272	64.7%
Meetings/Conferences-Directors	216	10,730	27,420	16,690	60.9%
Travel Reimbursement	371	11,732	17,800	6,068	34.1%
Travel Reimbursement-Directors	288	14,455	32,600	18,145	55.7%
Publications & Subscriptions	150	7,965	22,200	14,235	64.1%
Professional Development Sub-total	20,766	182,040	268,040	86,000	32.1%
Miscellaneous Expenses					
Employee Appreciation Expenses	7,334	-	25,880	25,880	100.0%
Internal/External Event Expenses	187	419	5,760	5,341	92.7%
Election Expense	-	-	16,800	16,800	100.0%
Reimbursable Repair Expense	3,314	39	54,710	54,671	99.9%
Property Taxes	-	2,617	4,800	2,183	45.5%
Uncollectible Accounts	156	8,608	30,240	21,632	71.5%
NSFs & Miscellaneous Fees	47	2,283	4,680	2,397	51.2%
Refund Overcharges	867	10,818	16,120	5,302	32.9%
Damage/Repair Reimbursements	47	1,400	19,160	17,760	92.7%
Miscellaneous Sub-total	11,951	26,184	178,150	151,966	85.3%
Capital Improvement Expenses					
Water System Projects					
Supply/Storage Projects	2,986,658	12,667,818	9,533,900	(3,133,918)	-32.9%
Pumping Projects	-	44,800	1,944,231	1,899,431	97.7%
Main/Service Line Projects	-	-	-	-	N/A
Wastewater System Projects				-	N/A
Pumping Projects	43,424	444,292	935,000	490,708	52.5%
Wastewater Treatment Projects	31,244	444,564	1,709,800	1,265,236	74.0%
Main/Service Line Projects	-	-	-	-	N/A
Recycled System Projects				-	N/A
Pumping Projects	-	9,546	-	(9,546)	N/A
Tertiary Treatment Projects	19,345	59,033	-	(59,033)	N/A
Main/Service Line Projects	-	-	-	-	N/A
General Projects				-	N/A
Operating Equipment Purchases	-	24,868	53,000	28,132	53.1%
Vehicle & Related Equipment Purchases	-	36,000	364,000	328,000	90.1%
Technoloy Projects & Purchases	16,347	16,347	120,000	103,653	86.4%
Building & Structure Improvements	-	806,218	-	(806,218)	N/A
General Capital Projects	97,680	1,038,799	107,900	(930,899)	-862.7%
Construction in Progress	(3,083,798)	(14,710,272)	(14,290,300)	419,972	-2.9%
Capital Improvement Expenses Sub-total	110,900	882,014	477,531	(404,483)	-84.7%
Other Expenses					
Retiree Health Insurance	20,337	196,175	320,000	123,825	38.7%
Depreciation	287,811	2,905,110	4,195,500	1,290,390	30.8%
Debt Interest Expense	190,125	1,901,247	2,240,000	338,753	15.1%
Other Expenses Sub-total	498,273	5,002,532	6,755,500	1,752,968	25.9%
Total Expenses	2,630,175	24,882,518	32,010,151	7,127,633	22.3%
Change in Net Position	95,502	5,471,136	(2,087,151)		

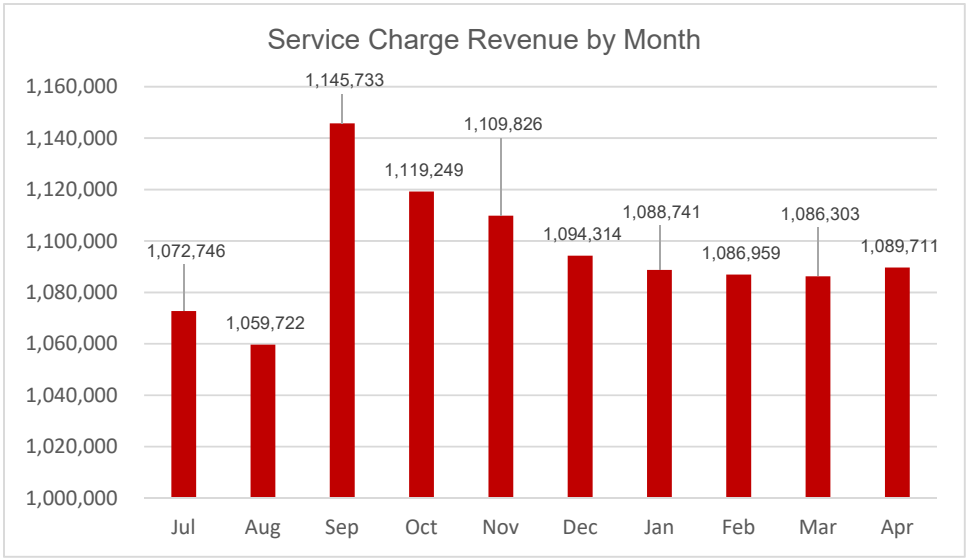
Attachment 5

Revenue and Expense Charts for April, 2023

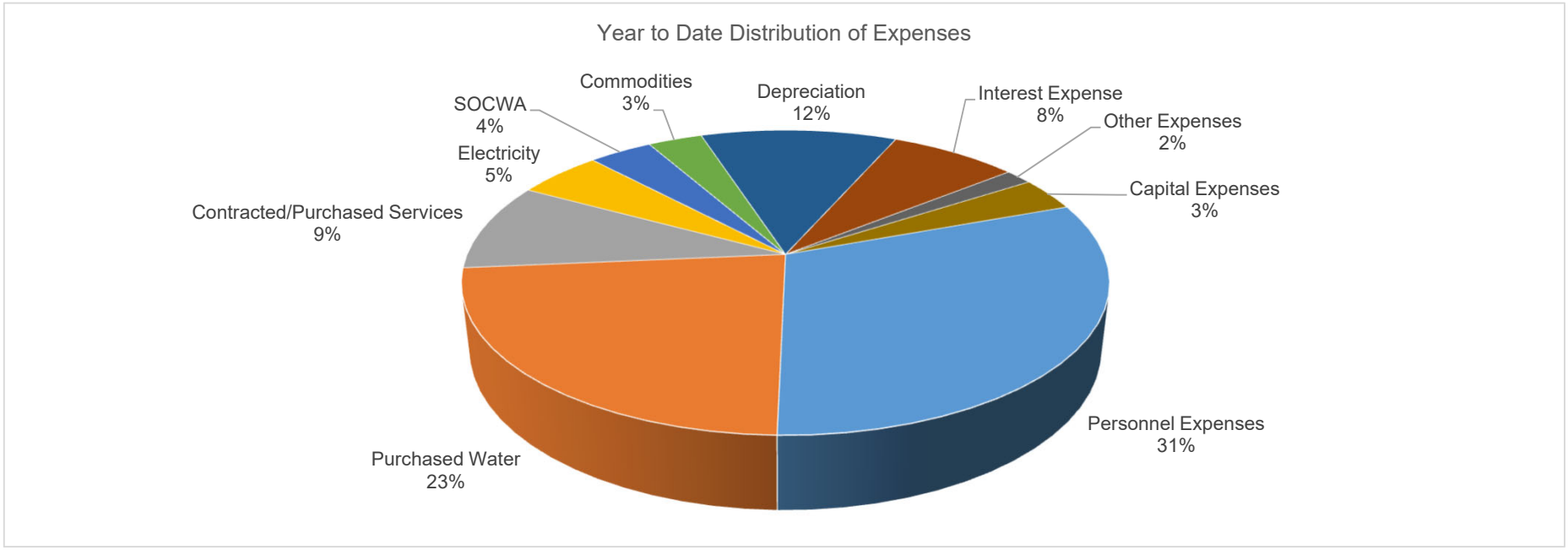
Revenue Charts - April Financial Report

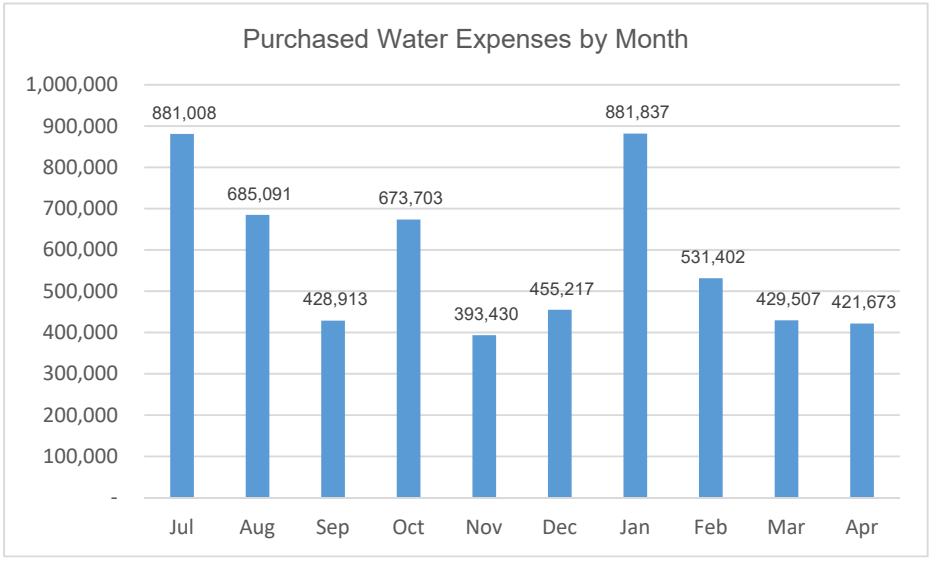






Expense Chart - April Financial Report





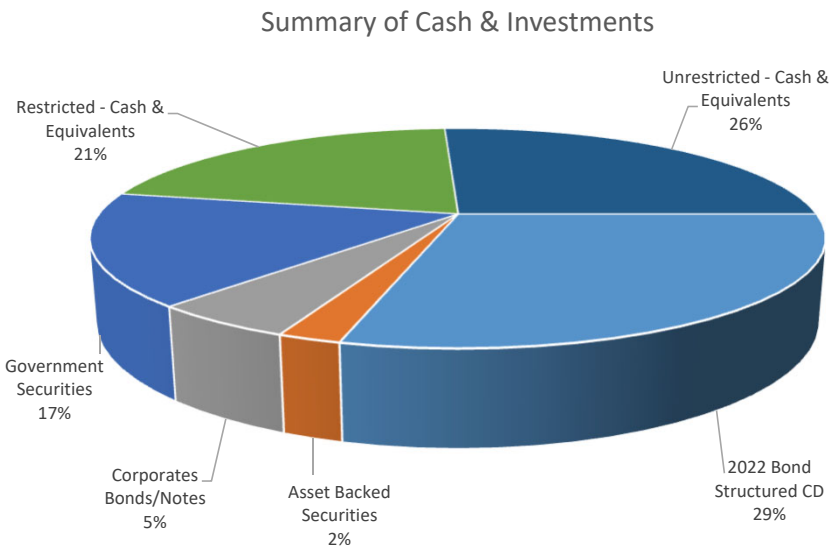
Attachment 6

Summary of Cash & Investments at the end of April, 2023

Summary of Cash & Investments

as of April 30, 2023

Summary of Cash & Investments	
Cash & Equivalents	
Unrestricted - Cash & Equivalents	9,853,681
Restricted - Cash & Equivalents	8,065,448
Investments	
Government Securities	6,313,099
Certificates of Deposit	-
Corporates Bonds/Notes	2,011,561
Asset Backed Securities	876,087
2022 Bond Structured CD	11,174,427
Total Cash & Investments	38,294,304
Operating Cash & Investments	**19,054,428**
2022 Bond Proceeds Cash & Investments	**19,239,875**



Cash & Equivalents

	Account Balance	Current Yield
Cash & Equivalents		
Demand Deposit Accounts		
Union Bank - Checking Account	6,630,260	
Union Bank - Capital Facilities Checking	2,895	
US Bank - 2022 Bond Proceeds Checking	-	
Petty Cash		
Money Market Accounts		
US Bank - Money Market Account	8,062,553	
CAMP Money Market	318,461	
LAIF Money Market	2,904,960	
Total Cash & Equivalents	17,919,129	

Investments

	Purchase Cost	Par Amount	Premium/ (Discount)	Market Value	Unrealized Gain/(Loss)	Coupon Rate	Yield to Maturity	Purchase Date	Maturity Date
Certificates of Deposit									
US Bank Structured Maturity CD	11,174,427	11,174,427	-	11,174,427	-	2.140%	2.14%	8/1/2022	Various
Certificates of Deposit - Total Balances	11,174,427	11,174,427	-	11,174,427	-				

Investments (continued)

	Purchase Cost	Par Amount	Premium/ (Discount)	Market Value	Unrealized Gain/(Loss)	Coupon Rate	Yield to Maturity	Purchase Date	Maturity Date
Governmental Securities									
United States Treasury Bond									
US Treasury N/B - AA+	401,047	400,000	1,047	397,625	(3,422)	0.250%	0.14%	2/18/2021	6/15/2023
US Treasury N/B - AA+	199,688	200,000	(313)	197,906	(1,781)	0.125%	0.19%	3/1/2021	7/15/2023
US Treasury N/B - AA+	399,828	400,000	(172)	395,812	(4,016)	0.125%	0.14%	2/1/2021	7/15/2023
US Treasury N/B - AA+	498,809	500,000	(1,191)	492,656	(6,152)	0.125%	0.23%	4/1/2021	8/15/2023
US Treasury N/B - AA+	89,982	90,000	(18)	87,750	(2,232)	0.250%	0.26%	4/26/2021	11/15/2023
US Treasury N/B - AA+	298,734	300,000	(1,266)	288,844	(9,891)	0.250%	0.27%	3/1/2021	2/15/2024
US Treasury N/B - AA+	164,807	165,000	(193)	156,415	(8,392)	0.375%	0.42%	9/3/2021	8/15/2024
US Treasury N/B - AA+	34,854	35,000	(146)	33,108	(1,746)	0.375%	0.52%	10/7/2021	9/15/2024
US Treasury N/B - AA+	347,047	350,000	(2,953)	332,117	(14,930)	1.125%	1.42%	2/4/2022	1/15/2025
US Treasury N/B - AA+	149,566	150,000	(434)	146,180	(3,387)	2.750%	2.85%	6/1/2022	5/15/2025
US Treasury N/B - AA+	466,543	500,000	(33,457)	476,797	10,254	2.125%	4.20%	11/30/2022	5/31/2026
US Treasury N/B - AA+	464,531	500,000	(35,469)	476,016	11,484	2.250%	4.10%	11/30/2022	2/15/2027
US Treasury N/B - AA+	480,273	500,000	(19,727)	493,359	13,086	3.250%	4.25%	2/22/2023	6/30/2027
US Treasury N/B - AA+	502,500	500,000	2,500	511,328	8,828	4.125%	4.01%	11/30/2022	9/30/2027
US Treasury N/B - AA+	497,930	500,000	(2,070)	511,328	13,398	4.125%	4.22%	2/22/2023	9/30/2027
US Treasury N/B - AA+	485,332	500,000	(14,668)	499,453	14,121	3.500%	4.16%	2/22/2023	1/3/2028
United States Treasury Bond - Totals	5,481,471	5,590,000	(108,529)	5,496,694	15,224				
Supra-National Agency Bond / Note									
Inter-American Devel BK Note - AAA	184,863	185,000	(137)	175,050	(9,813)	0.500%	0.52%	9/15/2021	9/23/2024
Supra-National Agency Bond / Note Totals	184,863	185,000	(137)	175,050	(9,813)				
Municipal Bond / Note									
NJ TPK Authority TXBL Revenue Bonds - AA-	20,000	20,000	-	18,724	(1,276)	0.897%	0.90%	1/22/2021	1/1/2025
Municipal Bond / Note Totals	20,000	20,000	-	18,724	(1,276)				
Federal Agency Commercial Mortgage-Backed Security									
FHMS K724 - AA+	53,981	50,566	3,415	50,207	(3,774)	3.062%	0.58%	1/28/2021	11/1/2023
FHLMC Multifamily Structured Pool - AA+	92,168	92,046	122	90,062	(2,106)	3.064%	3.00%	5/25/2022	8/1/2024
FHMS K047 - AA+	90,577	90,000	577	87,740	(2,837)	3.329%	3.10%	5/19/2022	5/1/2025
Federal Mortgage-Backed Security Totals	236,726	232,612	4,114	228,009	(8,717)				
Federal Agency Bond / Note									
Freddie Mac Notes - AA+	155,000	155,000	-	151,275	(3,725)	0.250%	0.23%	1/6/2021	11/6/2023
Fannie Mae Notes - AA+	250,107	250,000	107	243,346	(6,761)	0.250%	0.24%	1/6/2021	11/27/2023
Federal Agency Bond / Note Totals	405,107	405,000	107	394,621	(10,486)				
Governmental Securities - Total Balances	6,328,167	6,432,612	(104,445)	6,313,099	(15,068)				

Investments (continued)

