

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**  
**ENGINEERING COMMITTEE MEETING AND**  
**FINANCE AND INSURANCE COMMITTEE MEETING**

**November 20, 2023**

**7:30 a.m.**

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

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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/89862744168> (Meeting ID: 898 6274 4168).

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 – Vice President Monin**

## **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 October 23, 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. Quarterly Review of the District’s 401(k) Retirement Savings Plan (Reference Material Included)**

Keith Stribling (Highmark Capital Management) will review and comment on the investment performance of the District’s 401(k) Retirement Savings Plan.



4. **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**

5. **Comprehensive Financial Statement – Audit – Fiscal Year Ended June 30, 2023** (Reference Material Included)

Staff and the District's Independent Auditor, Clifton Larson Allen, will review and comment on the District's Comprehensive Financial Statements for the Fiscal Year ended June 30, 2022.

**Recommended Action:** Staff recommends that the Board of Directors receive and file the District's Comprehensive Financial Statements for the Fiscal Year ended June 30, 2023.

6. **Financial Package - Authorization to Approve Payment of Bills for the Month Ending November 20, 2023 and Receive and File Financial Statements as of October 31, 2023** (Reference Material Included)

The Board will consider approving Bills for Consideration dated November 20, 2023 and Receive and File Financial Statements as of October 31, 2023.

**Recommended Action:** Staff recommends that the Board 1) approve, ratify and confirm payment of those bills as set forth in the Payment Summary for the month ending November 20, 2023, and 2) receive and file the Financial Statements for the month ending October 31, 2023.

**COMMENTS REGARDING NON-AGENDA FIC ITEMS**

**CLOSE FINANCE AND INSURANCE COMMITTEE MEETING**

## ENGINEERING COMMITTEE

### CALL MEETING TO ORDER – Director Freshley

#### 7. **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 October 23, 2023 Engineering Committee meeting. (Minutes Included).

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

### ENGINEERING ACTION ITEMS

#### 8. **Headworks and Secondary Clarifier No. 1 Rehabilitation** (Reference Material Included)

Staff will review and comment on engineering design proposals for the Headworks and Secondary Clarifier No. 1 Rehabilitation Project.

**Recommended Action:** Staff recommends the Board authorize the General Manager to issue a contract to Carollo Engineers, Inc. in the amount of \$785,217.00 for the design of the Headworks and Secondary Clarifier No. 1 Rehabilitation Project. Staff also 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

#### 9. **Strategic Plan Update Report** (Reference Material Included)

Staff will review and comment on the Strategic Plan Status Report.

#### 10. **El Toro Water District Operations Report** (Reference Material Included)

Staff will review and comment on the El Toro Water District Operations Report.

#### 11. **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.

## 12. 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

#### REGULAR SESSION

#### 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)(1) to consult with legal counsel and staff regarding the following existing litigation: *Plaintiff, Marlene Jean v. Defendants, Dollar Tree Stores, Inc. et al.*, Superior Court of Los Angeles Case No. 19STCV25234.
2. Pursuant to Government Code Section 54956.9(d)(2) to consult with legal counsel and staff - Potential Litigation (one matter).
3. **Conference with Legal Counsel-Existing Litigation, pursuant to Government Code Section 54956.9 (d)(1)**  
In Re: Aqueous Film-Forming Foams Products Liability Litigation, Master Docket No.: 2:18-mn-2873-RMG, consider options, provide and receive direction on action in response to proposed settlements in: (1) City of Camden, et al. v. 3M Company, Civil Action No.: 2:23-cv-03147-RMG; and (2) City of Camden, et al. v. E.I. DuPont De Nemours and Company (n/k/a EIDP, Inc.) et al., Civil Action No.: 2:23-cv-03230-RMG.
4. Pursuant to Government Code Section 54957(b)(1) to conduct the General Manager's annual performance evaluation.

#### REGULAR SESSION

#### REPORT ON CLOSED SESSION (Legal Counsel)

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

### 13. **General Manager Compensation**

**Board Action:** The District's Board of Directors will discuss and consider granting the District's General Manager a compensation increase in the amount and form as determined by the Board.

### **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 BOARD OF DIRECTORS  
AND THE  
FINANCE & INSURANCE COMMITTEE MEETING

October 23, 2023

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

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

Committee Members KAY HAVENS, KATHRYN FRESHLEY, MIKE GASKINS, MARK MONIN, and FRED ADJARIAN participated.

Also participating were DENNIS P. CAFFERTY, General Manager, JUDY CIMORELL, Human Resources Manager, HANNAH FORD, Engineering Manager, RORY HARNISCH, Senior Engineer, GILBERT J. GRANITO, General Counsel, VISHAV SHARMA, CFO, SCOTT HOPKINS, Operations Superintendent, SHERRI SEITZ, Public Relations Manager, VU CHU, Water Use Efficiency Analyst, VICKI TANIOUS, Payroll, (Zoom), MIKE MIAZGA, IT Manager (Zoom), CAROL MOORE, Laguna Woods City Council member (Zoom), and POLLY WELSCH, Recording Secretary.