	Purchase Cost	Par Amount	Premium/ (Discount)	Market Value	Unrealized Gain/(Loss)	Coupon Rate	Yield to Maturity	Purchase Date	Maturity Date
Corporate Notes									
Toyota Motor Credit Corp Corporate Note - A+	69,996	70,000	(4)	67,841	(2,155)	0.450%	0.45%	1/6/2021	1/11/2024
John Deere Corp Notes - A	54,961	55,000	(39)	53,279	(1,682)	0.450%	0.48%	3/4/2021	1/17/2024
Morgan Stanley Corp Notes - A-	55,000	55,000	-	54,866	(134)	0.529%	0.53%	1/20/2021	1/25/2024
PACCAR Financial Corp Corporate Note - A+	64,925	65,000	(75)	62,527	(2,398)	0.350%	0.39%	1/28/2021	2/2/2024
Microsoft Corp (Callable) Note - AAA	46,864	45,000	1,864	44,399	(2,465)	2.875%	0.95%	12/1/2021	2/6/2024
National Rural Util Coop Corporate Note - A-	24,983	25,000	(17)	24,119	(864)	0.350%	0.37%	2/8/2021	2/8/2024
Apple Inc (Callable) Note - AA+	52,381	50,000	2,381	49,256	(3,125)	3.000%	0.870%	11/1/2021	2/9/2024
Goldman Sachs Corp Notes - BBB+	44,062	40,000	4,062	39,501	(4,561)	4.000%	0.690%	1/21/2021	3/3/2024
Merck & Co Inc Corp Notes	31,377	30,000	1,377	29,545	(1,832)	2.900%	0.880%	11/16/2021	3/7/2024
Charles Schwab Corp Note	29,985	30,000	(15)	28,702	(1,283)	0.750%	0.770%	3/16/2021	3/18/2024
Suntrust Bank (Callable) Corp Note	63,197	60,000	3,197	58,728	(4,470)	3.200%	0.960%	11/1/2021	4/1/2024
Comcast Corp (Callable) Corp Note	53,305	50,000	3,305	49,390	(3,915)	3.700%	0.960%	11/1/2021	4/15/2024
Bank of NY Mellon Corp Note	54,941	55,000	(59)	52,457	(2,484)	0.500%	0.540%	4/19/2021	4/26/2024
Novartis Capital Corp Note	53,112	50,000	3,112	49,248	(3,864)	3.400%	0.890%	11/1/2021	5/6/2024
Amazon.com Inc Corp Note	79,883	80,000	(117)	76,538	(3,345)	0.450%	0.500%	5/10/2021	5/12/2024
Unitedhealth Group Inc Corp Note	29,969	30,000	(31)	28,682	(1,287)	0.550%	0.590%	5/17/2021	5/15/2024
Unitedhealth Group Inc Corp Note	29,476	30,000	(524)	28,682	(793)	0.550%	1.320%	1/21/2022	5/15/2024
Caterpiller Finl Service Corp Note	44,940	45,000	(60)	42,974	(1,966)	0.450%	0.500%	5/10/2021	5/17/2024
Astrazeneca Finance LLC (Callable) Corp	49,996	50,000	(5)	47,835	(2,161)	0.700%	0.700%	5/25/2021	5/28/2024
John Deere Capital Corp Notes	9,988	10,000	(13)	9,545	(442)	0.450%	0.490%	6/7/2021	6/7/2024
Target Corp Notes	31,879	30,000	1,879	29,631	(2,248)	3.500%	1.040%	11/23/2021	7/1/2024
American Express Co Corp Notes	36,253	35,000	1,253	33,931	(2,322)	2.500%	1.140%	11/19/2021	7/30/2024
American Honda Finance Corp Notes	29,980	30,000	(20)	28,488	(1,492)	0.750%	0.770%	9/7/2021	8/9/2024
American Honda Finance Corp Notes	35,025	35,000	25	33,236	(1,789)	0.750%	0.720%	9/13/2021	8/9/2024
Caterpillar Finl Service Corp Notes	19,973	20,000	(27)	18,967	(1,006)	0.600%	0.650%	9/7/2021	9/13/2024
Bank of NY Mellon Corp Note	24,984	25,000	(16)	23,501	(1,482)	0.850%	0.870%	10/20/2021	10/25/2024
Apple Inc Corp Note - AA+	42,786	40,000	2,786	38,971	(3,815)	2.750%	0.890%	3/11/2021	1/13/2025
Goldman Sachs Corp Notes	10,000	10,000	-	9,688	(312)	1.757%	1.760%	1/19/2022	1/24/2025
Bank of America Corp Notes	20,000	20,000	-	19,404	(596)	1.843%	1.840%	2/1/2022	2/4/2025
Merck & Co Inc Corp Notes	21,389	20,000	1,389	19,462	(1,926)	2.750%	0.940%	3/9/2021	2/10/2025
3M Company Corp Note	69,744	70,000	(256)	66,730	(3,014)	2.000%	2.130%	3/3/2022	2/14/2025
JPMorgan Chase & Co Corp Note Call	30,000	30,000	-	28,821	(1,179)	0.563%	0.560%	2/9/2021	2/16/2025
Exon Mobil Corp Note	29,874	30,000	(126)	29,158	(716)	2.709%	2.860%	4/1/2022	3/6/2025
Bank of America Corp Notes	42,714	40,000	2,714	39,257	(3,457)	3.458%	1.530%	7/22/2021	3/15/2025
Intel Corp Notes	30,873	30,000	873	29,490	(1,382)	3.400%	2.400%	3/8/2022	3/25/2025
Burlington North Santa Fe Corp Note Call	21,533	20,000	1,533	19,461	(2,072)	3.000%	1.070%	3/5/2021	4/1/2025
Amazon.com Inc Corp Notes	74,881	75,000	(119)	73,160	(1,721)	3.000%	3.060%	4/11/2022	4/13/2025
Home Depot Inc Corp Note	4,991	5,000	(9)	4,848	(144)	2.700%	2.760%	3/24/2022	4/15/2025
Target Corp Note	30,015	30,000	15	28,814	(1,201)	2.250%	2.230%	3/8/2022	4/15/2025
Bank of America Corp Notes (Callable	70,000	70,000	-	66,604	(3,396)	0.976%	0.980%	4/16/2021	4/22/2025
Bank of NY Mellon Corp Note	46,148	45,000	1,148	42,403	(3,745)	1.600%	0.970%	3/10/2021	4/24/2025
Bank of NY Mellon Corp Note	19,997	20,000	(3)	19,374	(623)	3.350%	3.360%	4/19/2022	4/25/2025
Pepsico Inc Corp Note Call	21,400	20,000	1,400	19,379	(2,021)	2.750%	1.020%	3/5/2021	4/30/2025
Citigroup Inc Corp Notes	35,000	35,000	-	33,301	(1,699)	0.981%	0.980%	4/27/2021	5/1/2025
Suntrust Banks Inc Corp Notes	36,373	35,000	1,373	33,997	(2,376)	4.000%	2.690%	3/8/2022	5/1/2025
Charles Schwab Corp Note	40,616	40,000	616	38,731	(1,884)	3.850%	3.300%	6/1/2022	5/21/2025
Morgan Stanley Corp Notes (Callable)	10,000	10,000	-	9,452	(548)	0.790%	0.790%	5/26/2021	5/30/2025
Honeywell Intl Corp Note	20,360	20,000	360	18,821	(1,539)	1.350%	0.910%	3/5/2021	6/1/2025
JPMorgan Chase & Co Corp Note	25,000	25,000	-	23,696	(1,304)	0.824%	0.82%	5/24/2021	6/1/2025
National Rural Util Coop Corp Note	9,997	10,000	(3)	9,774	(223)	3.450%	3.46%	5/4/2022	6/15/2025
Intel Corp Notes	35,821	35,000	821	34,433	(1,388)	3.700%	2.95%	4/4/2022	7/29/2025
Citigroup Inc Corp Notes	20,000	20,000	-	18,772	(1,228)	1.281%	1.28%	10/27/2021	11/3/2025
State Street Corp Note	20,000	20,000	-	19,008	(992)	1.746%	1.75%	2/2/2022	2/6/2026
Citigroup Inc Corp Notes	15,000	15,000	-	14,466	(534)	3.290%	3.29%	3/10/2022	3/17/2022
State Street Corp Note	61,208	60,000	1,208	57,772	(3,436)	2.901%	2.38%	2/17/2022	10/29/2020
JPMorgan Chase & Co (Callable)	80,000	80,000	-	78,444	(1,556)	4.080%	4.08%	4/19/2022	4/26/2020
Corporate Bonds - Total Balances	2,117,152	2,080,000	37,152	2,011,561	(105,591)				

Investments (continued)

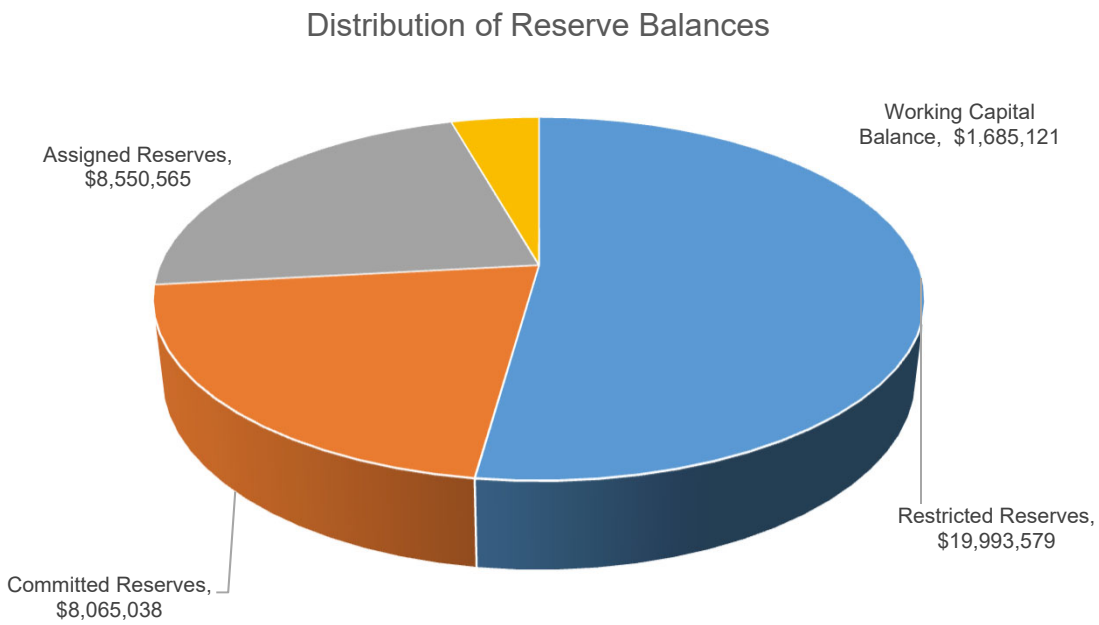
	Purchase Cost	Par Amount	Premium/ (Discount)	Market Value	Unrealized Gain/(Loss)	Coupon Rate	Yield to Maturity	Purchase Date	Maturity Date
Asset Backed Securities									
MBalt 2021 - AAA	1,447	1,448	(0)	1,443	(5)	0.250%	0.25%	1/20/2021	1/16/2024
BMWLT 2021 - AAA	480	480	(0)	479	(2)	0.290%	0.29%	3/10/2021	1/25/2024
BMWLT 2021 - AAA	1,760	1,761	(1)	1,755	(5)	0.290%	0.29%	10/19/2021	1/25/2024
FordL 2021 - AAA	45,431	45,439	(8)	44,911	(519)	0.370%	0.380%	9/21/2021	10/15/2024
Harot 2021 - Aaa	12,441	12,442	(0)	12,118	(323)	0.270%	0.270%	2/17/2021	4/21/2025
FordO 2021 - AAA	17,203	17,205	(1)	16,692	(511)	0.300%	0.300%	2/17/2021	8/15/2025
Harot 2021 - Aaa	29,063	29,064	(1)	28,164	(899)	0.330%	0.330%	5/18/2021	8/15/2025
GMCar 2021 - AAA	7,719	7,721	(1)	7,510	(209)	0.350%	0.350%	1/12/2021	10/16/2025
Harot 2021 - AAA	38,166	38,167	(1)	36,830	(1,336)	0.410%	0.410%	8/17/2021	11/18/2025
Carmx 2021 - AAA	8,608	8,610	(2)	8,334	(274)	0.340%	0.340%	1/20/2021	12/15/2025
Harot 2021 - Aaa	24,995	25,000	(5)	23,895	(1,100)	0.880%	0.890%	11/16/2021	1/21/2026
TAOT 2021 - AAA	29,999	30,000	(1)	28,643	(1,356)	0.710%	0.710%	11/9/2021	4/15/2026
Hart 2021 - AAA	19,996	20,000	(4)	19,124	(871)	0.740%	0.750%	11/9/2021	5/15/2026
Harot 2022 - AAA	44,993	45,000	(7)	43,117	(1,876)	1.880%	1.880%	2/15/2022	5/15/2026
FordO 2022 - Aaa	24,997	25,000	(3)	23,963	(1,034)	1.290%	1.290%	1/19/2022	6/15/2026
BMWOT 2021 - AAA	24,999	25,000	(1)	24,336	(663)	3.210%	3.210%	5/10/2022	8/25/2026
COPAR 2021 - AAA	25,000	25,000	(0)	23,780	(1,220)	0.770%	0.770%	10/19/2021	9/15/2026
FordO 2022 - Aaa	24,999	25,000	(1)	24,537	(461)	3.740%	3.740%	6/22/2022	9/15/2026
TAOT 2022 - AAA	29,999	30,000	(1)	29,136	(864)	2.930%	2.930%	4/7/2022	9/15/2026
DCENT 2021 - AAA	54,988	55,000	(12)	51,782	(3,207)	0.580%	0.580%	9/20/2021	9/15/2026
GMCar 2021 - AAA	24,999	25,000	(1)	23,798	(1,202)	0.680%	0.680%	10/13/2021	9/16/2026
Hart 2022 - AAA	54,998	55,000	(2)	52,948	(2,049)	2.220%	2.220%	3/9/2022	10/15/2026
Comet 2021 - AAA	49,993	50,000	(7)	47,210	(2,783)	1.040%	1.040%	11/18/2021	11/15/2026
Allya 2022 - AAA	59,988	60,000	(12)	58,676	(1,312)	3.310%	3.310%	5/10/2022	11/15/2026
GMCar 2022 - AAA	19,998	20,000	(2)	19,059	(939)	1.260%	1.260%	1/11/2022	11/16/2026
HDMOT 2022 - AAA	34,994	35,000	(6)	34,021	(973)	3.060%	3.060%	4/12/2022	2/15/2027
GMCar 2022 - AAA	24,995	25,000	(5)	24,276	(718)	3.100%	3.100%	4/5/2022	2/16/2027
Carmx 2022 - AAA	34,995	35,000	(5)	34,235	(760)	3.490%	3.490%	4/21/2028	2/16/2027
Comet 2022 - AAA	69,995	70,000	(5)	67,666	(2,328)	2.800%	2.800%	3/23/2022	3/15/2027
Comet 2022 - AAA	64,990	65,000	(10)	63,647	(1,343)	3.490%	3.490%	6/6/2022	5/15/2027
Corporate Bonds - Total Balances	907,229	907,335	(106)	876,087	(31,142)				

Attachment 7

Cash Reserve Balances for April, 2023

El Toro Water District
Cash Reserve Status Report for the month ended April 30, 2023

	Cash Reserve Balances	Reserve Targets
Reconciled Cash Balance	**$ 38,294,304**	
Restricted Reserve		
Bond Project Reserve	19,239,875	-
Capital Facilities	2,895	-
Tiered Conservation	750,809	-
Restricted Reserve Total	**19,993,579**	-
Committed Reserves		
Rate Stabilization	2,100,000	2,100,000
Operational Continuity	2,100,000	2,100,000
Capital Improvements	3,000,000	3,000,000
Current CIP Working Cash	865,038	-
Committed Reserves Total	**8,065,038**	**7,200,000**
Assigned Reserves		
Capital Improvement		
Carryover Capital	3,180,105	-
Accumulated Capital	1,375,026	-
SOCWA Capital Projects	3,544,781	-
Bond Project Reserve	235,500	-
Debt Service		
Baker Funding	215,153	-
O&M Working Capital	1,685,121	2,100,000
Assigned Reserves Total	**10,235,686**	**2,100,000**
Total Cash Reserves	**38,294,304**	
Adjusted Cash Reserves[(1)]	**19,051,533**	**9,300,000**



(1) the Adjusted Cash Reserves excludes the 2022 Bond Proceeds which are obligated to the projects identified in the 2022 Bond Official Statement and are therefore not available for Operations & Maintenance activities or the annual Capital Improvement Program.

Attachment 8

Capital Project Expense Report through April, 2023

El Toro Water District - Capital Projects Report, Fiscal Year 2022-2023

	2022 - 2023 Capital Project	Carryover Project	2022 - 2023 Budget	2022 - 2023 Expenses Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	2022 - 2023 Budget Remaining
Source of Supply / Water Storage Projects (40-710)																	
R-6 Reservoir Cover/Liner Project (RES-0047)	9,465,300	-	9,465,300	-	2,057	-	40,575	-	592,230	1,646,439	1,798,442	4,517,590	2,636,935			11,234,268	(1,768,968)
JRWSS Capital Contribution (RCE-0001)	12,400	-	12,400	-	-	-	-	816	-	2,057	389	-	559			3,821	8,579
Baker WTP Capital Contribution (RCE-0002)	56,200	-	56,200	-	-	-	-	-	-	28,080	-	-	-			28,080	28,120
JTM Pump Station (WPS-0093)	2,176,000	-	2,176,000	-	350	-	3,369	6,523	42,560	98,033	188,340	16,899	206,779			562,854	1,613,147
Reservoir Mixer Improvements (RES-0014)	77,000	-	77,000	-	-	-	-	-	-	19,469	48,237	-	-			67,706	9,294
R-2 Interior Recoating Project (GEN-0115)	-	219,080	219,080	-	221,426	-	25,576	56,074	-	6,140	17,017	-	-			326,233	(107,153)
Water Pumping Projects (40-720)																	
P-4 Pump Replacement (CAP-0024)	59,000	-	59,000	-	-	-	-	-	-	-	-	-	-			-	59,000
Reservoir Mixer Improvements (RES-0014)	77,000	-	77,000	-	-	-	-	-	-	-	-	-	-			-	77,000
Water Stations PLC Upgrade (CAP-0001)	-	76,734	76,734	-	-	-	-	-	-	-	-	-	-			-	76,734
Spartan Pump Rehabilitation	32,000	-	32,000	-	-	-	-	-	-	-	-	-	-			-	32,000
Wastewater Pumping Projects (40-740)																	
Aliso Creek Lift Station (CAP-0019)	310,510	275,000	585,510	-	2,948	-	-	-	-	5,645	351	-	-			8,944	576,566
Aliso Creek Disconnect Switch (SLS-0116)	24,000	-	24,000	-	-	-	-	-	-	-	-	-	22,398			22,398	1,602
4920 Siphon Project (CAP-0003)	-	170,000	170,000	-	2,417	-	-	-	-	-	-	-	-			2,417	167,583
Sewer Stations PLC Upgrade (CAP-0002)	-	118,295	118,295	-	-	-	-	-	-	-	-	-	-			-	118,295
Oso LS Improvement (SLS-0112)	-	-	-	-	-	544	-	-	-	-	-	-	-			544	(544)
Wastewater Treatment Projects (40-750)																	
Secondary Clarifier & WAC Rehabilitation (CAP-0020)	200,000	-	200,000	-	-	-	-	-	-	-	-	-	-			-	200,000
DAF Unit #2 Rehabilitation (CAP-0018)	128,000	75,000	203,000	-	-	-	-	-	-	15,219	-	-	-			15,219	187,781
Ocean Outfall LS Rehabilitation (SLS-0114)	75,000	33,962	108,962	-	217,061	-	-	-	-	-	-	-	20,276			237,337	(128,375)
SOCWA Capital Contributions (RCE-0003)	501,800	-	501,800	20,279	-	-	26,178	-	-	-	101,063	-	31,244			178,764	323,036
WRP Effluent PS Rehabilitation (SLS-0133)	-	142,000	142,000	-	12,350	15,200	-	41,088	-	-	-	-	-			68,638	73,362
Headworks Barscreen Retrofit (CAP-0021)	515,000	-	515,000	-	-	-	-	-	-	-	-	-	-			-	515,000
Fine Screen Facility Rehabilitation (CAP-0022)	230,000	-	230,000	-	-	-	-	-	-	-	-	-	-			-	230,000
Headworks Barscreen PLC Panel Replacement	60,000	-	60,000	-	-	-	-	-	-	-	-	-	-			-	60,000
WRP Main Electrical Breaker Upgrade (WRP-0132)	-	124,547	124,547	-	-	-	97,284	-	-	-	-	-	-			97,284	27,263
Wash Press System at Headworks (WRP-0133)	-	200,000	200,000	-	-	-	-	70,221	-	-	59	-	-			70,280	129,720
Grit Chamber Rehabilitation/Recoating (WRP-0131)	-	65,661	65,661	-	-	-	-	-	-	-	-	-	-			-	65,661
Ammonia Analyzer (WRP-0138) (Contingency)	-	-	-	-	-	-	-	24,868	-	-	-	-	-			24,868	(24,868)
Recycled Treatment Projects (40-780)																	
Tertiary Disinfection Optimizer (WRP-0137)	-	-	-	-	8,606	-	1,963	-	-	10,619	-	-	19,345			40,533	(40,533)
Operating Equipment Purchases (40-800)																	
Laboratory Equipment Purchases (OEP-0001)	33,000	-	33,000	-	-	-	-	-	-	-	-	-	-			-	33,000
Collections Equipment Purchases (OEP-0002)	9,000	-	9,000	-	-	-	-	-	-	-	-	-	-			-	9,000
Petroleum Equipment (OEP-0010)	11,000	-	11,000	-	-	-	-	-	-	-	-	-	-			-	11,000
Vehicle & Equipment Purchases (40-810)																	
Boom Truck (VEH-0002)	315,000	-	315,000	-	-	-	-	3,553	-	-	-	36,000	-			39,553	275,447
Trailer (VEH-0001)	49,000	-	49,000	-	-	-	-	5,128	-	-	-	-	49			5,177	43,823
Technology Purchases (40-820)																	
22/23 ATS Replacements (TCP-0005)	30,000	-	30,000	-	-	-	-	-	-	-	-	-	-			-	30,000
Technology Master Plan (TCP-0003)	90,000	-	90,000	-	-	-	-	-	-	-	-	-	-			-	90,000
Security System Improvements (TCP-0006)	-	-	-	-	-	9,546	-	-	-	-	-	-	-			9,546	(9,546)
SCADA Server Upgrades (TCP-0001)												-	16,347				
Boardroom AV System Upgrade (CAP-0025)	-	-	-	-	-	-	26,929	-	-	-	-	-	-			26,929	(26,929)

El Toro Water District - Capital Projects Report, Fiscal Year 2022-2023

	2022 - 2023 Capital Project	2022 - 2023 Carryover Project	2022 - 2023 Budget	Jul	Aug	Sep	Oct	Nov	Dec	2022 - 2023 Expenses Jan	Feb	Mar	Apr	May	Jun	Total	2022 - 2023 Budget Remaining
Building & Structure Improvements (40-830)																	
Filter Plant Demolition/Re-use Project (GEN-0112)	-	221,548	221,548	-	2,057	-	16,879	68,063	305,969	277,630	46,286	-	20,000			736,884	(515,336)
Administration Bldg HVAC Project (GEN-0114)	-	201,384	201,384	-	-	-	-	930	1,146	237,420	37,849	27,384	68,178			372,907	(171,523)
General Capital Projects (40-840)																	
Asset Management Study (CAP-0023)	100,000	-	100,000	-	-	-	-	-	-	70,170	-	21,287	4,215			95,672	4,328
Water & Sewer Master Plan (SPS-0049)	-	227,936	227,936	-	24,195	-	3,742	6,585	-	170,035	20,093	77,168	-			301,818	(73,882)
CalTrans I-5 Widening Project (GEN-0514)	-	-	-	-	-	-	-	100,133	10,440	-	-	-	-			110,573	(110,573)
Contingency (RCE-0004)	7,901	-	7,900	-	-	-	13,823	-	-	26,662	69,282	6,863	5,391			122,020	(114,120)
Capital Expenses by Project Area																	
Source of Supply/Water Storage Projects	11,786,900	219,080	12,005,980	-	223,833	-	69,520	63,413	634,790	1,800,218	2,052,425	4,534,490	2,844,273	-	-	12,222,961	(216,981)
Water Pumping Projects	168,000	76,734	244,734	-	-	-	-	-	-	-	-	-	-	-	-	-	244,734
Water Main/Service Line Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wastewater Pumping Projects	334,510	563,295	897,805	-	5,365	544	-	-	-	5,645	351	-	22,398	-	-	34,303	863,502
Wastewater Treatment Projects	1,709,800	641,170	2,350,970	20,279	229,411	15,200	123,462	136,177	-	15,219	101,122	-	51,520	-	-	692,390	1,658,580
Wastewater Main/Service Line Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recycled Pumping Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recycled Treatment Projects	-	-	-	-	8,606	-	1,963	-	-	10,619	-	-	19,345	-	-	40,533	(40,533)
Recycled Main/Service Line Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Equipment Purchases	53,000	-	53,000	-	-	-	-	-	-	-	-	-	-	-	-	-	53,000
Vehicle & Equipment Purchases	364,000	-	364,000	-	-	-	-	8,681	-	-	-	36,000	49	-	-	44,730	319,270
Technology Purchases	120,000	-	120,000	-	-	9,546	26,929	-	-	-	-	-	16,347	-	-	36,475	83,525
Building/Structure Improvement Projects	-	422,932	422,932	-	2,057	-	16,879	68,993	307,115	515,050	84,135	27,384	88,178	-	-	1,109,791	(686,859)
General Capital Projects	107,901	227,936	335,836	-	24,195	-	17,565	106,718	10,440	266,867	89,375	105,318	9,606	-	-	630,083	(294,247)
Total Capital Expenses	14,644,111	2,151,147	16,795,257	20,279	493,467	25,290	256,318	383,982	952,345	2,613,618	2,327,407	4,703,192	3,051,716	-	-	14,811,267	1,983,990
																	207,443

Project Management Designations

CAP - Capital Projects (No Work Order)
EFF - Effluent System*
GEN - General Facility Improvements*
OEP - Operating Equipment Purchases
RCE - Recurring Capital Expenses
RES - Water Reservoir Improvements*
SCS - Wastewater Collection System*
SLS - Sewer Lift Stations*
SPS - Special Studies*
TCP - Technology Capital Purchases*
WPS - Water Pump Stations*
WRP - Water Recycling Plant*
VEH - Vehicle Capital Expense

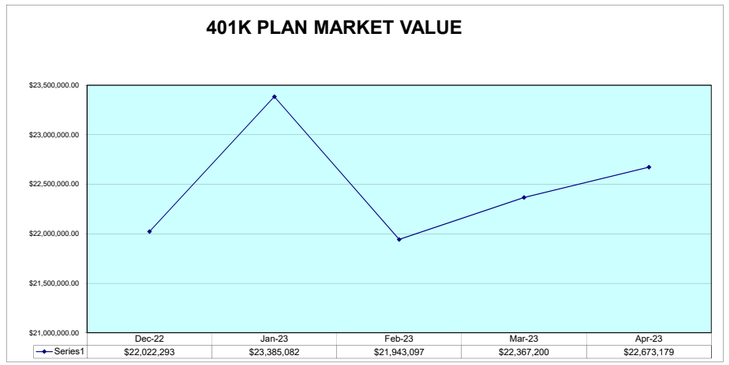
* These projects will generally have an Engineering work order associated with them

Attachment 9

Interim Report on 401k Plan Holdings

EL TORO WATER DISTRICT

401K PLAN SUMMARY



MARKET VALUE SUMMARY

	Growth Under 40 yrs. Old	Capital Appreciation 40 to 44 yrs. Old	Balanced 45 to 49 yrs. Old	Balanced Income 50 to 54 yrs. Old	Income & Growth 55 to 59 yrs. Old	Income 60 to 64 yrs. Old	Capital Pres. Port Over 65 yrs. Old	American Beacon Ahl Managed Futures Strategy Fund A Class	Blackrock Tactical Opportunities Fund Class K Shares	Blackrock Total Factor Fund Institutional Shares	Columbia Contrarian Core Fund Institutional 3 Class	Delaware Small Cap Core Fund Class R6	Dfa Large Cap International Portfolio Institutional Class	Dodge & Cox Income Fund Class I	Dodge & Cox International Stock Fund Class I	Dodge & Cox Stock Fund Class I	Doubleline Core Fixed Income Fund Class R6	Emerald Growth Fund Institutional Class	Guaranteed Income Fund	Harbor Capital Appreciation Fund Retirement Class	Mfs International Growth Fund Class R6	Nuveen Real Estate Securities Fund Class R6	Pgim Total Return Bond Fund -class R6	Pimco Income Fund Institutional Class	Pimco Rae Us Fund Institutional Class	The Merger Fund Class I	Undiscovered Managers Behavioral Value Fund Class R6	Vanguard Emerging Markets Stock Index Fund Admiral Shares	Vanguard Growth And Income Fund Admiral Shares	Vanguard Growth Index Fund Admiral Shares	Vanguard Long-term Investment-grade Fund Admiral Shares	Vanguard Mid cap Index Fund Admiral Shares
Balance at June 30, 2022	$1,733,972.40	$1,464,595.40	$953,052.03	$3,481,975.23	$7,738,613.81	$6,406,094.97	$1,462,806.94	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Contributions	145,622.49	73,504.23	32,930.28	91,821.09	164,076.12	140,141.11	114,019.04	17,068.84	6,293.90	2,101.64	52,211.97	18,485.49	34,130.92	60,453.66	7,884.16	28,579.78	61,872.68	12,139.61	44,540.02	23,354.05	7,883.72	20,399.94	58,758.69	6,294.02	28,580.09	6,294.33	12,139.19	15,407.61	53,003.47	24,387.06	20,855.65	6,294.40
Withdrawals	(12,989.63)	0.00	0.00	0.00	(108,018.04)	(1,538,693.56)	(118,893.83)	(42,620.52)	(10,412.24)	(10,708.80)	(49,940.00)	(23,150.89)	(38,655.82)	(160,737.40)	(7,952.28)	(30,575.66)	(160,507.49)	(8,234.99)	(102,012.05)	(19,994.70)	(7,988.29)	(50,023.34)	(160,665.80)	(10,838.55)	(29,808.31)	(10,613.88)	(8,120.09)	(11,215.34)	(49,525.42)	(31,741.90)	(49,907.07)	(11,432.72)
Transfers	(1,870,889.98)	(1,519,959.08)	(988,529.64)	(3,546,156.91)	(7,777,558.88)	(4,982,670.27)	(1,441,962.28)	694,062.06	227,176.00	67,101.80	1,691,196.29	675,497.43	1,104,418.40	2,271,657.84	267,629.10	960,266.75	2,338,731.06	398,625.42	1,705,893.06	653,952.20	256,529.45	744,088.38	2,229,586.85	221,303.57	960,235.90	224,850.28	416,141.71	486,945.85	1,796,891.49	709,291.34	797,779.50	227,875.31
Interest, dividends and appreciation net of fees and charges	4,284.72	(18,140.55)	2,547.33	(27,639.41)	(17,113.01)	(24,872.25)	(15,969.87)	(15,957.93)	1,482.68	3,601.93	173,695.42	4,022.86	112,903.99	51,943.75	22,151.43	29,158.49	63,855.75	13,565.39	17,168.24	121,223.09	29,075.30	30,789.97	54,706.91	5,093.87	14,605.62	1,429.96	(3,385.26)	13,421.05	114,767.14	119,324.59	29,194.06	5,582.41
Balance at April 30, 2023	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$652,552.45	$224,540.34	$62,096.57	$1,867,163.68	$674,854.89	$1,212,797.49	$2,223,317.85	$289,712.41	$987,429.36	$2,303,952.00	$416,095.43	$1,665,589.27	$778,534.64	$285,500.18	$745,254.95	$2,182,386.65	$221,852.91	$973,613.30	$221,960.69	$416,775.55	$504,559.17	$1,915,136.68	$821,261.09	$797,922.14	$228,319.40
Average return YTD April 30, 2023	0.25%	-1.24%	0.27%	-0.79%	-0.22%	-0.39%	-1.09%																									

1. Average return is calculated by dividing the interest, dividends and appreciation, net of fees by beginning fiscal year fund balance. The average return currently only includes the changes in balances through December 19, 2022 when the change from US Bank to Empower occurred.
2. Disrict Staff is working with Highmark and Empower to design a new 401k report. Once the data for the portfolios is being generated by Empower, the District portfolio information by age group will be updated.

MINUTES OF THE REGULAR MEETING
& OF THE
ENGINEERING COMMITTEE MEETING

April 24, 2023

At approximately 8:12 a.m. Director Freshley called the Engineering Committee meeting to order.

Committee Members KAY HAVENS, KATHRYN FRESHLEY, MIKE GASKINS, JOSE VERGARA (Zoom), and MARK MONIN (Zoom) participated.

Also participating were DENNIS P. CAFFERTY, General Manager, SCOTT HOPKINS, Operations Superintendent, HANNAH FORD, Engineering Manager, RORY HARNISCH, Project Engineer (8:30 a.m.), JASON HAYDEN, CFO, GILBERT J. GRANITO, General Counsel, MIKE MIAZGA, IT Manager, VU CHU, Water Use Efficiency Analyst, VICKI TANIOUS (Zoom), and CAROL MOORE, Laguna Woods City Council Member (Zoom).

Consent Calendar

Director Freshley asked for a Motion.

Motion: Director Monin made a Motion, seconded by Vice President Havens and unanimously carried across the Board to approve the Consent Calendar.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Engineering Action Items

City of Mission Viejo Street Pavement Rehabilitation Project

Mr. Cafferty stated that the city of Mission Viejo is completed a street repaving project, and we are responsible for costs associated with raising manhole covers and water valves back to grade.

President Havens stated that after the last rain storm the collar around the manholes appear to be softer than the rest of the street. Mr. Cafferty replied that the contractor and inspectors have not had significant problems with the collars around the manholes. He further stated that District staff inspects the manhole covers every two years.

Director Freshley asked for a Motion.

Motion: Director Gaskins made a Motion, seconded by Director Monin and unanimously carried across the Board to authorize the General Manager to approve payment of a City of Mission Viejo invoice in the amount of $111,100.

Roll Call Vote:

Director Monin	aye
Director Gaskins	aye
Director Freshley	aye
Vice President Vergara	aye
President Havens	aye

Engineering Information Items

Capital Projects Status Report

R-6 Reservoir Floating Cover and Liner Replacement Project

Mr. Cafferty stated that this project continues to move along with minimal rain delays. He further stated that the liner replacement is nearly complete.

Mr. Cafferty stated that they had to wait on the last part of the liner installation because they were waiting on the delivery of the vault valves. He further stated that the cover material has been delivered and installation should begin in May.

Filter Building Demolition Project

Mr. Cafferty stated that the project is nearing completion and waiting on completion of the backfill.

Warehouse Construction Project

Mr. Cafferty stated that the warehouse design is out to bid, and bids should be received May 9th.

JTM Pump Station Project

Mr. Harnisch stated that the commissioning is complete, and now we are waiting on the record drawings which are being prepared now, and the permanent MCC which is scheduled to arrive late July. He further stated that currently we plan to use internal staff to install a temporary MCC.

Main Office HVAC Improvement Project

Mr. Harnisch stated that the final touches and inspections were in place. He further stated that smoke duct detectors, fire alarm panel upgrades, and new duct work was done and inspected.

Director Gaskins asked if the HEPA filters were replaced. Mr. Harnisch replied yes.

Tertiary System Optimization

Mr. Cafferty stated that staff submitted the Technical Memorandum to the Division of Drinking Water and awaits approval.

WRP Main Electrical Power Breaker

Mr. Cafferty stated that the breakers have been installed at the Plant, and we are waiting for the delivery of the transfer switches in August.

Effluent Transmission Main (ETM) Backflow Prevention Project

Mr. Cafferty stated that the project was awarded to Don Peterson Contracting. He further stated that the District received bonds and insurance documents and held a preconstruction meeting with staff and the Contractor. Mr. Cafferty stated that we are waiting for the delivery of the check valve.

Energy Efficiency Analysis

Mr. Hopkins stated that staff met with SCE and is reviewing their calculations.

Engineering Items Discussed at Various Conferences and Meetings

There were no comments.

Comments Regarding Non-Agenda Engineering Committee Items

There were no comments.

Adjournment

There being no further business, the Engineering Committee meeting was adjourned at approximately 8:53 a.m.

Attorney Report

Mr. Granito reported that there is no need for a Closed Session today, and as such the Regular Session resumed.

Adjournment

At approximately 8:55 a.m. the meeting was adjourned.

Respectfully submitted,

POLLY WELSCH
Recording Secretary

APPROVED:

KAY HAVENS, President
of the El Toro Water District and the
Board of Directors thereof

DENNIS P. CAFFERTY, Secretary
of the El Toro Water District and the
Board of Directors thereof

Agenda Item No. 7

STAFF REPORT

To: Board of Directors **Meeting Date: May 22, 2023**

From: Hannah Ford, Engineering Manager
Rory Harnisch, Project Engineer

Subject: New Warehouse Project

BACKGROUND

The District hired Resource Environmental, Inc. (REI) to demolish the El Toro Water District Water Filtration Plant (Filter Plant), shown in Figure 1, which has been out of service since 1984. Demolition is near completion, as shown in Figure 2, at which point the site will be available to repurpose. The District would like to construct a new storage Warehouse in place of the demolished Filter Buildings.

Figure 1 – Previous Filter Plant Site

Figure 2 – Demolished Filter Plant Site

MWDOC partnered with the District on this Project due to their interest in constructing a new Emergency Operations Center (EOC). The District and MWDOC jointly hired Richard Brady & Associates (Brady) to complete an alternatives analysis, preliminary design report, and final design for the project. Final design of the new Warehouse was complete at the end of 2022 with EOC components marked as “Not in Contract”.

BID EVALUATION

The District invited eight qualified contractors to bid on February 8, 2023. Six contractors attended the mandatory pre-bid meeting. During the bid phase, MWDOC decided not to move forward with their portion of the project, at which point the District delayed the bid due date and directed Brady to remove the EOC from the bid documents and flip the orientation of the new Warehouse to better facilitate access. The District issued a complete modified design set as an addendum to the original bid documents.

During bidding, several contractors indicated workload constraints that precluded them from submitting a bid as planned. In order to obtain three competitive bids, District staff decided to further extend the bid due date and allow an additional contractor to bid the job.

After conducting a total of two pre-bid meetings and responding to bidder questions, the District issued a total of six addenda to the original bid documents. Staff opened three bids on Wednesday, May 17, with the breakdown shown in Table 1 and Figure 3.