Determination of a Quorum

Roll Call:

Director Adjarian	present
Director Gaskins	present
Director Freshley	present
Vice President Monin	present
President Havens	present

Five Board members are present at the meeting and therefore a quorum has been determined.

### Oral Communications/Public Comment

There were no comments.

### Items Too Late to be Agendized

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

### Finance and Insurance Committee Meeting

At approximately 7:35 a.m. Director Gaskins called the Finance and Insurance Committee meeting to order.

### Consent Calendar

Director Gaskins asked for a Motion.

Motion: Vice President Monin made a motion, seconded by Director Freshley to approve the Consent Calendar.

### Roll Call Vote:

Director Adjarian	abstain (absent from the Sept 25 meeting)
Director Gaskins	aye
Director Freshley	aye
Vice President Monin	aye
President Havens	aye

### Financial Information Items

### Update on the Implementation of the Springbrook Software System

Mr. Sharma stated that staff continues to work with the Springbrook team on the utility billing, online credit card processing, and Fixed Assets. He further stated that staff will be attending a Springbrook conference this week in Las Vegas.

Mr. Sharma stated that the tentative go live date for the utility billing module has been scheduled for the week of January 8, 2024. He further stated that Springbrook suggested using Xpress Bill Pay instead of Civic Pay which will bring down the cost of debit and credit card processing fees as well as the cost of the module.

#### Health Savings Account Contribution

Mr. Cafferty stated that this is an information item. He further stated that when the District had the Open Enrollment meetings it became aware that the deductibles for the Consumer Driven Health Care Plan increased slightly and the Health Savings Account Contribution are being adjusted to match the deductibles.

#### Financial Action Items

##### Dental Insurance

Mr. Cafferty stated that under the current JPIA and Delta Dental Plan the District has a \$1,500 annual maximum with no options to cover orthodontics. He further stated that the new maximum available benefit is either \$1,500, \$2,000, or \$3,000.

Mr. Cafferty stated that the maximum benefit is the ceiling, and at which point you reach, then the remaining balance is out of pocket charges that the employee will pay. He further stated that the cost increase to add the orthodontic benefit does not count against the annual maximum benefit limit.

Director Gaskins asked for a Motion.

Motion: Director Adjarian made a motion, seconded by Vice President Monin to authorize the General Manager to execute the ACWA JPIA Change Dental Plan Form modifying the District's Dental Plan to include an annual maximum benefit limit of \$3,000 with orthodontic care coverage for adults and children.

Roll Call Vote:

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

Quarterly Insurance Report

Ms. Cimorell stated that we are currently in the Open Enrollment period which ends November 2<sup>nd</sup>. She further stated that rates increased more than expected due to JPIA's cutting back on the supplemented amounts.

Ms. Cimorell stated that the Workers Compensation rate increased for everyone in the JPIA pool.

Director Gaskins asked for a Motion.

Motion: Vice President Monin made a motion, seconded by Director Adjarian to Receive and File the Quarterly Insurance Report for the period of July 1, 2023 through September 30, 2023.

Roll Call Vote:

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

Financial Package - Authorization to Approve Bills for Consideration Dated October 23, 2023 and Receive and File Financial Statements as of September 30, 2023

Mr. Sharma stated that the annual audit is in the final process, and thus far there are no comments.



Director Adjarian asked who are the District's current auditors. Mr. Sharma replied CLA (Clifton, Larson, & Associates) which is a national level firm.

Director Freshley asked how the projects where the District does their own Engineering is accounted for in the capitalized costs. Mr. Cafferty replied that staff will review how time is accounted for on Engineering projects.

Director Gaskins asked for a Motion.

Motion: Vice President Monin made a Motion, seconded by Director Freshley to approve, ratify, and confirm payment of the bills set forth in the schedule of bills for consideration dated October 23, 2023, and receive and file the financial statements for the period ending September 30, 2023.

Roll Call Vote:

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

Comments Regarding Non-Agenda FIC Items

Vice President Monin stated that he attended the CSDA meeting with the District where they discussed their two funds; a market fund and a longer duration fund. He further stated that their management fee was seven basis points, and most money markets are around 17 basis points.

Adjournment

There being no further business the Finance Committee meeting was closed at approximately 7:57 a.m.