Table 1 – Bid Comparison to Engineer's Estimate

Description	Engineer's Estimate	Faris Constructors	Dumarc Corp.	Pacific Hydrotech Corp.
Mobilization and Demobilization (5%)	$122,998	$95,000	$5,000	$115,000
Erosion Control	$8,251	$5,000	$9,410	$41,000
Miscellaneous Utilities and Yard Piping Work	$514,423	$250,000	$478,792	$400,800
Warehouse Building	$1,814,293	$1,735,000	$1,690,798	$1,826,800
Total	**$2,459,965**	**$2,085,000**	**$2,184,000**	**$2,383,600**
Credit for Plywood and Rigid Insulation		$49,000	$91,000	$70,150
Total including Credit		**$2,036,000**	**$2,093,000**	**$2,313,450**

Note the bids included a credit for removing installation of plywood and rigid insulation from the contract, which the District will evaluate with the selected low bidder and their pre-engineered metal building supplier after award.

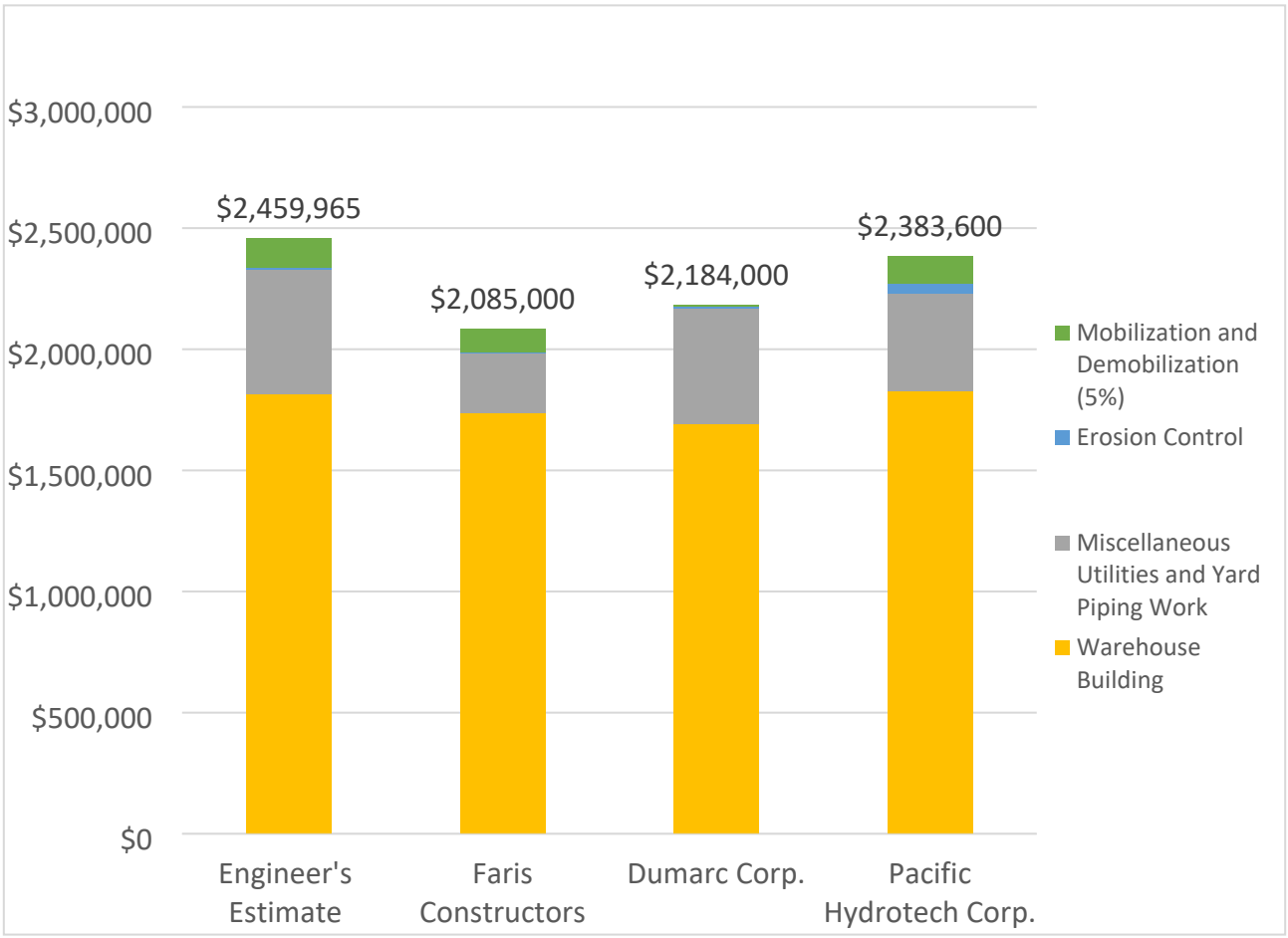


Figure 3 – New Warehouse Bid Summary

The spread between the low and high bids is approximately 14 percent. The apparent low bid was submitted by Faris Constructors (Faris). However, upon closer review, Faris's bid omitted the six signed addenda, did not contain the required proposal page indicating pre-engineered metal building (PEMB) and electrical vendors and lead times, and lacked percentage of contract information required in the proposal on subconsultants. Staff determined these omissions to be substantial thereby rendering Faris's bid non-responsive.

Dumarc Corporation (Dumarc) submitted the second lowest bid, and its contents were complete with no missing information. The design architect recommended inviting Quality Erectors and Construction, Inc. (QEC) to bid this Project due to their experience working with this PEMB installer; QEC in turn recommended inviting Dumarc to bid this Project as the general contractor. QEC will be Dumarc's subcontractor for building installation. CECO, who worked with the design architect to develop the bid documents, will be the PEMB supplier for Dumarc. District staff confirmed references for Dumarc with several other utilities with similar PEMB projects and received only positive feedback.

ENGINEERING DURING CONSTRUCTION SERVICES (ESDC) AND INSPECTION

District staff recommends amending the current contract with Brady to perform ESDC and its subconsultant, Group Delta, to conduct geotechnical and structural inspections. District staff plan to conduct electrical inspections and construction management in house. Attachment A contains the proposed scope of work, which amounts to $222,095. Table 2 summarizes tasks, associated hours, and fee.

Table 2 –ESDC and Inspection Tasks and Proposed Fee

Task	Hours	Fee
Project Management and Meetings	280	$ 79,390
ESDC	136	$ 62,122
Inspection Services	64	$ 80,584
Total	**480**	**$ 222,095**

CEQA

District staff prepared and filed a Class 2 and Class 32 Categorical Notice of Exemption with the County because the work only rehabilitates existing facilities without an increase in capacity. State CEQA Guideline Section 15302 provides exemption for replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. State CEQA Guideline Section 15332 provides exemption for in-fill development. This Project is consistent with the applicable general plan designation and policies as well as zoning designation requires as part of the Class 32 exemption. The District hired Dudek to develop supporting technical studies, conduct tribal consultation, and documentation for this Notice of Exemption. After filing, the 30-day public comment period expired with no comments.

BUDGET ANALYSIS

Table 3 summarizes total project costs, inclusive of the demolition phase of the project. Total cost for the new Warehouse, including ESDC, inspection, and contingency, is approximately $2.6 million. Total project cost including demolition amounts to just over $4 million. Adequate funding for the new Warehouse is available as part of the revenue bond. In an effort to maintain low costs, in house staff will perform the construction management and electrical inspection.

Table 3 –Filter Building and Clearwell Demolition and New Warehouse Costs

Organization	Description	Contractual Amount	ETWD Cost
Filter Building and Clearwell Demolition Project			
Brady	Alternatives Analysis	$123,812	$102,581
ABS	RFP Support	$14,200	$7,100
Brady	Design	$514,633	$285,526
Dudek	CEQA	$25,737	$15,007
REI	Demolition Construction Contract	$685,000	$685,000
	Change Order No. 1	$40,226	$40,226
	Change Order No. 2 (Anticipated)	$80,203	$80,203
Brady	ESDC and Inspections	$129,430	$129,430
Group Delta	Geotechnical ESDC	$7,580	$7,580
Paulus	Emergency Repair	$20,000	$20,000
Vert Environmental	Hazardous Material Surveys and Inspections	$2,390	$2,390
	Demolition Total	**$1,653,631**	**$1,380,117**
New Warehouse Project			
Dumarc	New Warehouse Construction Contract	$2,184,000	$2,184,000
	Contingency	$218,400	$218,400
Brady	ESDC and Inspections	$222,095	$222,095
	New Warehouse Total	**$2,624,495**	**$2,624,495**
Demolition and New Warehouse Total		**$4,278,126**	**$4,004,612**

NEXT STEPS

Constructing a new Warehouse will allow District staff to operate more effectively and better protect District fleet, equipment, and electrical investments. Construction at the new Warehouse site is proposed to begin after the nesting season of this year in September 2023. Electrical main switchboard and electrical panels have a lead time of 365 and 266 days, respectively, so their procurement will drive the duration of the project, likely into the end of next year.

RECOMMENDATION

Recommended Action:

Staff recommends that 1) the Board of Directors determine the bid submitted by Faris Constructors to be non-responsive due to substantial omissions of required bid documents and that the Faris Constructors bid be rejected, 2) authorize the General Manager to issue a contract to Dumarc Corp. in the amount of $2,184,000 for the construction of the ETWD Warehouse Project and 3) authorize the General Manager to issue a contract to Richard Brady & Associates in the amount of $222,095 for engineering services during construction. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

Consulting Contract # 119
Task Order # 4
Work Order 37-112

TASK ORDER NO. 4

FILTER PLANT SITE USE PLAN

This Task Order is issued by EL TORO WATER DISTRICT ("DISTRICT") and accepted by Richard Brady & Associates, Inc. ("CONSULTANT") pursuant to the mutual promises, covenants and conditions contained in the Consulting Agreement between the above-named parties dated the _____ day of June, 2023 in connection with the Filter Plant Site Use Project. The terms and conditions of said Consulting Agreement are incorporated herein by reference.

1.0 BACKGROUND.

The main objective of Task Order 4 is to provide Engineering Services during the DISTRICT warehouse construction contract to interpret the bid documents developed by the CONSULTANT to construct a new warehouse and perform site improvements. The DISTRICT will perform the duties of the Construction Manager for the contract.

2.0 PURPOSE.

The purpose of this Task Order 4 is to establish scope, time, and payment provisions for Engineering Services During Construction of the new warehouse building as detailed in the following Scope of Services.

3.0 SCOPE OF SERVICES.

The Scope of Work includes attendance at meetings, review of submittals, requests for information (RFIs), and clarification during the performance of the New Warehouse construction contract. Site visits by the CONSULTANT and the Geotechnical Engineer will be conducted to assist in addressing field issues.

Task 1 Project Management and Meetings

Project Management

CONSULTANT shall communicate and coordinate as needed with DISTRICT staff to provide updates, follow up on action items, and manage the project on budget and on schedule. The CONSULTANT shall prepare and submit a concise monthly status report with the monthly invoice statement that includes the following:

- DISTRICT's standard form that includes a summary of expenditures by task showing total budget, billing to date, current billing, and remaining amount.
- A summary of work progress/items complete for all work tasks;
- An estimate of actual percent complete based on progress compared to percent complete based on budget expended; and

Pre-construction Meeting

DISTRICT shall arrange and conduct a pre-construction meeting with the CONSULTANT and Contractor at the start of the project. The purpose will be to introduce project participants, establish lines of communications, review the accepted scope of the contract and discuss all other related information pertaining to the contract. CONSULTANT shall attend the pre-construction meeting and provide insight based on the design.

Progress Meetings

DISTRICT will conduct virtual progress meetings with CONSULTANT and Contractor on a monthly basis following notice to proceed until construction begins. Progress meetings shall take place in person on a weekly basis once construction begins for a total of five months. For construction wrap up following January 31, 2024 (assuming schedule is driven by electrical equipment lead time), progress meetings shall take place virtually on a monthly basis until construction ends.

DISTRICT is responsible for organizing these meetings including preparing agenda, reviewing construction progress, compiling meeting minutes, and distributing the minutes to all attendees or as required. CONSULTANT shall attend the progress meetings virtually pre-construction and in-person during construction. During these meetings, the CONSULTANT's role is to clarify design intent and provide direction to the contractor as needed.

Task 1 Assumptions

1) Monthly progress meetings shall take place virtually June 2023 through August 2023.

2) Weekly progress meetings shall take place in person September 2023 through January 2024.

3) Monthly progress meetings shall take place virtually February 2024 through September 2024.

4) Group Delta will attend the monthly virtual progress meetings from June 2023 to August 2023 and half of the weekly in-person progress meetings from September 2023 through January 2024.

Task 1 Deliverables:

1. ***Monthly invoice***
2. ***Meeting participation***

Task 2 Engineering Services During Construction for Warehouse Contract

Prepare Conformed Drawings

The CONSULTANT shall prepare one conformed set of drawings and specifications for use during the New Warehouse construction contract. The conformed plans and specifications will include the changes made during the bid period including all addenda.

Submittals / RFIs / Requests for Clarification

The CONSULTANT and its subconsultants (COAR and Group Delta) shall review and respond to the following number of submittals, RFI's and Requests for Clarifications

- Submittals
  - BRADY: 10
  - COAR: 50
  - Group Delta: 5
- Resubmittals
  - BRADY: 5
  - COAR: 5
  - Group Delta: 2
- Requests for information/clarification
  - BRADY: 10
  - COAR: 10
  - Group Delta: 5
- Change order requests
  - BRADY: 2
  - COAR: 5
  - Group Delta: 2

Final Inspection / Contract Punch List

The CONSULTANT shall participate in the final inspection and preparation of a punch list.

Record Drawings

The CONSULTANT shall meet with DISTRICT and prepare record drawings based upon information supplied by the Contractor.

Task 2 Assumptions

1) All deliverables will be distributed to the DISTRICT designated Project Manager.

2) Fee is based upon providing the number of submittals, resubmittals, RFIs, requests for clarification, and change order requests listed herein.

Task 2 Deliverables

1. Conformed drawings and specifications (electronic file, PDF)
2. Submittal responses (electronic file, PDF)
3. RFIs and RFC (electronic file, PDF)
4. Record drawings (electronic file, PDF, and AutoCAD)

Task 3 Geotechnical, Special Inspection, and Materials Testing

The CONSULTANT's subconsultant, Group Delta, will provide geotechnical, special inspection, and materials testing services during construction. The purpose of Group Delta's services will be to provide sufficient testing, observation, and inspections so that Group Delta can develop professional opinions as to whether or not the earthwork and materials construction are conducted in general accordance with the approved plans, specifications, and Group Delta's geotechnical recommendations for the project. Geotechnical services will include testing and observation of the compaction of the building remedial grading, subgrade soils, trench backfill, aggregate base, and asphalt concrete placed for the new pavements, as well as the observation of the foundation excavations. Special inspection and materials testing services will include inspection and testing of required structural elements indicated on the structural plans, including reinforced concrete (concrete and rebar), structural steel, and post-installed anchors. Details regarding Group Delta's proposed scope of work for both geotechnical services and special inspection and materials testing services are summarized below:

Geotechnical Testing and Observation Scope:

Group Delta personnel will be required on-site full-time during construction of the new pavement sections and part-time during utility construction, foundation excavations, and preparation of subgrade for new pavements and flatwork. The following scope is planned.

1) Group Delta shall provide field technicians to observe and document the site preparation and any remedial grading, perform field density tests on fill, trench backfill, pavement and flatwork subgrade, base and asphalt concrete, and observe foundation excavations.

2) Group Delta shall perform laboratory tests on soil, base, and asphalt concrete to support recommendations. Testing may include soil/base maximum density, Expansion Index, soluble sulfate content, and R-value. Group Delta shall utilize the plant Hveem density for asphalt pavement testing.

3) Group Delta shall prepare daily field reports summarizing the day's activity with regard to earthwork construction. These daily reports will also serve to document the time spent in the field by their personnel.

4) Group Delta shall provide as-needed engineering support, including review of RFIs, requests for clarification, change orders, and submittals, attending project meetings, and geotechnical analyses.

5) Group Delta shall prepare an As-Graded Geotechnical Report for the project following the conclusion of earthwork operations.

Materials Testing and Special Inspection Scope:

Periodic special inspection of the reinforcing steel, structural concrete placement, structural steel, steel base plate grouting, and post-installed anchor installation will be required. Group Delta anticipates laboratory materials testing will be required on the structural concrete and base plate grout for the structure. The following scope of materials testing and special inspection is planned.

1) Group Delta shall provide special inspectors to inspect the reinforced concrete, structural steel, post-installed anchor, and base plate grout components of construction and collect samples of fresh concrete and base plate grout during placement. Group Delta has provided estimated budgets to cover these items for the primary building structure of this project based on the preliminary schedule provided by the DISTRICT.

2) Group Delta will perform compressive strength testing on structural concrete and base plate grout specimens to support their conclusions. Group Delta did not include compressive strength testing for structural grout used for masonry components of the project and testing of concrete used for pavements and flatwork in their estimate.

3) Group Delta shall prepare daily field reports summarizing the day's activity with regard to special inspection. These daily reports will document the time in the field by their inspectors.

4) Group Delta shall provide as-needed engineering support, including review of RFIs, requests for clarification, change orders, and submittals, and attending project meetings.

5) Group Delta will prepare and submit one Special Inspection Agency/Construction Materials Testing Laboratory Final Report summarizing the inspections and material testing performed for the project.

Task 3 Assumptions

1) Preparation of interim pad grade certification or other similar documentation are not included in their estimate. These services can be provided for additional cost, if required.

2) Any additional reporting and documentation are not included in this estimate, and these services can be provided for additional cost, if required.

Task 3 Deliverables

1. ***Field visits and daily field reports (electronic file, PDF)***
2. ***As needed RFI, RFC, and submittal responses (electronic file, PDF)***
3. ***As-Graded Geotechnical Report (electronic file, PDF)***
4. ***Special Inspection Agency/Construction Materials Testing Laboratory Final Report (electronic file, PDF)***

4.0 TIME OF PERFORMANCE.

The CONSULTANT shall commence work immediately following authorization to proceed. The CONSULTANT has reviewed the project with DISTRICT and agrees to work with DISTRICT during the performance of the warehouse construction contract period. Record drawings will be prepared and submitted for DISTRICT review within 30 calendar days following receipt from the Contractor.

The CONSULTANT and DISTRICT mutually agree that they will work toward meeting the schedule. Should the Scope of Work be changed and/or should problems arise during the course of the work effort that could affect the schedule, it is understood that the CONSULTANT will develop a revised schedule, if required, to address scope changes or problems subject to the provisions of the Consulting Agreement.

This Task Order may be terminated by either party at any time upon thirty (30) days prior written notice to the other party. The date for termination of this Task Order shall be in accordance with, and shall not be sooner than, nor later than, the date for expiration or termination of the term of the Consulting Agreement.

5.0 PAYMENT.

Exhibit A presents the total not to exceed budget to provide the Scope of Services herein defined. A budget estimate of $222,095 is hereby established for the CONSULTANT's services unless amended by scope of services or schedule changes agreed to in writing by both DISTRICT and CONSULTANT. In no event shall the payment for services under this Task Order, as billed pursuant to the CONSULTANT's Fee Schedule in Exhibit A, exceed the amount of $222,095.

6.0 PROJECT TEAM.

CONSULTANT Team: The key members of the CONSULTANT Team are as follows:

Richard Brady and Associates (BRADY) – Engineer:
Robert J. (Jud) Warren, PE, BCEE – Project Manager
Debbie De Bow, PE – Project Engineer
Garrett Murawsky, PE – Project Engineer
Karl Kuebitz, PE – Structural Engineer
Christopher Dull, PE – Principal In Charge
Richard Brady, PE, BCEE – QA/QC

COAR Design Group – Architect
Jeff Katz- Principal Architect
Troy Schalge – Sr. Project Manager

Group Delta – Geotech
Kristen Chang, PE, GE – Geotechnical Engineer

If any of these individuals becomes unavailable to act in these capacities, the CONSULTANT may designate other individuals who shall be the replacement upon the written approval of the DISTRICT. In the event that these designated individuals are no longer capable of performing the services required, as determined in DISTRICT's discretion, and/or DISTRICT does not approve of the individual designated by the CONSULTANT to replace the then designated Project Manager, DISTRICT may, in its discretion, terminate this Agreement.

EFFECTIVE DATE.

This Task Order No. 4 is effective as of the _____ day of June, 2023.

IN WITNESS WHEREOF, duly authorized representatives of the District and CONSULTANT have executed this Task Order No. 4, evidencing its issuance by District and acceptance by CONSULTANT.

EL TORO WATER DISTRICT **RICHARD BRADY & ASSOCIATES, INC.**

By_____ By _____

DENNIS P. CAFFERTY
General Manager

CHRISTOPHER DULL
President

Task Order No. 4 - Exhibit A

Fee Summary

WORK ELEMENT DETAIL SUMMARY

LABOR HOURS			LABOR HOURS BY WBS								
			1.01	1.02	1.03	2.01	2.02	2.03	3.01	3.02	
Labor Category	Code	Bill Rate	Project Management	Pre-Construction Meeting	Progress Meeting	Prepare Conformed Drawings	Submittals / RFIs / Request for Clarifications	Final Inspection / Contract Punch List	Geotechnical Testing and Observation	Materials Testing and Special Inspection	TOTAL
Managing Engineer / Principal Engineer I	P5	$ 271.00	80.0	4.0	48.0	4.0	20.0	4.0	16.0	16.0	**192.0**
Staff Engineer	P2	$ 186.00	40.0	4.0	48.0	24.0	80.0	4.0	16.0	16.0	**232.0**
Subtotal Labor Hours			**176.0**	**8.0**	**96.0**	**28.0**	**100.0**	**8.0**	**32.0**	**32.0**	**480.0**
Total Labor Costs			**$ 37,528**	**$ 1,828**	**$ 21,936**	**$ 5,548**	**$ 20,300**	**$ 1,828**	**$ 7,312**	**$ 7,312**	**$ 103,592**

ODCs & Travel	Vendor/Subk		ODCS/TRAVEL BY WBS								TOTAL
Travel			$ -	$ 98	$ 983	$ -	$ -	$ 98	$ -	$ -	**$ 1,179**
Total Travel Cost			**$ -**	**$ 98**	**$ 983**	**$ -**	**$ -**	**$ 98**	**$ -**	**$ -**	**$ 1,179**
Services during Construction	COAR		$ -	$ -	$ -	$ -	$ 31,225	$ -	$ -	$ -	**$ 31,225**
Geotechnical	Group Delta		$ 15,470	$ -	$ -	$ -	$ -	$ -	$ 23,468	$ 36,495	**$ 75,433**
Service Center Charge		**$0.00**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Reproduction			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Subtotal ODCs			**$ 15,470**	**$ -**	**$ -**	**$ -**	**$ 31,225**	**$ -**	**$ 23,468**	**$ 36,495**	**$ 106,658**
G&A on ODCs (excl Travel)		**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total ODC Costs			**$ 15,470**	**$ -**	**$ -**	**$ -**	**$ 31,225**	**$ -**	**$ 23,468**	**$ 36,495**	**$ 106,658**
Profit on ODCs (excl Travel)		**10.00%**	**$ 1,547**	**$ -**	**$ -**	**$ -**	**$ 3,123**	**$ -**	**$ 2,347**	**$ 3,650**	**$ 10,666**
Total ODCs			**$ 17,017**	**$ -**	**$ -**	**$ -**	**$ 34,348**	**$ -**	**$ 25,815**	**$ 40,145**	**$ 117,324**
Total ODCS & Travel			**$ 17,017**	**$ 98**	**$ 983**	**$ -**	**$ 34,348**	**$ 98**	**$ 25,815**	**$ 40,145**	**$ 118,503**
		Total Cost	**$ 54,545**	**$ 1,926**	**$ 22,919**	**$ 5,548**	**$ 54,648**	**$ 1,926**	**$ 33,127**	**$ 47,457**	**$ 222,095**

Agenda Item No. 8

STAFF REPORT

To: Board of Directors **Meeting Date: May 22, 2023**

From: Hannah Ford, Engineering Manager

Subject: Headworks Grit Chamber Rehabilitation Project

BACKGROUND/PURPOSE

Last year, the District initiated a Headworks Rehabilitation Study (Study) with Carollo Engineers, Inc. (Carollo) to evaluate rehabilitating each process area at the WRP Headworks. During the Study, the District paused its $346,000 construction contract with SS Mechanical, Inc. (SS Mechanical) to recoat the walls of the Grit Chamber due to corrosion exposing aggregate in the concrete. Now that the Study is complete, the District would like to implement recommended modifications to the Grit Chamber as a change order to the current construction contract. In order for SS Mechanical to develop accurate costing, Carollo needs to advance the conceptual design. The purpose of this action item is to amend the District's contract with Carollo to include final design of the recommended Grit Chamber improvements.

SCOPE OF WORK

The recommended modifications to the Grit Chamber serve to improve maintainability, longevity, and energy efficiency of the grit removal system. The current contract with SS Mechanical includes some mechanical equipment recoating as well as pipe replacement, so this Project will modify the existing scope of work to match recommendations that will improve longevity and maintainability of the grit removal system. The over 40-year old grit aeration diffusers (Figure 1) will be replaced with wide-band non-clog diffusers (Figure 2) to provide better, more efficient air flow distribution and therefore potentially require less energy for grit removal. The air lift pumps are also over 40 years old and will be replaced.

In addition, the Project will install a VFD, thermal mass flow meter, new air piping, and automatic control valve as well as modify the controls for the grit blower to vary flow when the air lift pumps are running and optimize as needed for improved grit removal. The existing blower will be refurbished to provide a like-new unit, equipped with a VFD to enable aeration air flow optimization and realize associated energy savings.

Figure 1 – Current Grit Aeration Diffusers

Figure 2 -Proposed Grit Aeration Diffusers

PROPOSAL EVALUTION

WRP and Engineering staff met with the proposed Project Manager from Carollo and SS Mechanical to conduct a site visit to clarify scope and reduce cost. After negotiations, Carollo submitted the scope of work and fee for the Headworks Rehabilitation Study (Study) included as Attachment A. Table 1 summarizes the high-level tasks along with associated hours and cost.

Table 1- Grit Chamber Rehabilitation Study Proposed Fee

Task Description	Hours	Cost
Project Management and Meetings	44	$12,400
Construction Document Development	146	$51,478
Total	**190**	**$63,878**

In addition to their expertise on Headworks design, the proposed team possess unique knowledge of the District's Headworks due to their work on the Study.

COST AND FUNDING

Carollo estimates implementation of the proposed Grit Chamber improvements will cost approximately $500,000 if executed in Fiscal Year 2023/2024. The 7-Year CIP includes funding for this project accordingly.

The Fiscal Year 2022/23 CIP budgeted $230,000 for the Headworks Rehabilitation Study. District staff reduced scope of the originally budgeted Study and agreed to a contract limit of $132,848 with Carollo. Carollo only spent $76,061 of the Study contract, leaving $153,939 of the original budget available for project implementation costs. Executing the final design of the Grit Chamber Improvements Project will cost much less than the remaining available amount, as shown in Table 2. In fact, $90,061 will remain available for additional Headworks rehabilitation project implementation.

Table 2- Grit Chamber Rehabilitation Design Budget

Project	Cost
Study Budget	
Headworks Rehabilitation Study	$76,061
Budgeted	$230,000
Remainder Available for Design/Implementation	$153,939
Design Budget	
Remainder Available for Design/Implementation	$153,939
Final Design of Grit Chamber Improvements	$63,878
Remainder Available for Implementation	**$90,061**

RECOMMENDATION

Recommended Action:

Staff recommends that the Board of Directors authorize the General Manager to issue a contract to Carollo Engineers, Inc. in the amount of $63,878 for the design of the Headworks Grit Chamber Rehabilitation Project. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

Consulting Contract #126
Task Order # 5
Work Order 31-049

TASK ORDER NO. 5

HEADWORKS GRIT REHABILITATION PROJECT

This Task Order is issued by El Toro Water District ("DISTRICT") and accepted by ENGINEER (referred to herein as "CAROLLO") pursuant to the mutual promises, covenants and conditions contained in the Consulting Agreement between the above-named parties dated the _____ day of _____, 2023 in connection with the Headworks Grit Rehabilitation Project (Project). The terms and conditions of said Consulting Agreement are incorporated herein by reference.

1.0 BACKGROUND.

The DISTRICT provides domestic water, recycled water and sanitary sewer collection, treatment and disposal services to a population of nearly 50,000 in a service area that includes portions of the Cities of Aliso Viejo, Lake Forest, Laguna Hills, Mission Viejo, and all of the City of Laguna Woods. The DISTRICT owns and operates a 13.8-mgd peak wet weather capacity WRP that currently treats an average influent flow of 3.6 mgd. The WRP was originally constructed by Rossmoor Sanitation Company then later improved by Laguna Hills Sanitation, Inc., prior to DISTRICT ownership, as described below.

In 1963, Rossmoor Sanitation Company constructed the WRP with aeration, secondary clarification, solids thickening, and sludge drying beds. The Effluent Pump Station lifted secondary effluent to the Effluent Holding Pond (also known as Rossmoor Dam No. 1), which held secondary effluent for either processing through the Chlorine Contact Tank for golf course consumption or spraying vacant land.

The WRP did not include any preliminary treatment (i.e., screening and grit removal) until the Phase I Modification in 1979, when Laguna Hills Sanitation, Inc., installed several fine screens. The 1980 Phase II WRP Modification converted the sludge drying beds into an Aeration Pond and the aeration/clarification system into the Waste Activated Clarifier (WAC) surrounding a secondary clarifier (i.e., Secondary Clarifier No. 1). Phase II also added three additional secondary clarifiers for a total of four. The 1981 Phase III WRP Modification installed Dissolved Air Floatation (DAF) No. 1 along with a Sludge Storage Tank. Phase III also added a coarse screen and aerated grit chamber upstream of the fine screens. In 1985, Laguna Hills Sanitation, Inc., converted the existing thickener to DAF No. 2. In parallel with these WRP modifications, Aliso Water Management Agency constructed the Ocean Outfall Pump Station and Effluent Transmission Main, which conveys secondary effluent to the ocean outfall for disposal.

In 1995, the DISTRICT reconstructed the WRP by converting the Aeration Pond to an Equalization Basin downstream of the Headworks and constructing three Aeration Basins. Additional projects included reconstruction of the Fine Screen Facility and Secondary Clarifier No. 2 to support these modifications.

In 2015, the DISTRICT added the Tertiary Treatment Plant (TTP) at the WRP to filter and chlorinate secondary effluent prior to distribution for non-potable reuse. Several other minor improvement projects took place between the aforementioned projects, such as:

- In 2012, the DISTRICT added a dedicated blower for the WAC and an additional dedicated blower for the aerated grit chamber.
- In 2014, the DISTRICT replaced the manual bar rack in the Headworks bypass channel with a FloMinutor.

Note that the WRP does not currently and has never previously included primary clarification.

The Headworks at the WRP has experienced significant deterioration over the years and is in need of comprehensive upgrades and/or rehabilitation in order to effectively extend service life. To this end, a conceptual design study was conducted by CAROLLO in 2022. The study evaluated improvement options for the coarse screening, grit removal, and fine screening facilities within the headworks. Based on the findings on the study, the recommended improvements to the grit removal facility, summarized below, are found to be an immediate priority for the District. In fact, the DISTRICT has a current construction project to recoat the walls of the grit chamber due to corrosion exposing aggregate in the concrete. The DISTRICT intends to implement the grit removal improvements under the current construction contract for the grit chamber structural rehabilitation. This approach will streamline construction by consolidating all work affecting the grit removal facility and will result in an expedited delivery.

1. Rehabilitate the existing aerated grit chamber. This includes replacing grit air lift pumps, grit piping and valving, aeration diffusers, air piping and valving, as well as proceeding with the structural rehabilitation addressing concrete degradation.
2. Refurbish the existing grit aeration blower to provide a like-new unit. This includes equipping the blower with a VFD to enable aeration air flow optimization and realize associated energy savings. It will also install a new blower discharge header with a flowmeter and a flow control valve system. The existing pressure sensor will be re-installed on the new blower discharge header.
3. Retain the existing grit classifier and its control system. This equipment is in good condition and produces clean dry grit for hauling.

The DISTRICT would like Carollo's professional services to implement the recommended improvements to the existing grit removal facility at the WRP Headworks in accordance with the Headworks Rehabilitation Conceptual Design Study and develop a set of construction documents to this end.

PURPOSE.

The purpose of this Task Order is to establish scope, time and payment provisions for Engineering Services relative the Headworks Grit Rehabilitation Project as detailed in the following Scope of Services. Note that all submittals shall be electronic.

3.0 SCOPE OF SERVICES.

Task 1 Project Management and Meetings

Subtask 1a Project Management

CAROLLO shall communicate and coordinate as needed with DISTRICT staff to provide updates, follow up on action items, and manage the project on budget and on schedule. CAROLLO shall prepare and submit a concise monthly status report with the monthly invoice statement that includes the following:

- DISTRICT's standard form that includes a summary of expenditures by task showing total budget, billing to date, current billing, and remaining amount.
- A summary of work progress/items complete for all work tasks;
- An estimate of actual percent complete based on progress compared to percent complete based on budget expended; and
- An updated work plan providing schedule overview and technical task progression.

Deliverables:

1. ***Monthly status report***
2. ***Monthly invoice***
3. ***Decision log***
4. ***Action items log***

Subtask 1b Meetings

CAROLLO shall coordinate and lead the following meetings for this project:

- **Detail Design Development Workshop and Site Visit**: Prior to this kickoff meeting, a site visit will be performed by the design team on the day of the meeting and will focus on existing power distribution system architecture. Following the site visit, CAROLLO shall conduct a kickoff workshop during which CAROLLO shall present process flow diagrams, single-line diagrams, and preliminary mechanical and electrical layouts related to grit improvements for DISTRICT's input. In addition, CAROLLO shall review other key design information for further advancement as follows:
    - Work restrictions and permissible shutdowns.
    - Grit blower operating philosophy and related control system modifications.
    - Startup, testing, and commissioning requirements.

- **Draft Design Submittal Presentation Workshop**: CAROLLO shall review the draft design submittal with the DISTRICT as well as the CONTRACTOR for the grit chamber structural rehabilitation for comments and coordination. CAROLLO will incorporate the resulting comments into the Final Design Submittal as appropriate.

For all workshops and meetings, CAROLLO shall prepare and submit a meeting agenda to DISTRICT staff at least one business day in advance of the meeting and shall document and submit meeting minutes, highlighting action items and decisions, to DISTRICT staff within one week of the meeting. Unless otherwise noted, meetings and workshops will take place at the WRP.

Deliverables:

1. ***Meeting agenda***
2. ***Meeting minutes and decision log***

Task 2 Construction Documents Development

CAROLLO shall advance conceptual design for grit facilities established in the Headworks Rehabilitation Conceptual Design Study and prepare a set of construction documents consisting of technical specifications and drawings. Technical specifications will be limited to complex equipment as well as procedures for their testing, startup, and commission. Material specifications for items commonly used in construction will be included on the Drawings for convenience. Drawings for the Grit Chamber Rehabilitation Project will be revised in Bluebeam to convey the additional work to the extent feasible. Any additional drawings will also be developed in Bluebeam and use the same border as the Grit Chamber Rehabilitation Project'. Given the grit improvements will consist of refurbishment, rehabilitation, and in-kind replacement and be implemented as a change order to the Grit Chamber Rehabilitation Project, drawings will be generally diagrammatic in nature.

Refer to Attachment "A" for a preliminary drawing list that represents CAROLLO's assumptions for the scope and level of effort associated with this project. Typical details will be provided as an appendix to the specifications. Project elements are assumed to be as follows.

1. Mechanical:
    a. Replacement of existing air lift pumps, grit piping and valving, aeration diffusers and drop-legs, and other air piping and valving
    b. Refurbishment of existing grit air blower with a rebuilt core from the same manufacturer in addition to the electrical improvements listed below; The blower is to remain in the existing enclosure.
2. Electrical, instrumentation, and controls.

   a. A new motor, VFD, and associated controls to power the existing grit air blower; The VFD to be powered by the existing Headworks MCC and to communicate with the existing Headworks PLC. The VFD to be located outdoor near the existing blower enclosure.
   b. A new local controller (solenoid valves) to control the air flows to the new aeration diffusers and the new air lift pumps using timer control.
   c. A new air flowmeter and an existing pressure sensor on blower discharge header.
3. Demolition
4. Electrical conduit routing associated with construction of the project elements mentioned above.

Deliverables:

1. Draft Design Submittal:
   a. Electronic version of drawings and technical specifications.
      i. Bookmarked Adobe PDF format.
2. Final Design Submittal:
   a. Electronic version of drawings and technical specifications.
      i. Bookmarked Adobe PDF format.

ASSUMPTIONS AND EXCLUSIONS

This scope of work is assumed to not include the following:

1. Surveying, potholing, or other third-party services,
2. Materials testing or similar condition assessment of existing equipment and infrastructure,
3. Design services for coarse/fine screening, composite sampling, or influent metering improvements,
4. PLC replacement or SCADA system modifications,
5. Front-end specifications,
6. Bid phase services,
7. Construction management or inspection services, or
8. Preparation of as-built drawings.

It is assumed that DISTRICT review time for deliverables will be 2-weeks. It is further assumed that the DISTRICT will provide available CAD files for existing facilities; where CAD files are not available, it may be acceptable to use scanned images of existing as-built drawings as background for the drawings that CAROLLO will develop.