Respectfully submitted

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POLLY WELSCH  
Recording Secretary

APPROVED:

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

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

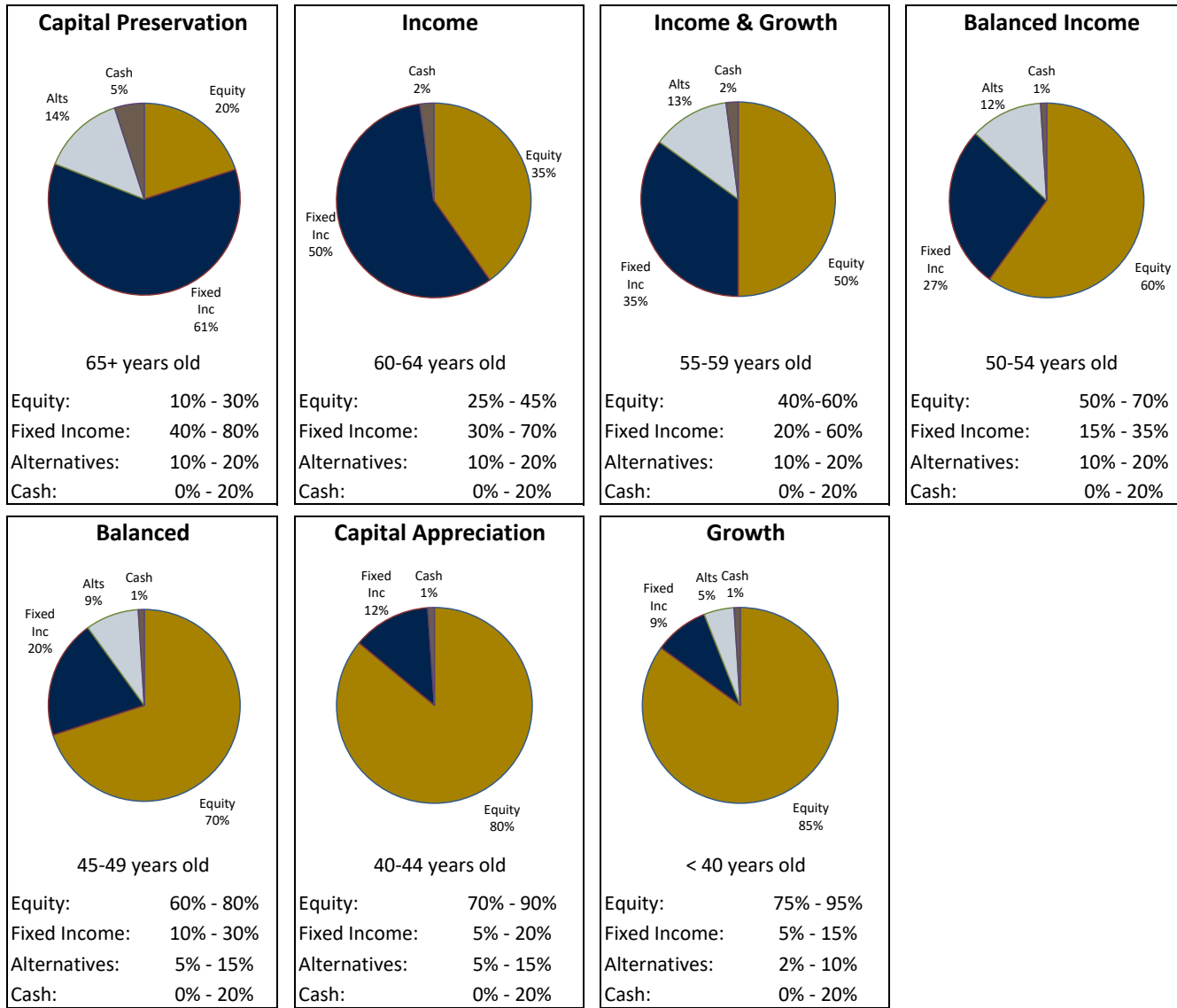
**El Toro Water District 401(k) Plan**  
**Third Quarter 2023**



Keith Stribling, CFA  
Vice President and Senior Portfolio Manager  
HighMark Capital Management  
[james.stribling@usbank.com](mailto:james.stribling@usbank.com)

## INVESTMENT POOLS - ASSET ALLOCATION

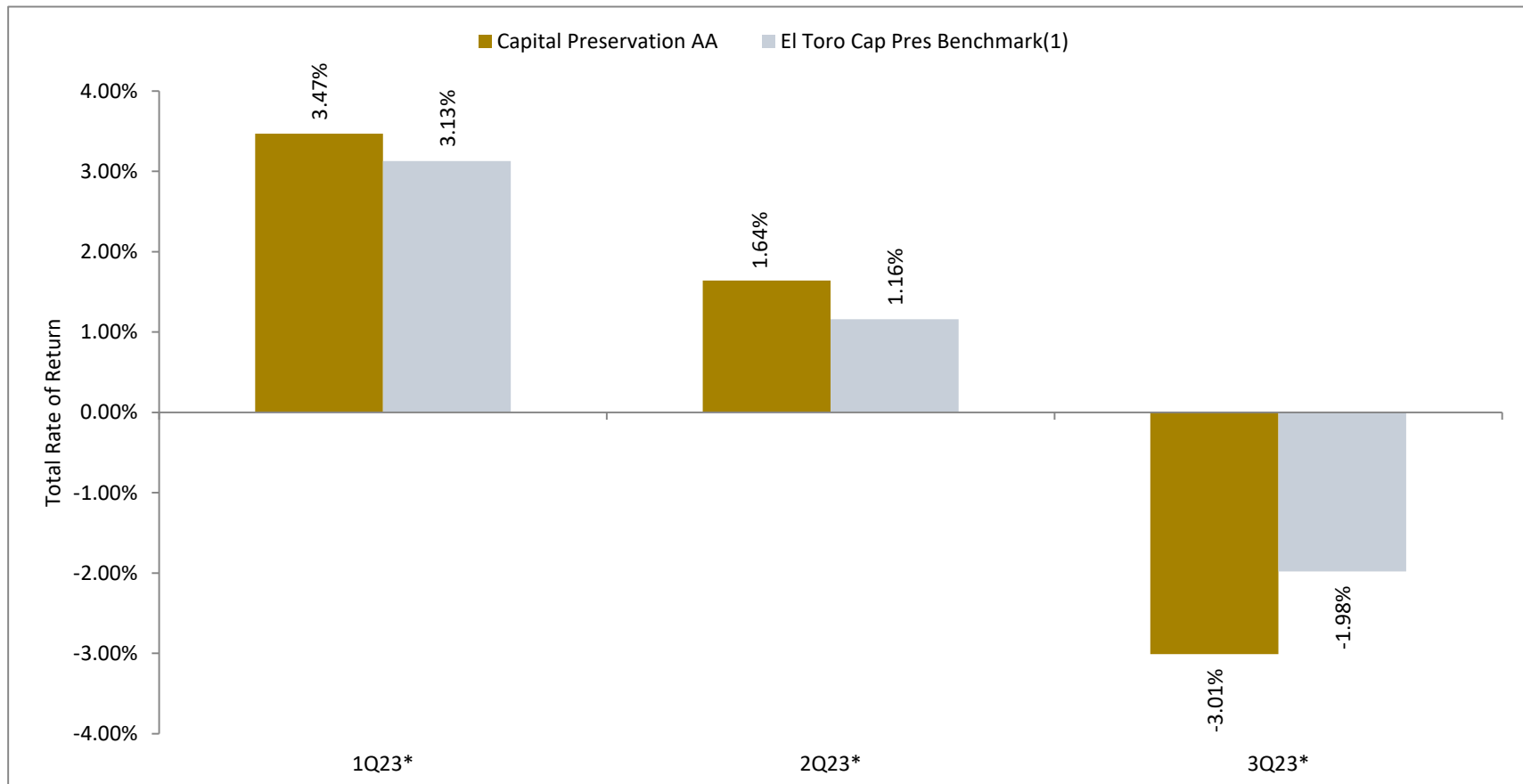
El Toro Water District - 401(k) Plan



# INVESTMENT RETURNS - CAPITAL PRESERVATION PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: January 2006

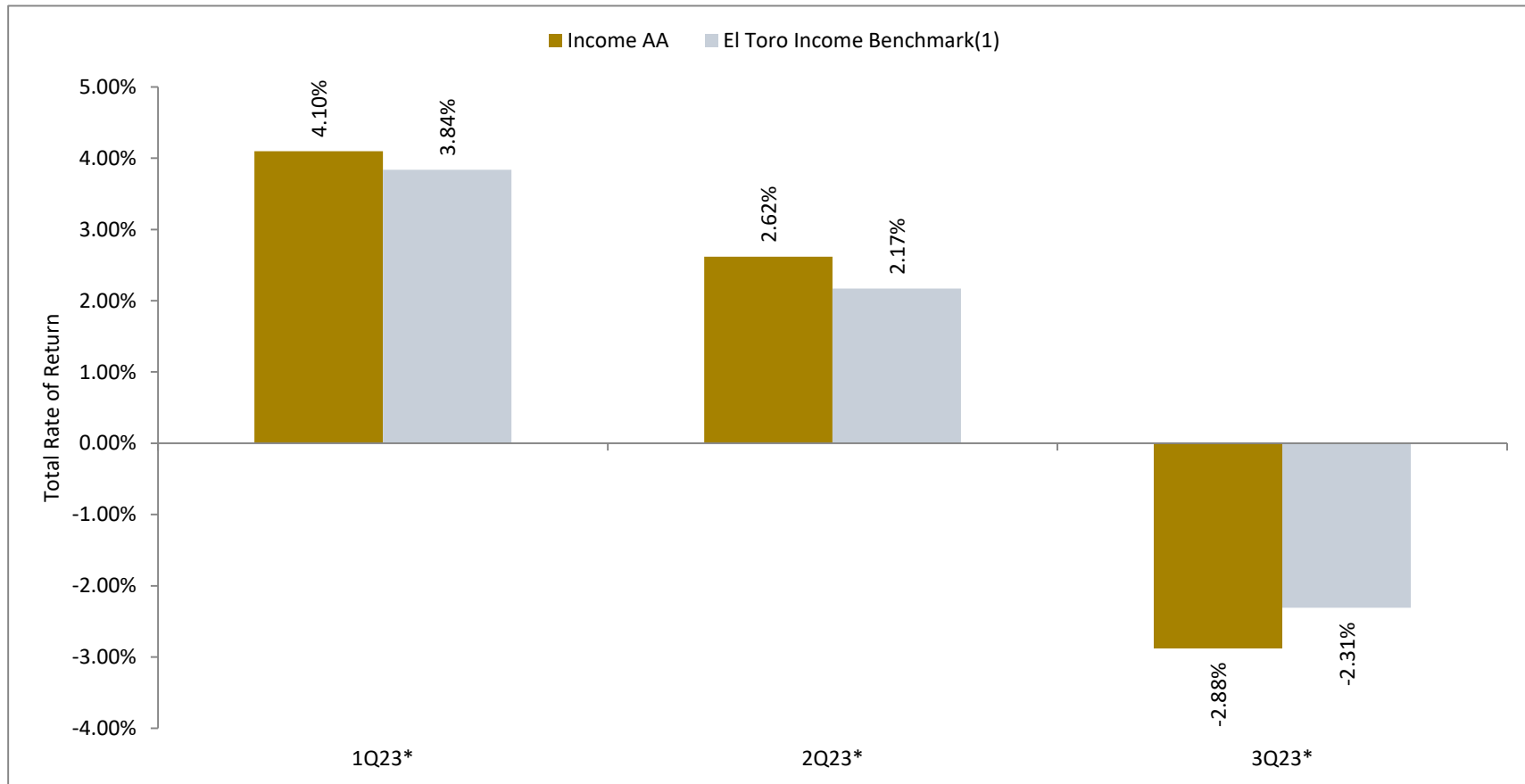
(1) El Toro Cap Pres Benchmark: 12% S&P 500, 2% Russell MidCap, 2% Russell 2000, 3% MSCI EAFE, 1% MSCI Emerging Markets, 44% Barclays US Aggregate Bond, 17% Barclays 1-3 Year Government/Credit Bond, 14% Wilshire Liquid Alternatives, 5% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