4.0 TIME OF PERFORMANCE.

CAROLLO shall commence work immediately following authorization to proceed. CAROLLO has reviewed the project with the DISTRICT and agrees that 17 weeks is a reasonable time frame within which to accomplish the work up to and including Task 3. Task 4 shall be performed in accordance with the CONTRACTOR's construction schedule.

CAROLLO and the DISTRICT mutually agree that they will work toward meeting the schedule. Should the Scope of Work be changed and/or should problems arise during the course of the work effort that could affect the schedule, it is understood that both CAROLLO and the DISTRICT will develop a revised schedule, if required, to address scope changes or problems subject to the provisions of the Consulting Agreement.

This Task Order may be terminated by either party at any time upon thirty (30) days prior written notice to the other party. The date for termination of this Task Order shall be in accordance with, and shall not be sooner than, nor later than, the date for expiration or termination of the term of the Consulting Agreement.

5.0 PAYMENT.

The estimated hours and budget to provide the Scope of Services herein defined is presented in Attachment "B". A budget estimate of SIXTY-THREE THOUSAND AND EIGHT HUNDRED SEVENTY-EIGHT DOLLARS ($63,878.00) is hereby established for CAROLLO's services unless amended by scope of services or schedule changes agreed to in writing by both the DISTRICT and CAROLLO. In no event shall the payment for services under this Task Order, as billed pursuant to CAROLLO's Fee Schedule, exceed the amount of $63,878.00.

6.0 PROJECT TEAM.

CAROLLO Team: The key members of the CAROLLO Team are shown in Figure 1.

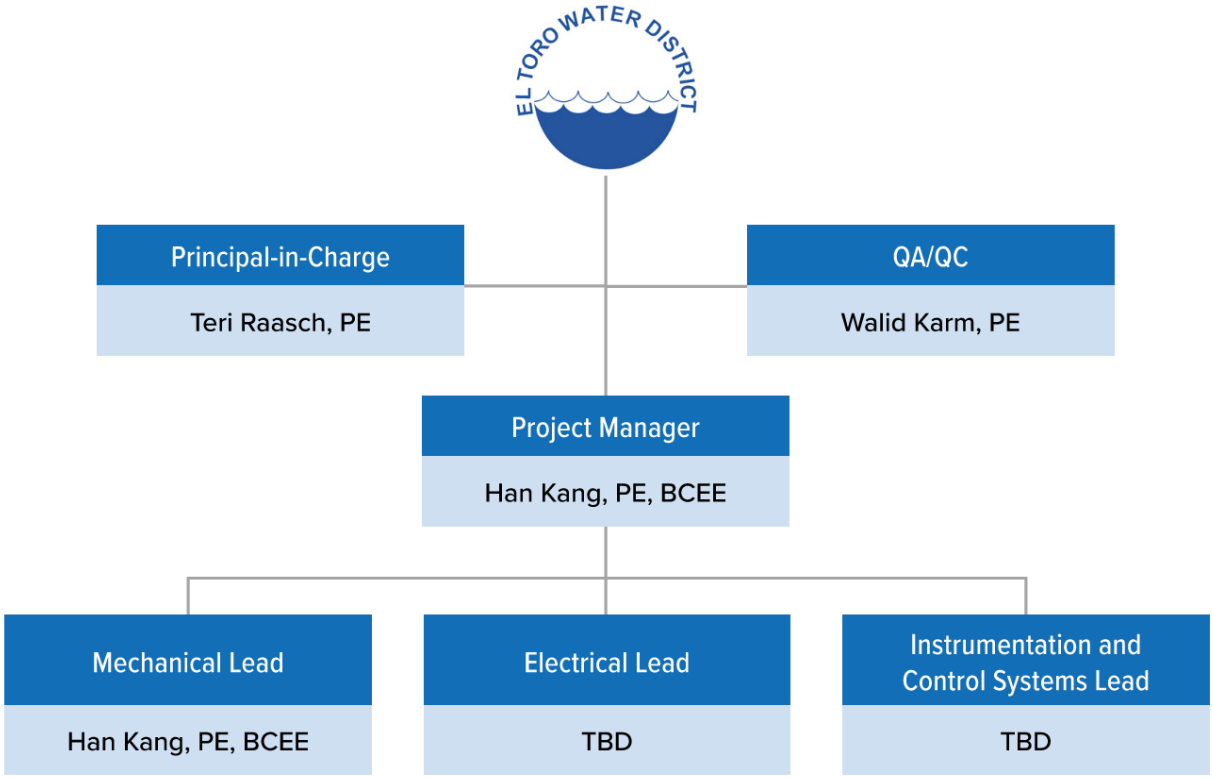


Figure 1 – Headworks Grit Rehabilitation Project Team

If any of these individuals becomes unavailable to act in these capacities, CAROLLO may designate other individuals who shall be the replacement upon the written approval of the DISTRICT. In the event that these designated individuals are no longer capable of performing the services required, as determined in the DISTRICT's discretion, and/or the DISTRICT does not approve of the individual designated by CAROLLO to replace the then designated Project Manager, the DISTRICT may, in its discretion, terminate this Agreement.

EFFECTIVE DATE.

This Task Order No. 5 is effective as of the _____ day of _____, 2023.

IN WITNESS WHEREOF, duly authorized representatives of DISTRICT and CAROLLO have executed this Task Order No. 5, evidencing its issuance by DISTRICT and acceptance by ENGINEER.

EL TORO WATER DISTRICT

By_____
DENNIS P. CAFFERTY
General Manager

CAROLLO ENGINEERS, INC.

By_____
HAN KANG
Project Manager

_____
TERI RAASCH
Principal-in-Charge

El Toro Water District
Headworks Grit Rehabilitation Project
Preliminary Drawing List

Sheet No.	Dwg No.	Dwg Title Line 1	Dwg Title Line 2	Modify Existing Drawing?	Responsible
1	G-1	GENERAL	Cover Sheet, Sheet Index and Vicinity Map	Yes	Carollo
2	C-2	CIVIL	Key Plan & Legend	Yes	Carollo
3	C-3	CIVIL	Grit Chamber Plan 1	Yes	Carollo
4	C-4	CIVIL	Grit Chamber Plan 2	Yes	Carollo
5	M-1	MECHANICAL	Grit Facility Plan	No	Carollo
6	M-2	MECHANICAL	Grit Facility Sections	No	Carollo
7	M-3	MECHANICAL	Grit Facility Details	No	Carollo
8	M-4	MECHANICAL	Grit Blower Enclosure	No	Carollo
9	E-1	ELECTRICAL	Notes, Symbols, and Abbreviations	No	ProjectLine
10	E-2	ELECTRICAL	Schedules	No	ProjectLine
11	E-3	ELECTRICAL	Electrical Plan and Details	No	ProjectLine
12	E-4	ELECTRICAL	MCC Elevation and One-Line Diagram	No	ProjectLine
13	I-01	INSTRUMENTATION	Abbreviations and Symbols 1	No	ProjectLine
14	I-02	INSTRUMENTATION	Control Schematics - Blower VFD and Pneumatic Air Con	No	ProjectLine
15	I-03	INSTRUMENTATION	Grit Airlift Pumps and Blower P&ID	No	ProjectLine

El Toro Water District
Headworks Grit Rehabilitation Project

Attachment B
Fee Estimation

	Design Phase Task Description	Client Services Manager	Project Manager, Quality Control	Professional	Staff Engineer	Senior CAD Technician	CAD Technician	Support Staff	TOTAL HOURS	CAROLLO SUBTOTAL COST	SUB-CONSULTANT COST	OTHER ODC's	TOTAL COST
	Personnel Hourly Rate	$ 263	$ 334	$ 263	$ 155	$ 224	$ 161	$ 143					
Task 1 – Project Management and Meetings													
1a	Project Management		4						4	$ 1,336		$ 56	$ 1,392
1b	Meetings		12		28				40	$ 8,348	$ 2,100	$ 560	$ 11,008
	Task 1 – Project Management and Meetings Subtotal	**0**	**16**	**0**	**28**	**0**	**0**	**0**	**44**	**$ 9,684**	**$ 2,100**	**$ 616**	**$ 12,400**
Task 2 – Construction Document Development													
2	Construction Document Development		28	10	60		16	32	146	$ 28,434	$ 21,000	$ 2,044	$ 51,478
	Task 2 – Construction Document Development Subtotal	**0**	**28**	**10**	**60**	**0**	**16**	**32**	**146**	**$ 28,434**	**$ 21,000**	**$ 2,044**	**$ 51,478**
	DESIGN PHASE TOTAL HOURS	**0**	**44**	**10**	**88**	**0**	**16**	**32**	**190**	$ 38,118	--	--	--
	DESIGN PHASE TOTAL COST	**$ -**	**$ 14,696**	**$ 2,630**	**$ 13,640**	**$ -**	**$ 2,576**	**$ 4,576**	**-**	**$ 38,118**	**$ 23,100**	**$ 2,660**	**$ 63,878**

Agenda Item No. 9

STAFF REPORT

To: Board of Directors **Meeting Date: May 22, 2023**

From: Rory Harnisch, Project Engineer

Subject: DAF Unit 2 Rehabilitation and Retrofit Project
Nikuni Pump Pre-Purchase Contract

BACKGROUND

Originally constructed in 1985, the DAF Unit 2 (DAF 2), thickens Waste Activated Sludge (WAS) prior to hauling off site to SOCWA. The WRP has two DAF Units and currently prioritizes DAF Unit 1 (DAF 1). Both DAF 1 and DAF 2 utilize Nikuni regenerative turbine pumps to circulate and create micro air bubbles to thicken the WAS for processing and removal.

Figure 1 – Existing DAF Unit 2 Nikuni Pump

DAF 2's pump, shown in Figure 1, was first installed in 2010 and, since then, has already been rebuilt once. The existing 25-HP Nikuni pump has been known to struggle with higher DAF 2 loading rates during its critical use in the summer months. District staff estimate a larger (i.e., 40-HP) motor on the recirculation pump will:

1. Increase thickening by approximately 0.5% (from 3% to 3.5%) thereby reducing truck trips required for hauling to SOCWA,
2. Improve overall operability and performance as experienced at DAF 1, and
3. Standardize equipment across the DAF system.

Due to the expected 12-14 week lead time, District staff recommends pre-purchasing the new 40-HP Nikuni pump before the equipment installation contract is bid.

PREVIOUS REPAIR WORK

In the fourth quarter of 2022, District staff identified the full project scope in order to rehabilitate the non-operational DAF 2 with electrical upgrades, pump replacement, and mechanical equipment replacement. Interim repair work was necessary to allow operation

until the mechanical equipment could be procured and replaced. Staff identified an interim scope, parsed from the full scope, as replacing the metal skirt which seals the center feedwell to the structure floor, relocating the VFD from the catwalk to the lower deck, further defining alarms and adding SCADA integration. Staff hired Don Peterson Contracting Inc for the mechanical-related repairs and Southern Contracting Inc for the electrical related repairs. All repairs were complete before the end of 2022. Staff also pre-purchased some of the mechanical components due to their 35-week lead time after Board authorization in November 2022. Table 1 summarizes the cost spent to date for the repair work and pre-purchase package.

Table 1 –DAF 2 Repair Cost To Date

Component	Cost
Equipment Cost	$2,917.80
Mechanical Installation Cost	$12,075.00
Electrical Installation Cost	$11,776.00
Mechanical Component Pre-purchase Package	$100,871.88
Total	**$127,640.68**

PREPURCHASE PACKAGE

District staff has worked with World Water Works (WWW) to develop another pre-purchase package for the Nikuni pump with skid and valve components.

The Nikuni pump has a 12 to 14-week lead time after execution of a purchase order, which includes submittal creation, District review, and fabrication. This equates to a similar delivery date of the already pre-purchased DAF 2 mechanical components. In order to maintain equipment consistency between DAF 1 and DAF 2, provide less daily maintenance, obtain similar delivery dates of both the pump and the mechanical components, and guarantee procurement of the Nikuni pump for the remainder of the DAF 2 Rehabilitation and Retrofit project, District staff recommends sole-sourcing the upgrade of the existing 25-HP Nikuni pump to a 40-HP Nikuni pump to WWW.

The proposed pricing is valid until June 30, 2023 and includes submittals, freight, taxes, and a 12-month warranty. The manufacturer stated submittal lead times are between 2-3 weeks, and pump fabrication of 6-8 weeks. With this timetable, the pump would be delivered by mid to end of September. Table 2 summarizes the total proposed cost of the pump package. Appendix A includes the complete WWW proposal for reference.

Table 2 – Pre-Purchase Nikuni Pump Cost

Component	Cost
Pump Cost	$30,225.00
Engineering / Consulting	$7,000.00
Taxes	$900.00
Freight	$2,342.44
Total	**$40,467.44**

NEXT STEPS

Because the pre-purchased pump will arrive in early September 2023, in close proximity to the already pre-purchased DAF equipment delivery date, staff has been working to develop design documents with the intent to hire a contractor for pump and DAF equipment installation by July 2023. Next fiscal year's CIP budget includes additional funds to cover remaining costs for construction. Table 3 summarizes the remaining CIP budget for construction of the remainder of the project.

Table 3 – Remaining Construction Budget

Component	Cost
DAF 2 Interim Repair Costs	$26,768.80
Pre-Purchase DAF Equipment Cost	$100,871.88
Pre-Purchase Pump Cost	$40,467.44
Total	**$168,108.12**
CIP Budget Fiscal Year 2022/2023	$203,000.00
CIP Budget Fiscal Year 2023/2024	$18,640.68
Remaining Construction Budget	**$53,532.56**

RECOMMENDATION

Recommended Action:

Staff recommends that the Board of Directors authorize the General Manager to issue a purchase order to World Water Works, Inc. in the amount of $40,467.44 for the purchase of the Nikuni Pump for the DAF Unit 2 Rehabilitation and Retrofit Project. Staff further recommends that the Board authorize the General Manager to fund the project costs from the District's Capital Reserves in accordance with the District's adopted Capital Reserve Policy.

QUOTE

JS-031022-003

World Water Works, Inc.
PO Box 892050
Oklahoma City, OK 73189
(405) 943-9000 phone
(405) 943-9006 fax

Quote #: JS-031022-003
Company: El Toro Water District-LagunaHillsCA
Date: 03-10-2022
Issued By: John Schnecker

Description	Item #	QTY	Unit Price	Line Total
Nikuni Pump with Skid-Valve	M80FP-1-S-V	1.000000	$ 30,225.00	$ 30,225.00
(Generic) Consultation / Engineering	89948	1.000000	$ 7,000.00	$ 7,000.00
Freight	87503	1.000000	$ 900.00	$ 900.00
Taxes	82554	1.000000	$ 2,342.44	$ 2,342.44
			TOTAL	$ 40,467.44

Lead time: Submittals: 2-3 weeks from WWW-OKC

Nikuni Pump: 6-8 weeks

Please Reference the Quote# JS-031022-003 on your Purchase Order.

Expected shipment within 999 Business Days of receiving the Purchase Order.

Thank you for your consideration!

Payment Terms. All payments are net 30 days.
Offer Validity. This offer and price is valid until 6/30/2022.
Shipping. Shipping & Handling costs have NOT been included. WWW's preferred carriers are FedEx and UPS.
Taxes. Prices do NOT include sales, excise or similar taxes levied by government authority.
Cancellation. Buyer's cancellation of any order is required to be in writing, and Buyer is subject to pay a cancellation fee equal to 25% of the total purchase price plus all non-recoverable costs and expenses.
Law. The rights and obligations of the parties shall be governed by the laws of the State of Oklahoma.

STAFF REPORT

To: Board of Directors **Meeting Date: May 22, 2023**

From: Hannah Ford, Engineering Manager
Rory Harnisch, Project Engineer

Subject: Capital Project Status Report

I. R-6 Reservoir Floating Cover and Liner Replacement Project

Construction of the R-6 Reservoir cover commenced this month after completion of the liner installation. Figures 1 through 4 show photos of the last portion of liner installed, around the inlet and outlet vaults. Figures 5 and 6 show the first panels of cover installation, on the bench of the reservoir. Substantial completion remains on schedule to occur at the end of September 2023.

Figure 1 – Final Liner Installation

Figure 2 – Liner Installation around Vaults

Figure 3 –Sand Tube Placement

Figure 4 – Air Lance Testing

Figure 5 – Drone Footage of Floating Cover Installation on Bench

Figure 6 – Floating Cover Installation on Bench

The District worked with the contractor, Layfield USA Inc. (Layfield), to develop the cost for the first change order, which resulted in a net credit to the District, as summarized in Table 1. Inspection determined that the existing inlet vault was in good condition, so the District removed constructing a new inlet vault as part of this construction contract, which resulted in a credit of $186,850. Combining this large credit with the other credits and adders, the Change Order resulted in a net credit of over $48,000 to the District.

Table 1 – R-6 Reservoir Floating Cover and Liner Replacement Change Order No. 1

Change Order Request	Adder	Deduct
Class II base rock backfill over storm drain and electrical conduit trenches.	$29,508.70	
Rainwater removal pump conductor revisions in perimeter road duct bank.	$107,554.75	
Revise floating cover shop T-seam patches requirement.		($6,000.00)
Protection for existing piezometer & survey monuments in perimeter road.	$1,000.00	
Remove Contractor provided 8" gate valve (install ETWD provided 8" gate valve instead).		($16,664.62)
Perimeter road temporary repairs.	$12,501.59	
Soil testing trench spoils stockpiled material.		($1,582.00)
Additional liner ballast sand tubes at ramp & bench.	$5,400.00	
Remove “New Inlet Valve Vault” (provisional bid item #26) from project scope of work.		($186,850.00)
Storm drain pipe and duct bank trenching delays.	$5,106.02	
Utility conflict and repair to 1-inch service line.	$1,153.32	
Subtotal	$162,224.38	($211,096.62)
Change Order No. 1 Total	**($48,872.24)**	

District staff is working to hire a design consultant to evaluate and recommend solutions to repair the perimeter road. After evaluation and design, the District will competitively bid the contract for the perimeter road repair. District staff plans to start perimeter repair work after completion of the cover and liner installation. In addition, District staff are preparing the disinfection and startup plan to prepare in advance of the reservoir fill anticipated in August.

Table 1 summarizes the total budget, timeframe, and percent complete for the current construction contract with Layfield. Because invoiced to date only reflects work through the end of March 2023, budget expediture remains less than schedule completion.

Table 1 – R-6 Floating Cover and Liner Replacement Schedule and Budget Status

Construction Contract	Total	Earned to Date	Percent Complete
Budget	$23,154,428[1]	$11,396,240	49%
Schedule	August 18, 2022 – September 30, 2023		68%

[1]Includes deductive Change Order No. 1 of $48,872.24. Excludes optional bid items related to asphalt paving replacement.