# INVESTMENT RETURNS - INCOME PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: August 2018

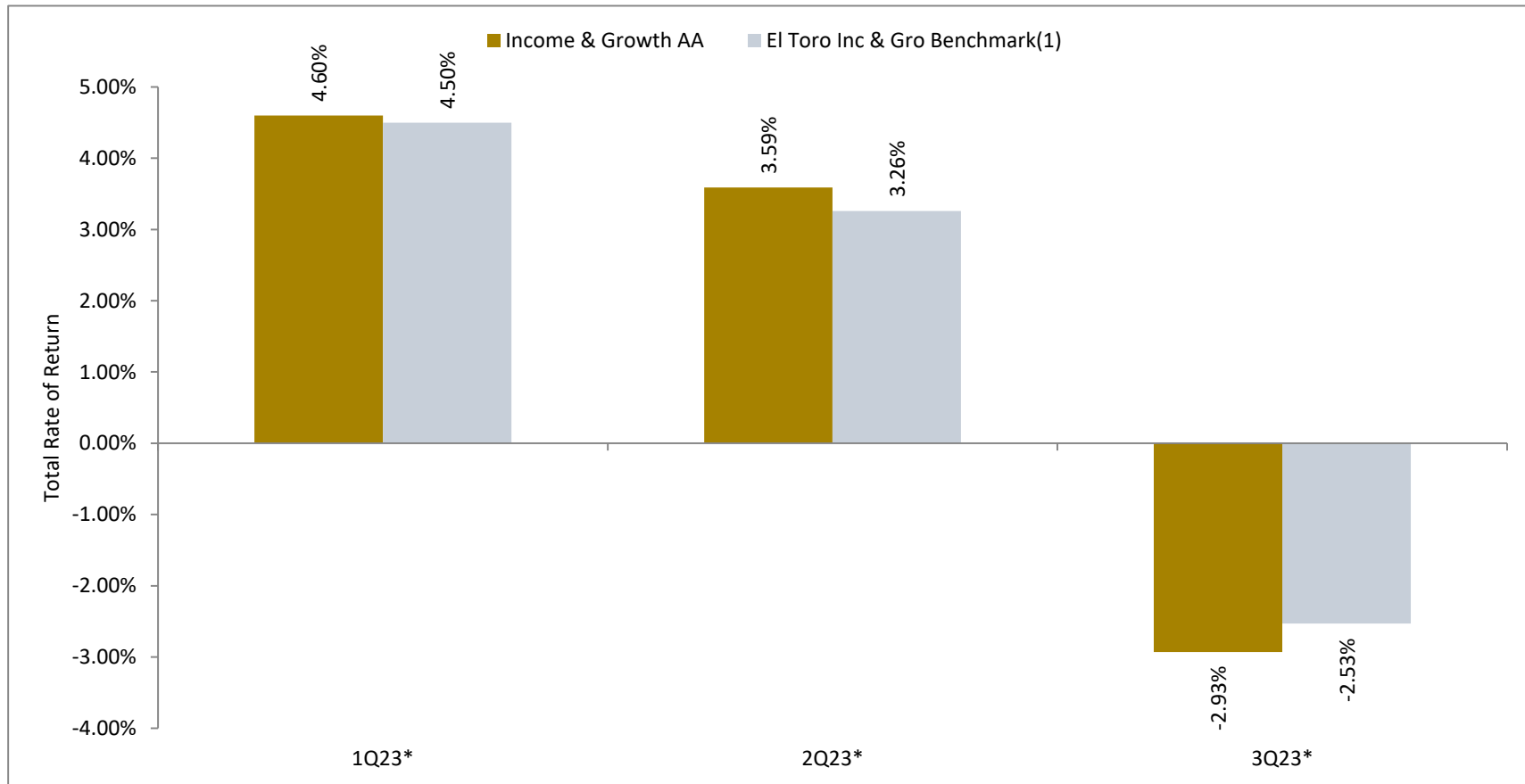
(1) El Toro Income Benchmark: 21% S&P 500, 3% Russell MidCap, 3% Russell 2000, 6% MSCI EAFE, 2% MSCI Emerging Market, 36% Barclays US Aggregate Bond, 14% Barclays 1-3 Year Government/Credit Bond, 13% Wilshire Liquid Alternatives, 2% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

# INVESTMENT RETURNS - INCOME & GROWTH PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: January 2006

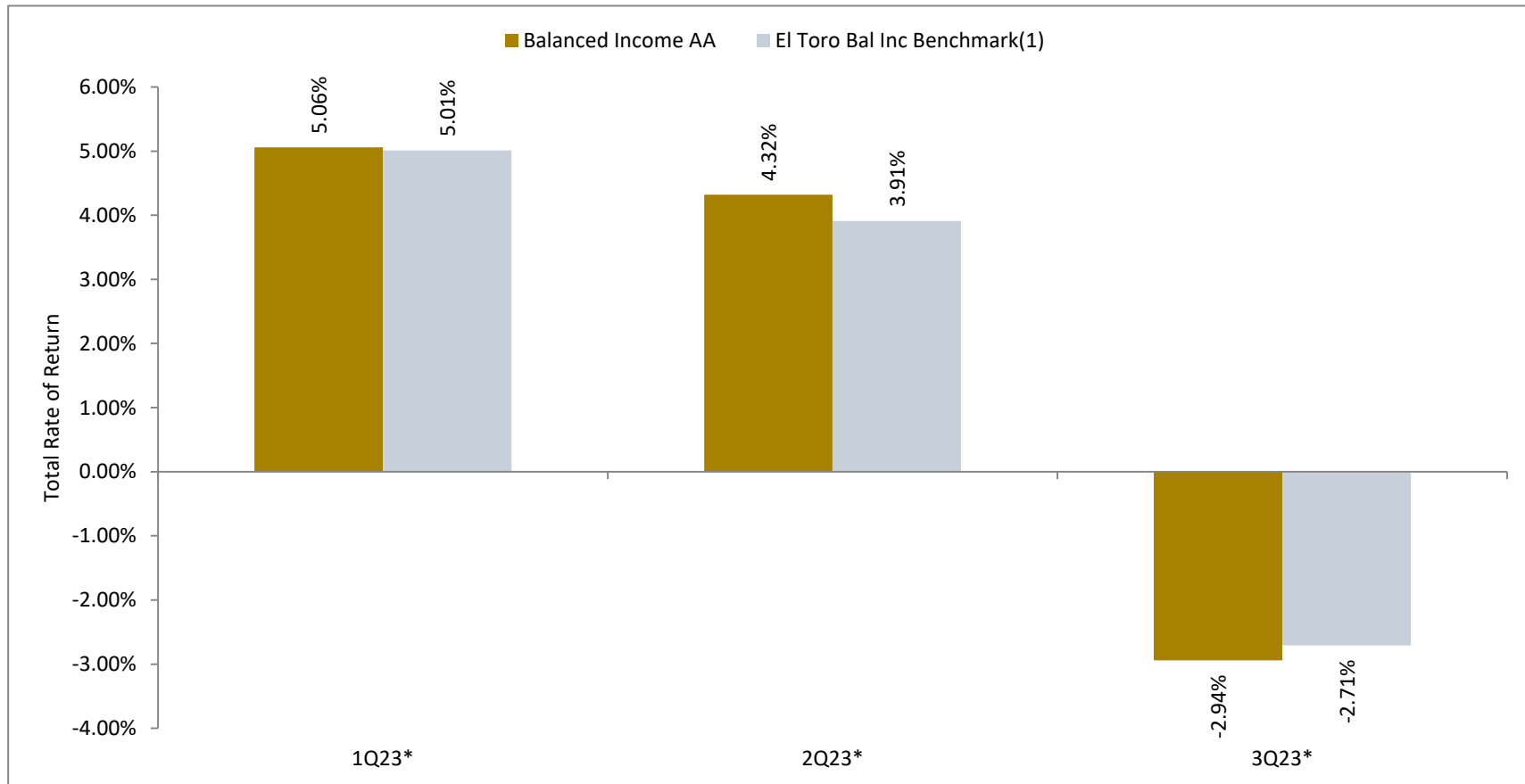
(1) El Toro Inc & Gro Benchmark: 30% S&P 500, 4% Russell MidCap, 4% Russell 2000, 9% MSCI EAFE, 3% MSCI Emerging Market, 25% Barclays US Aggregate Bond, 10% Barclays 1-3 Year Government/Credit Bond, 13% Wilshire Liquid Alternatives, 2% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