II. Filter Building and Clearwell Demolition Project

Resource Environmental, Inc. (REI) completed blind flange and thrust block installation this month. REI plans to complete final backfill by the end of the month. Figure 7 shows the current status of the Filter Building site with the majority of backfill complete. To rectify the erosion caused by the main line leak and heavy rains (Figure 8), District staff plans to address hillside repairs as a time and materials (T&M) based change order.

Figure 7 – Filter Plant Demolition near Completion

Figure 8 – Hillside Erosion near Clearwell

Table 2 summarizes the total budget, timeframe, and percent complete for the construction contract. Although contractual end date was extended by 23 days to February 1, 2023, heavy rains have further delayed REI's ability to complete the final backfill. Demolition work will be complete by the end of this month, and hillside repairs will take place shortly thereafter. The District will issue a formal change order modifying the contractual end date accordingly.

Table 2 – Filter Plant Demolition Schedule and Budget Status

Construction Contract	Total	Earned to Date	Percent Complete
Budget	$725,226.96[1]	$706,076	97%
Schedule	September 1, 2022 – February 1, 2023		--

[1]Includes $40,225.96 added as part of Change Order No. 1, which incorporated additional removal and disposal of unforeseen asbestos containing materials.

III. Pump Station Asset Management Plan

After incorporating recommendations from the Pump Station asset management work into the 7-year CIP, District staff continues to work with the consultant, Hazen and Sawyer (Hazen), to refine the dynamic dashboard that summarizes findings via graphics in PowerBI. Figure 9 shows a preview of one page of the dashboard related to risk.

Figure 9 – Pump Station Asset Mangement Dynamic Dashboard Tool Preview

In addition to finalizing the dashboard, Hazen is developing an Asset Management Plan report that will document methodology and findings. District staff are working with Hazen and Sawyer to review and refine costs per asset and ultimately obtain an average annual investment cost in Pump Stations assets for budgeting purposes.

The final scope element of this contract is to evaluate the computerized maintenance management system and determine how to best integrate information from staff's daily maintenance into the asset management dashboard, with the goal of automating adjustments to the remaining useful life calculations in real time. Processes developed as part of the Pump Station Asset Management work will be applied to the next phase, WRP Asset Management, which District staff plans to commence at the beginning of Fiscal Year 2023/2024.

IV. WRP Main Electrical Power Breaker

District staff worked with Schneider Electric to install the last of the three purchased breakers at the WRP this month, as shown in Figures 10 and 11. Schneider Electric provided four portable generators to power critical processes at the WRP while the breaker was installed, as shown in Figures 12 through 15. Breaker installation was completed successfully over the course of one long workday on Tuesday, May 16th.

In parallel, District staff has been verifying the status of the purchased ATSs, which were anticipated in August 2023. The manufacturer indicated that delivery may be delayed 20 weeks (i.e., until January 2024) but is working to rectify that timeline. Table 3 summarizes the total budget, timeframe, and percent complete for this project.

Figure 10 – Breaker Installation in the Main Electrical Room

Figure 11 – New 4,000 amp Breaker

Figure 12 – Portable Generator at Headworks

Figure 13 – Portable Generator at Main Electrical Building

Figure 14 – Portable Generator at RAS Pump Station

Figure 15 – Portable Generator at Field Office/Laboratory

Table 3 – WRP Main Electrical Power Breaker Schedule and Budget Status

Construction Contract	Total	Earned to Date	Percent Complete
Budget	$196,124[1]	$112,737	57%
Schedule	April 29, 2021 – August 31, 2023		88%

[1]Includes $61,633 change order for two new ATSs.

V. Joint Transmission Main (JTM) Pump Station Project

District staff finalized the project with the contractor, J.R. Filanc Construction Co. (Filanc), and developed the record drawings with the engineering team of Black and Veatch (BV). Staff anticipates receiving the final invoice for record drawing development from the BV team by the end of May.

Staff currently waits for delivery of the pre-purchased MCC equipment, which is scheduled in August 2023. Once delivered, District staff will shut down the pump station and install of the new MCC.

The District obtained revenue bond funding for this Project based on the conceptual design, which budgeted the total project at $2,400,000. Actual expenditures of $1,047,790 are well below that estimate, leaving $1,352,210 of available funds. Table 4 summarizes expenditures on this Project compared to contract limits and overall project budget.

Table 4 – JTM Pump Station Cost Summary

Contract Type	Contract Limit	Actual Expenditure	Remaining Available
Tetra Tech (Conceptual Design)	$10,000	$9,975	$25
Black and Veatch (Design)	$182,043	$182,043	$0
Black and Veatch (ESDC)	$71,300	$71,300[1]	$0[1]
Dudek (Environmental)	$62,686	$58,424	$4,262
Filanc Construction	$499,195	$499,195	$0
DXP Enterprises, Inc. (Pre-purchased Pump)	$67,479	$67,479	$0
Allen Bradley (Pre-purchased MCC)	$62,879	$62,879	$0
JRWSS (Meter Replacement)	$95,762	$95,762	$0
Total Project Costs	**$1,051,275**	**$1,047,790**	**$4,288**
Budgeted Cost			**$2,400,000**
Remaining Available Funds (Difference between Budget and Actual Expenditure)			**$1,352,210**

[1]District assumes BV will invoice for the full contract amount to leave $0 remaining.

VI. Revenue Bond Expense Tracking

District staff have been closely tracking project actuals compared to revenue bond expenditures, as summarized in Table 5. Some expenses were incurred prior to the District obtaining the revenue bond, so those costs are shown as "non-bond costs" in Table 5. Since issuance of the bond, the District has re-allocated funding previously intended for automated metering infrastructure (AMI) to other capital projects, as indicated in the 7-Year CIP. Current project expenditure remains over $0.5 million below the revenue bond value. Any excess revenue bond funding will be re-allocated to ongoing capital projects.

Table 5 –Revenue Bond Expense Tracking

Projects	Projected Cost	Non - Bond Costs	Projected Bond Expenditure
R-6 Reservoir Floating Cover & Liner Replacement	$12,237,866	$150,475	$12,087,395
Filter Plant Demolition / Warehouse Design	$1,356,421	$412,309	$944,111
Warehouse Construction	$2,624,495		$2,624,495
JTM Pump Station	$1,047,790	$22,385	$1,025,405
South Orange County Turnout	$3,000,000		$3,000,000
SOCWA	$692,520		$692,520
Other Capital Projects	$6,660,971		$6,660,971
SRF Reserve Release			($2,270,000)
Total			**$24,952,382**
Revenue Bond Value			**$25,530,600**
Remaining Available Bond Funding			**$578,218**

VII. Water and Sewer Master Plan Update

Carollo Engineers, Inc. (Carollo) is incorporating the District's comments on the draft Master Plan in order to finalize. Remaining elements of work include refining recommendations related to:

- Distribution system water quality based on planned chlorine decay testing, and
- Aliso Creek Lift Station based on pump testing the District conducted this month.

Wrap up of the final Master Plan hinges on completion of this ongoing testing, so schedule has been extended likely to the third quarter of 2023 to accommodate.

VIII. Tertiary System Optimization

The District's consultant, Trussell Technologies, Inc. (Trussell Tech), completed the draft the Technical Memorandum (TM) for District review in late February. District staff met with Trussell Tech to discuss changes and answer questions in mid-March. Trussell Tech revised the draft TM and recommended submission to Division of Drinking Water (DDW). District staff submitted the TM to DDW in mid-April and awaits approval, which may extend into August.

IX. Effluent Transmission Main (ETM) Backflow Prevention Project

District staff is working with the project contractor, Don Peterson Contracting (DPC), to continue the submittal phase including finalizing the construction baseline schedule. DPC will perform exploratory excavations in late May to obtain existing pipeline dimensions.

The District has received all pre-purchased components (Surgebuster check valve and butterfly valves). Staff also maintains communication with IRWD Operations to verify they can still accommodate a 3-day shutdown of the ETM in a June through July 2023 time period. Additional coordination will take place with SOCWA for upcoming outages of the Aliso Creek Ocean Outfall.

X. Effluent Pump Station Rehabilitation Project

The contractor, Filanc, is still demobilized from the site and plans to return prior to the pump installation. Currently, the pumps are scheduled to ship in early June. However, because the EPS construction schedule encroaches into the critical shutdown window of the ETM Backflow Prevention Project, the District has elected to delay the EPS Pump Station Rehabilitation Project until after the ETM is complete.

XI. Caltrans I-5 Widening Utility Relocations

Phase B is complete, and the District began receiving reimbursements for Phase B work activities from Caltrans. Staff maintains communication with the Caltrans contractor and Caltrans construction management team for Phase C activities, which will include relocation of two fire hydrants and an irrigation meter. Phase C is anticipated to begin in August 2023.

XII. Energy Efficiency Analysis

District staff continues to work on developing the recommended energy efficiency projects for the WRP and pump stations. Table 6 summarizes the projects staff are developing. All pumps have been tested by SCE. SoCalREN has approved rebates for pump replacement. District staff are working on replacement schedule, cost, and lead times with vendors.

Table 6 – Energy Efficiency Progress Summary

Facility	Recommended Project	Projected Savings (kWh/yr)	Budgetary Cost	Projected Payback (years)[1]	Status
WRP					
ABAC based Aeration Control	Introduce ammonia-based aeration control (ABAC) in aeration basins.	334,000	$84,000	1.7	Submitted rebate paperwork to SCE for approval. Analyzer will be installed once vendor provides necessary software.
WAC Rehabilitation	Eliminate waste activated clarifier (WAC) sludge blower. Replace with polymer addition.	147,000	$112,000	4.9	Will remove WAC operation and its associated blower as part of Secondary Clarifier No. 1 Rehabilitation Project.
Odor Control System Optimization	Install H_2S analyzers for trimming and VFDs on blowers.	29,000	$31,000	5.0	Will evaluate as part of this year's WRP asset management work.
Aerated Grit Chamber Optimization	Optimize blower for aerated grit chamber.	54,000	$65,000	5.6	Refer to scope modifications to Grit Rehabilitation Project proposed as part of this meeting's agenda.
RAS Pump Optimization	Flow pace and trim based on sludge blanket monitoring.	113,000	$156,000	6.4	Will evaluate as part of next year's WRP asset management work.
Aeration Distribution Optimization	Automate valves on droplegs to zones of aeration basins.	94,000	$254,000	12.5	
Large Bubble Mixing in Equalization Basin	Replace mixing pumps with large bubble diffusers.	235,000	$880,000	17.3	
Water Pump Stations					
P-1	Rehabilitate due to degraded efficiency.	98,000	$107,000	6.4	Included in FY 24/25 CIP budget.
P-4	Following recent testing, rehabilitate due to degraded efficiency.	62,000	$92,000	12.1	Determining rebate amount prior to purchase.
Cherry	Rehabilitate due to end of service life.	12,000	$29,000	12.1	Included in FY 24/25 CIP budget. Based on pump station asset management evaluation only one pump needs to be replaced from an energy efficiency perspective.
Shenandoah	Rehabilitate due to degraded efficiency.	33,000	$43,000	6.8	Deferred based on pump station asset management evaluation. Current

					condition and efficiency do not warrant replacement.
Spartan	Rehabilitate due to degraded efficiency.	59,000	$29,000	3.5	Determining rebate amount prior to purchase.
Towers	Potentially rehabilitate due to degraded efficiency based on November 2015 test data.	1,488	$12,000	5.4	Received test results and now working to evaluate and develop replacement cost.
Sewer Lift Stations					
Aliso Creek – Pump 1	Tested in April 2021, and pump and motor were replaced thereafter in December 2021.	37,276	$30,000	7.3	Received test results and now working to evaluate and develop replacement cost.
Aliso Creek – Pump 2	Pump and motor were replaced in September 2020 and SCE testing conducted in April 2021. Evaluate deficiencies to understand causation of rapid efficiency decline in one of the duty pumps.	87,000	$36,000	3.1	Conducting a pressure and head test to identify hydraulic issues of the lift station. Included a rehabilitation project in FY 23/24 CIP budget.
Northline – Pump 3	Pump and motor were replaced in January 2020 and SCE testing conducted in April 2021. Evaluate deficiencies to understand causation of rapid efficiency decline in one of the duty pumps.	24,000	$18,000	4.5	Operations staff indicate that Northline Pump 3 is under frequent strain because it serves to regularly pump down the wet well, at which time it is subject to poor suction conditions.
Westline	Following recent testing, defer rehabilitation for another 5 years.	13,000	$20,000	7.2	Efficiency has not yet significantly degraded to merit rehabilitation.
Freeway	Potentially rehabilitate due to degraded efficiency based on October 2015 test data.	75,457	19,500	1.7	Received test results and now working to evaluate and develop replacement cost.
Veeh – Pumps 3 and 4	Potentially rehabilitate due to degraded efficiency based on September 2015 test data.	33,828	11,000	2.1	Received test results and now working to evaluate and develop replacement cost.

(1)Does not include potential rebate from SCE.

F.Y. 2022/23 CAPITAL IMPROVEMENT PROGRAM BUDGET ITEMS > $50,000
BOARD APPROVAL SCHEDULE

Category	Project Description	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Revenue Bond / CIP Budget	Board Approved Cost
2022/23 Capital Projects															
	4920 Siphon	E	E	E	BP									$170,000	< $50,000
	La Paz Abandonment	ET	ET	ET	ET	ET	ET	ET	ET	ET	ET	ET	ET	$100,000	-
	WRP Optimization Study			A	E	E	BP							$200,000	$117,078
	Headworks Rehabilitation Study	A	E	E	E	E	BP							$230,000	$132,848
	Headworks Bar Screen Retrofit	Pushed until FY 2023/24 based on Headworks Rehabilitation Study												$515,000	-
	Asset Management		B	A	E	E	BP	E			E	E	E	$100,000	$132,170
	ETM Backflow Prevention Project				E	E	A	E	B	A	C	C	C	-	$304,463
2022/23 Capital Equipment															
	P-4 Pump Replacement											ET	ET	$59,000	-
	P-1 and R-5 Fence Alarm Replacement	R-5 fence alarm replacement deferred to future. P-1 fence alarm replacement within GM authority.												$69,000	< $50,000
	Reservoir R-3 RMS Mixer Replacement				E	A	C	C	C					$77,000	$75,841
	Headworks Bar Screen PLC Panel Replacement	Pushed until FY 2023/24 based on Headworks Rehabilitation Study												$60,000	-
	Boom Truck (Diesel - Regulatory Compliance)								A	O				$315,000	$360,633
Revenue Bond Projects															
	R-6 Reservoir Floating Cover	A	C	C	C	C	C	C	C	C	C	C	C	$9,776,400	$11,948,193
	Filter Plant Site Use Plan Investigation and Design	A / E	C / E	C / E	C / E	C / E	C / E	A	C	C	C	A	C	$2,917,000	$1,163,616
	AMR / AMI Implementation	To be determined based on costs incurred by ongoing revenue bond projects												$6,761,900	-
	South Orange County Turnout Project			E	E	E	E	E	E	E	E	E	E	$3,000,000	
	JTM Pump Station	B	A	C	C	C	C	C	C	C				$2,400,000	$989,546
Previous Fiscal Year Carryover															
	R-2 Reservoir Interior Recoating	C	C	C	C	A								$605,000	$806,000
	Wash Press System at Headworks		R	C	C	C								$200,000	$103,063
	Effluent Pump Station Rehabilitation	C	C	C	C	C	C	C	C	C				$150,000	$425,000
	WRP Main Electrical Power Breaker Upgrades	C	C	C	C	C								$140,000	$134,491
	DAF Unit #2 Rehabilitation Project	E	E	E	E	A	O			E	E	A	B	$203,000	$127,641
	Aliso Creek Emergency Generator Replacement Project	E	E	E	E	E	E	E	E	E	E	E	E	$275,000	-
	Grit Chamber Rehabilitation Project											A	E	$85,000	$416,000
	OOPS Emergency Generator Replacement	C	C	C										$220,000	$414,523
	Main Office HVAC Replacement Project	B	A	C	C	C	C	C						$240,000	$291,140
	Master Plan Update	ET	ET	ET	ET	ET	BP	ET						$350,000	$349,951
	Caltrans I-5 Widening Utility Relocations			C	C									$0	$627,365
													Total	$29,379,300	$18,615,099

Key:

- Water
- Wastewater
- Split between Water and Wastewater
- Board Involvement

Abbreviations:

A = Approve by Board
B = Bid
BP = Board Presentation
C = Construction
E = Engineering/Study
ET = Evaluate
L = Legal
N = Negotiate
O = Order
P = Permit
RFP = Request for Proposal
R = Receive

EL TORO WATER DISTRICT
Glossary of Water Terms

Accumulated overdraft: The amount of water necessary to be replaced in the intake area of the groundwater basin to prevent the landward movement of ocean water into the fresh groundwater body.

Acre-foot, AF: A common water industry unit of measurement. An acre-foot is 325,851 gallons, or the amount of water needed to cover one acre with water one foot deep. An acre-foot serves annual needs of two typical California families.

ACWA: Association of California Water Agencies.
A statewide group based in Sacramento that actively lobbies State and Federal Government on water issues.

Advanced treatment: Additional treatment processes used to clean wastewater even further following primary and secondary treatment. Also known as tertiary treatment.

AFY: Acre-foot per year.

Alluvium: A stratified bed of sand, gravel, silt, and clay deposited by flowing water.

AMP: Allen McCulloch pipeline.

Major pipeline transporting treated water to water districts between Yorba Linda, where it starts to El Toro Water District reservoir, where it terminates.

Annexation: The inclusion of land within a government agency's jurisdiction.

Annual overdraft: The quantity by which the production of water from the groundwater supplies during the water year exceeds the natural replenishment of such groundwater supplies during the same water year.

Aqueduct: A man-made canal or pipeline used to transport water.

Aquifer: An underground geologic formation of rock, soil or sediment that is naturally saturated with water; an aquifer stores groundwater.

Arid: Dry; deserts are arid places. Semi-arid places are almost as dry as a desert.

Artesian: An aquifer in which the water is under sufficient pressure to cause it to rise above the bottom of the overlying confining bed, if the opportunity is provided.

Artificial recharge: The addition of surface water to a groundwater reservoir by human activity, such as putting surface water into recharge basins. (See also: groundwater recharge and recharge basin.)

AWWA American Water Works Association
Nationwide group of public and private water purveyors and related industrial suppliers.

Base flow: The portion of river surface flow which remains after deduction of storm flow and/or purchased imported water.

Bay-Delta: The Sacramento-San Joaquin Bay-Delta is a unique natural resource of local, state and national significance. The Delta Is home to more than 500,000 people; contains 500,000 acres of agriculture; provides habitat for 700 native plant and animal species; provides water for more than 25 million Californians and 3 million acres of agriculture; is traversed by energy, communications and transportation facilities vital to the economic health of California; and supports a $400 billion economy.

BIA: Building Industry Association.

Biofouling: The formation of bacterial film (biofilm) on fragile reverse osmosis membrane surfaces.