# INVESTMENT RETURNS - BALANCED INCOME PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: August 2018

(1) El Toro Bal Inc Benchmark: 36% S&P 500, 4% Russell MidCap, 4% Russell 2000, 12% MSCI EAFE, 4% MSCI Emerging Market, 19% Barclays US Aggregate Bond, 8% Barclays 1-3 Year Government/Credit Bond, 12% Wilshire Liquid Alternatives, 1% ICE BofAML 3 Mo US T-Bill

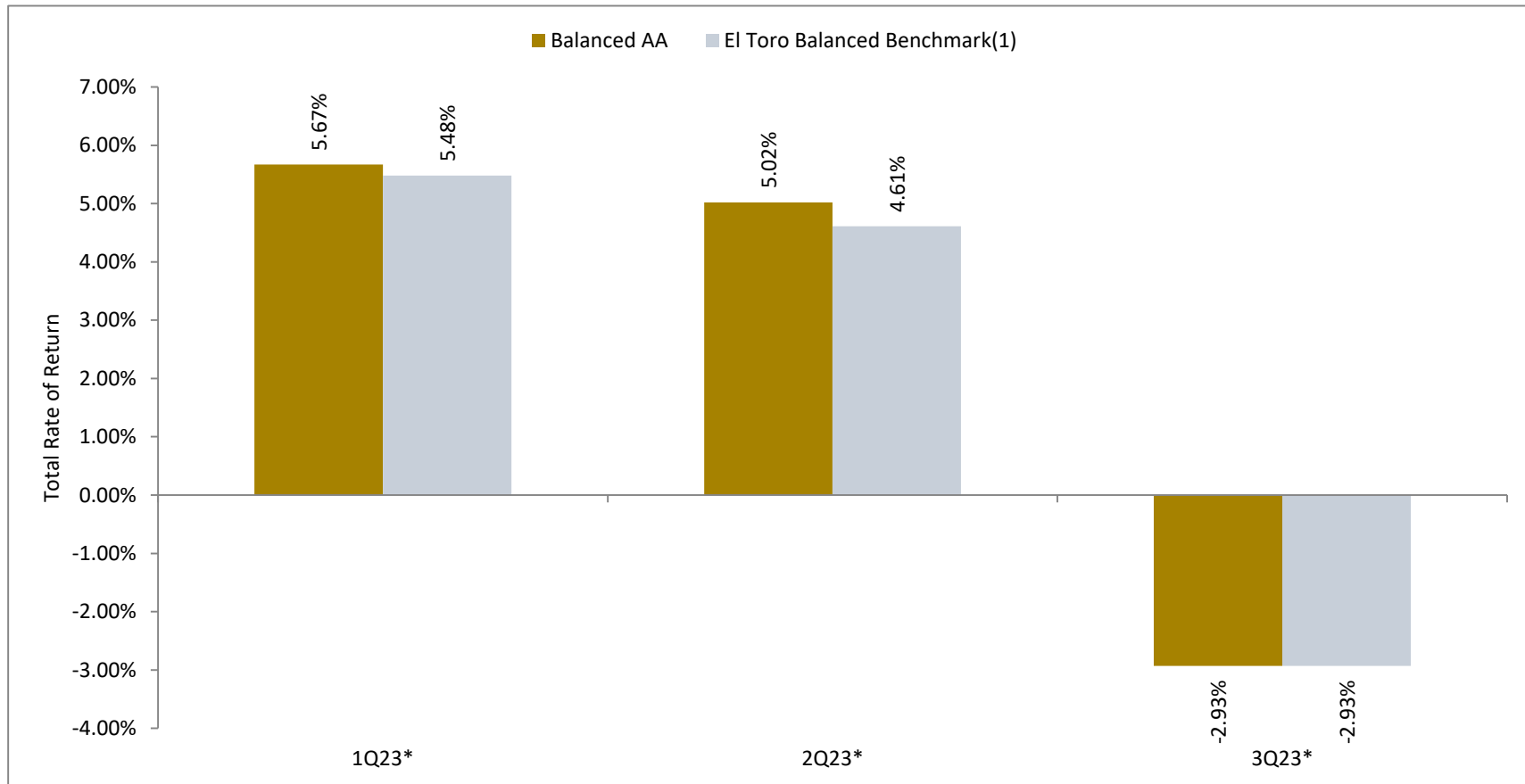
Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18