Biosolids: Solid organic matter recovered from a sewage treatment process and used especially as fertilizer.

BMP: Best Management Practice. An engineered structure or management activity, or combination of these, that eliminates or reduces adverse environmental effects.

Brackish water: A mixture of freshwater and saltwater.

Brown Act: Ralph M. Brown Act enacted by the State legislature governing all meetings of legislative bodies. Also know as the Open Meeting requirements.

Canal: A ditch used to move water from one location to another.

CASA: California Association of Sanitation Agencies The sanitation equivalent of ACWA concerned solely with issues affecting the treatment and disposal of solid waste and wastewater.

CEQA: California Environmental Quality Act.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act. This federal law establishes the Superfund program for hazardous waste sites. It provides the legal basis for the United States EPA to regulate and clean up hazardous waste sites, and if appropriate, to seek financial compensation from entities responsible for the site.

CFS: Cubic feet per second.

Chloramines: A mixture of ammonia and chlorine used to purify water.

Clarify: To make clear or pure by separation and elimination of suspended solid material.

Coagulation: The clumping together of solids so they can more easily be settled out or filtered out of water. A chemical called aluminum sulfate (alum) is generally used to aid coagulation in water treatment and reclamation.

Coastkeepers: A non-profit organization dedicated to the protection and preservation of the marine habitats and watersheds of Orange County through programs of education, restoration, enforcement and advocacy.

Colored water: Groundwater extracted from the basin that is unsuitable for domestic use without treatment due to high color and odor exceeding drinking water standards.

Condensation: The process of water vapor (gas) changing into liquid water. An example of condensation can be seen in the tiny water droplets that form on the outside of a glass of iced tea as warmer air touches the cooler glass.

Confined aquifer: An aquifer that is bound above and below by dense layers of rock and contains water under pressure.

Conjunctive use: Storing imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Contaminate: To make unclean or impure by the addition of harmful substances.

CPCFA: California Pollution Control Financing Authority. State agency providing funds for wastewater reclamation projects.

Crisis:
1. **a:** The turning point for better or worse **b:** a paroxysmal attack of pain, distress, or disordered function **c:** an emotionally significant event or radical change of status in a person's life <a midlife *crisis*>
2. The decisive moment (as in a literary plot)
3. **a:** An unstable or crucial time or state of affairs in which a decisive change is impending; *especially* **:** one with the distinct possibility of a highly undesirable outcome <a financial *crisis*> **b:** a situation that has reached a critical phase

CTP Coastal Treatment Plant

CWPCA California Water Pollution Control Association. A 7000 member non-profit educational organization dedicated to water pollution control.

Dam: A barrier built across a river or stream to hold water.

Decompose: To separate into simpler compounds, substances or elements.

Deep percolation: The percolation of surface water through the ground beyond the lower limit of the root zone of plants into a groundwater aquifer.

Degraded water: Water within the groundwater basin that, in one characteristic or another, does not meet primary drinking water standards.

Delta: Where the rivers empty; an outlet from land to ocean, also where the rivers deposit sediment they carry forming landforms.

Delta Vision: Delta Vision is intended to identify a strategy for managing the Sacramento-San Joaquin Delta as a sustainable ecosystem that would continue to support environmental and economic functions that are critical to the people of California.

Demineralize: To reduce the concentrations of minerals from water by ion exchange, distillation, electro-dialysis, or reverse osmosis.

De-nitrification: The physical process of removing nitrate from water through reverse osmosis, microfiltration, or other means.

Desalting (or desalination): Removing salts from salt water by evaporation or distillation. Specific treatment processes, such as reverse osmosis or multi-stage flash distillation, to demineralize seawater or brackish (saline) waters for reuse. Also sometimes used in wastewater treatment to remove salts other pollutants.

Desilting: The physical process of removing suspended particles from water.

Dilute: To lessen the amount of a substance in water by adding more water.

Disinfection: Water treatment which destroys potentially harmful bacteria.

Drainage basin: The area of land from which water drains into a river, for example, the Sacramento River Basin, in which all land area drains into the Sacramento River. Also called catchment area, watershed, or river basin.

Drought: A prolonged period of below-average precipitation.

DPHS: California Department of Public Health Services. Regulates public water systems; oversees water recycling projects; permits water treatment devices; certifies drinking water treatment and distribution operators; supports and promotes water system security; provides support for small water systems and for improving technical, managerial, and financial (TMF) capacity; provides funding opportunities for water system improvements.

DVL: Diamond Valley Lake. Metropolitan's major reservoir near Hemet, in southwestern Riverside County.

DWR: California Department of Water Resources. Guides development/management of California's water resources; owns/operates State Water Project and other water facilities.

Endangered Species: A species of animal or plant threatened with extinction.

Endangered Species Act of 1973 (ESA): The most wide-ranging of the dozens of United States environmental laws passed in the 1970s. As stated in section 2 of the act, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untendered by adequate concern and conservation.

Ecosystem: Where living and non-living things interact (coexist) in order to survive.

Effluent: Wastewater or other liquid, partially or completely treated or in its natural state, flowing from a treatment plant.

Evaporation: The process that changes water (liquid) into water vapor (gas).

Estuary: Where fresh water meets salt water.

Evapotransporation: The quantity of water transpired (given off), retained in plant tissues, and evaporated from plant tissues and surrounding soil surface. Quantitatively, it is expressed in terms of depth of water per unit area during a specified period of time.

FCH Federal Clearing House – Environmental Review/Processing

FEMA Federal Emergency Management Agency

Filtration: The process of allowing water to pass through layers of a porous material such as sand, gravel or charcoal to trap solid particles. Filtration occurs in nature when rain water soaks into the ground and it passes through hundreds of feet of sand and gravel. This same natural process of filtration is duplicated in water and wastewater treatment plants, generally using sand and coal as the filter media.

Flocculation: A chemical process involving addition of a coagulant to assist in the removal of turbidity in water.

Forebay: A reservoir or pond situated at the intake of a pumping plant or power plant to stabilize water level; also, a portion of a groundwater basin where large quantities of surface water can recharge the basin through infiltration.

Gray water reuse: Reuse, generally without treatment, of domestic type wastewater for toilet flushing, garden irrigation and other non-potable uses. Excludes water from toilets, kitchen sinks, dishwashers, or water used for washing diapers.

Green Acres Project (GAP): A 7.5 million gallons per day (MGD) water reclamation project that serves tertiary treated recycled water to irrigation and industrial users in Costa Mesa, Fountain Valley, Huntington Beach, Newport Beach, and Santa Ana.

God Squad: A seven-member committee that is officially called the "Endangered Species Committee". Members consist of Secretary of the Interior, the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Council of Economic Advisers, the Administrator of the National Oceanic and Atmospheric Administration and one individual from the affected state. The squad was established in 1978 by an amendment to the 1973 Endangered Species Act (ESA). It has only been called into action three times to deal with proposed federal agency actions that have been determined to cause "jeopardy" to any listed species. Such actions may receive an exemption from the ESA if five members of the committee determine that the action is of regional or national significance, that the benefits of the action clearly outweigh the benefits of conserving the species and that there are no reasonable and prudent alternatives to the action.

Groundwater: Water that has percolated into natural, underground aquifers; water in the ground, not water puddled on the ground.

Groundwater basin: A groundwater reservoir defined by the overlying land surface and the underlying aquifers that contain water stored in the reservoir. Boundaries of success-ively deeper aquifers may differ and make it difficult to define the limits of the basin.

Groundwater mining: The withdrawal of water from an aquifer in excess of recharge over a period of time. If continued, the underground supply would eventually be exhausted or the water table could drop below economically feasible pumping lifts.

Groundwater overdraft: The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average.

Groundwater recharge: The action of increasing groundwater storage by natural conditions or by human activity. See also: Artificial recharge.

Ground Water Replenishment System (GWRS): A joint project of the Orange County Water District and the Orange County Sanitation District that will provide up to 100,000 acre-feet of reclaimed water annually. The high-quality water will be used to expand an existing underground seawater intrusion barrier and to replenish the groundwater basin underlying north and central Orange County.

Groundwater table: The upper surface of the zone of saturation (all pores of subsoil filled with water), except where the surface if formed by an impermeable body.

GPM: Gallons per minute.

Ground Water Replenishment System (GWRS): Orange County Water District's state-of-the-art, highly advanced, waste-water treatment facility.

Hydrologic balance: An accounting of all water inflow to, water outflow from, and changes in water storage within a hydrologic unit over a specified period.

Hydrologic cycle: The process of water constantly circulating from the ocean, to the atmosphere, to the earth in a form of precipitation, and finally returning to the ocean.

Imported water: Water that has originated from one hydrologic region and is transferred to another hydrologic region.

Inflatable rubber dams: Designed to replace temporary sand levees that wash out during heavy storm flow, the dams hold back high-volume river flows and divert the water into the off-river system for percolation.

Influent: Water or wastewater entering a treatment plant, or a particular stage of the treatment process.

Irrigation: Applying water to crops, lawns or other plants using pumps, pipes, hoses, sprinklers, etc.

JPIA Joint Powers Insurance Authority. A group of water agencies providing self-insurance to members of the ACWA.

LAIF Local Agency Investment Fund. Statewide pool of surplus public agency money managed by State Treasurer.

Leach: To remove components from the soil by the action of water trickling through.

MAF: Million acre feet.

MCL: Maximum contaminant level set by EPA for a regulated substance in drinking water. According to health agencies, the maximum amount of a substance that can be present in water that's safe to drink and which looks, tastes and smells good.

MET: Metropolitan Water District of Southern California.

MGD: Million gallons per day.

Microfiltration: A physical separation process where tiny, hollow filaments members separate particles from water.

Microorganism: An animal or plant of microscopic size.

MWD: Metropolitan Water District of Southern California.

MWDOC: Municipal Water District of Orange County. Intermediate wholesaler between MWD and 27 member agencies including ETWD.

Non-point source pollution: Pollution that is so general or covers such a wide area that no single, localized source of the pollution can be identified.

NPDES National Pollution Discharge Elimination System

OCBC: Orange County Business Council.

OCEMA Orange County Environmental Management Agency

OCWD: Orange County Water District.

Opportunity:
1. A favorable juncture of circumstances.
2. A good chance for advancement or progress .

Organism: Any individual form of life, such as a plant, animal or bacterium.

PCM Professional Community Management, Inc. Property Management company providing services to Laguna Woods Village and other homeowner associations.

Perched groundwater: Groundwater supported by a zone of material of low permeability located above an underlying main body of groundwater with which it is not hydrostatically connected.

Percolation: The downward movement of water through the soil or alluvium to the groundwater table.

Permeability: The capability of soil or other geologic formations to transmit water.

Point source: A specific site from which waste or polluted water is discharged into a water body, the source of which is identified. See also: non-point source.

Potable water: Suitable and safe for drinking.

PPB: Parts per billion.

Precipitation: Water from the atmosphere that falls to the ground as a liquid (rain) or a solid (snow, sleet, hail).

Primary treated water: First major treatment in a wastewater treatment facility, usually sedimentation but not biological oxidation.

Primary treatment: Removing solids and floating matter from wastewater using screening, skimming and sedimentation (settling by gravity).

Prior appropriation doctrine: Allocates water rights to the first party who diverts water from its natural source and applies the water to beneficial use. If at some point the first appropriator fails to use the water beneficially, another person may appropriate the water and gain rights to the water. The central principle is beneficial use, not land ownership.

Pumping Plant: A facility that lifts water up and over hills.

Recharge: The physical process where water naturally percolates or sinks into a groundwater basin.

Recharge basin: A surface facility, often a large pond, used to increase the infiltration of surface water into a groundwater basin.

Reclaimed wastewater: Wastewater that becomes suitable for a specific beneficial use as a result of treatment. See also: wastewater reclamation.

Reclamation project: A project where water is obtained from a sanitary district or system and which undergoes additional treatment for a variety of uses, including landscape irrigation, industrial uses, and groundwater recharge.

Recycling: A type of reuse, usually involving running a supply of water through a closed system again and again. Legislation in 1991 legally equates the term "recycled water" to reclaimed water.

Reservoir: A place where water is stored until it is needed. A reservoir can be an open lake or an enclosed storage tank.

Reverse osmosis: (RO) A method of removing salts or other ions from water by forcing water through a semi-permeable membrane.

RFP Request for Proposal

Riparian: Of or on the banks of a stream, river, or other body of water.

RO: Reverse osmosis. See the listing under "reverse osmosis."

R-O-W Right-of-way

Runoff: Liquid water that travels over the surface of the Earth, moving downward due to gravity. Runoff is one way in which water that falls as precipitation returns to the ocean.

RWQCB Regional Water Quality Control Board. State agency regulating discharge and use of recycled water.

Safe Drinking Water Act (SDWA): The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.) SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. US EPA, states, and water systems work together to make sure that these standards are met.

Safe yield: The maximum quantity of water that can be withdrawn from a groundwater basin over a long period of time without developing a condition of overdraft, sometimes referred to as sustained yield.

SAFRA Santa Ana River Flood Protection Agency

Salinity: Generally, the concentration of mineral salts dissolved in water. Salinity may be measured by weight (total dissolved solids - TDS), electrical conductivity, or osmotic pressure. Where seawater is known to be the major source of salt, salinity is often used to refer to the concentration of chlorides in the water.

SAWPA: Santa Ana Watershed Project Authority.

SCADA Supervisory Control and Data Acquisition

SCAP Southern California Alliance of Publicly. Newly formed group of public agencies seeking reasonable regulation of sewer industry.

SCH State Clearing House – Environmental Review/Processing

Seasonal storage: A three-part program offered by Metropolitan Water District of Southern California:

> **STSS (Short Term Seasonal Storage)** financially encourages agencies with local groundwater production capabilities to produce a higher percentage of their demand in the summer from their local groundwater supplies, thus shifting a portion of their demand on the MWD system from the summer to winter;
>
> **LTSS (Long Term Seasonal Storage)** financially encourages retail agencies to take and store additional amounts of MWD water above their normal annual demands for later use; Replenishment Water provides less expensive interruptible water that is generally available and used to increase the operating yield of groundwater basins.

Seawater intrusion: The movement of salt water into a body of fresh water. It can occur in either surface water or groundwater basins.

Seawater barrier: A physical facility or method of operation designed to prevent the intrusion of salt water into a body of freshwater.

Secondary treatment: The biological portion of wastewater treatment which uses the activated sludge process to further clean wastewater after primary treatment. Generally, a level of treatment that produces 85 percent removal efficiencies for biological oxygen demand and suspended solids. Usually carried out through the use of trickling filters or by the activated sludge process.

Sedimentation: The settling of solids in a body of water using gravity.

Settle: To clarify water by causing impurities/solid material to sink to a container's bottom.

Sewer: The system of pipes that carries wastewater from homes and businesses to a treatment plant or reclamation plant. Sewers are separate from storm drains, which is a system of drains and pipes that carry rain water from urban streets back to the ocean. Overwatering your yard can also cause water to run into the streets and into storm drains. Storm drain water is not treated before it is discharged.

SigAlert: Any unplanned event that causes the closing of one lane of traffic for 30 minutes or more, as opposed to a planned event, like road construction, which is planned.

SJBA San Juan Basin Authority

Sludge: The solids that remain after wastewater treatment. This material is separated from the cleaned water, treated and composted into fertilizer. Also called biosolids.

SOCWA South Orange County Wastewater Authority. Regional Joint Powers Authority formed for collection and treatment of sewerage (previously known as AWMA/SERRA/SOCRA). SOCWA member agencies:

CSC – City of San Clemente

CSJC – City of San Juan Capistrano

CLB – City of Laguna Beach

ETWD – El Toro Water District

EBSD – Emerald Bay Service District

IRWD – Irvine Ranch Water District

MNWD – Moulton Niguel Water District

SCWD – South Coast Water District

SMWD – Santa Margarita Water District

TCWD – Trabuco Canyon Water District

SRF State Revolving Fund

Storm Drain: The system of pipes that carries rain water from urban streets back to the ocean. Overwatering your yard can also cause water to run into the streets and into storm drains. Storm drain

water is not treated before it is discharged. Storm drains are separate from sewers, which is a separate system of pipes to carry wastewater from homes and businesses to a treatment plant or reclamation plant for cleaning.

Storm flow: Surface flow originating from precipitation and run-off which has not percolated to an underground basin.

SWP: State Water Project. An aqueduct system that delivers water from northern California to central and southern California.

SWRCB State Water Resources Control Board

TDS: Total dissolved solids. A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution. Usually expressed in milligrams per liter.

Tertiary treatment: The treatment of wastewater beyond the secondary or biological stage. Normally implies the removal of nutrients, such as phosphorous and nitrogen, and a high percentage of suspended solids.

THM: Trihalomethanes. Any of several synthetic organic compounds formed when chlorine or bromine combine with organic materials in water.

TMA: Too many acronyms.

TMDL: Total maximum daily load; A quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water.

Transpiration: The process in which plant tissues give off water vapor to the atmosphere as an essential physiological process.

Turbidity: Thick or opaque with matter in suspension; muddy water.

Ultraviolet light disinfection: A disinfection method for water that has received either secondary or tertiary treatment used as an alternative to chlorination.

VE Value Engineering

VOC: Volatile organic compound; a chemical compound that evaporates readily at room temperature and contains carbon.

Wastewater: Water that has been previously used by a municipality, industry or agriculture and has suffered a loss of quality as a result.

Water Cycle: The continuous process of surface water (puddles, lakes, oceans) evaporating from the sun's heat to become water vapor (gas) in the atmosphere. Water condenses into clouds and then falls back to earth as rain or snow (precipitation). Some precipitation soaks into the ground (percolation) to replenish groundwater supplies in underground aquifers.

Water rights: A legally protected right to take possession of water occurring in a natural waterway and to divert that water for beneficial use.

Water-use Efficiency: The water requirements of a particular device, fixture, appliance, process, piece of equipment, or activity.

Water year (USGS): The period between October 1st of one calendar year to September 30th of the following calendar year.

Watermaster: A court appointed person(s) that has specific responsibilities to carry out court decisions pertaining to a river system or watershed.

Water Reclamation: The treatment of wastewater to make it suitable for a beneficial reuse, such as landscape irrigation. Also called water recycling.

Watershed: The total land area that from which water drains or flows to a river, stream, lake or other body of water.

Water table: The top level of water stored underground.

WEF Water Environment Federation. Formerly – Water Pollution Control Federation (WPCF). International trade group advising members of sewage treatment techniques and their effect on the environment.

Weir box: A device to measure/control surface water flows in streams or between ponds.

Wellhead treatment: Water quality treatment of water being produced at the well site.

Wetland: Any area in which the water table stands near, at, or above the land surface for a portion of the year. Wetlands are characterized by plants adapted to wet soil conditions.

Xeriscape: Landscaping that requires minimal water.