# INVESTMENT RETURNS - BALANCED PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: January 2006

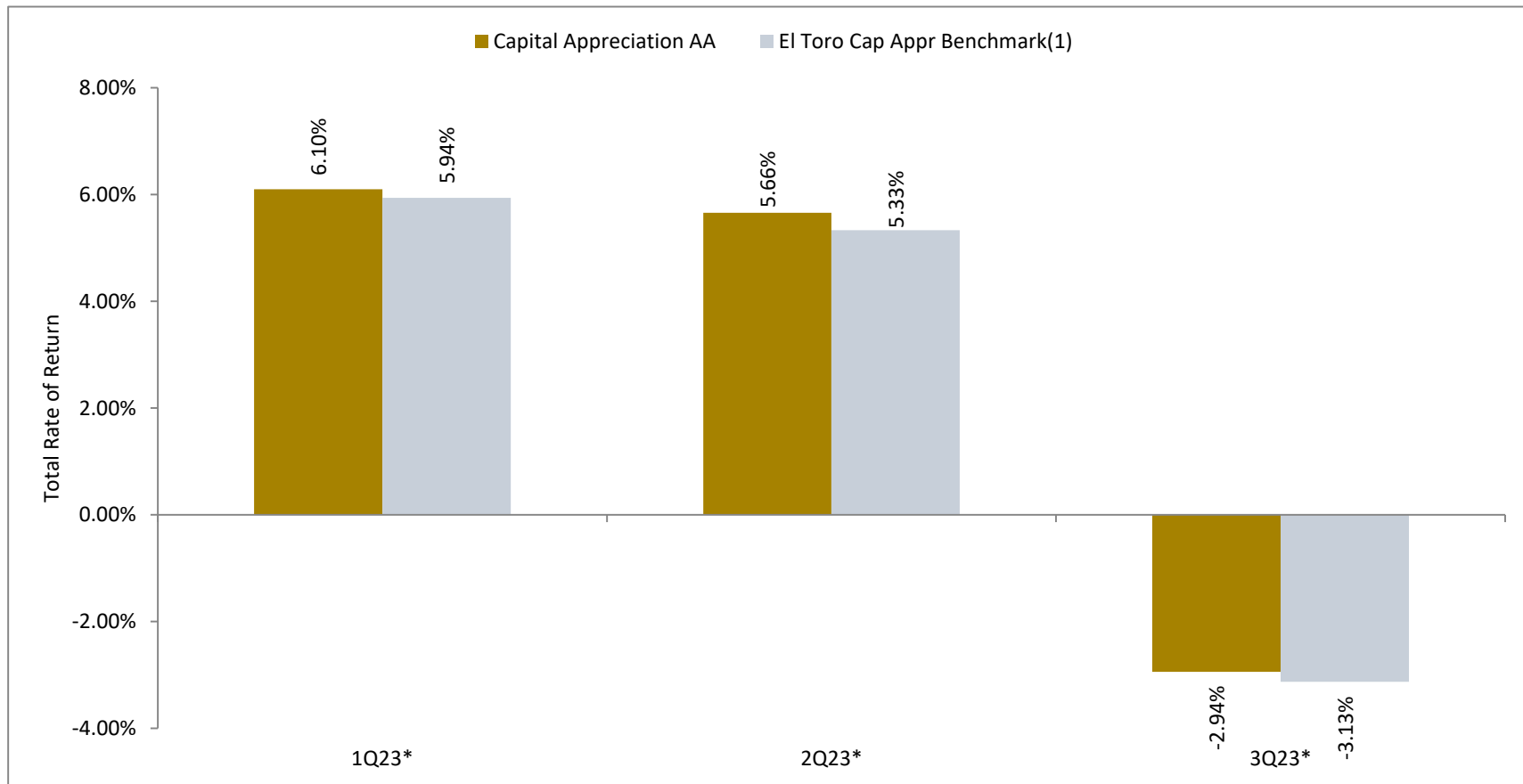
(1) El Toro Balanced Benchmark: 42% S&P 500, 5% Russell MidCap, 5% Russell 2000, 14% MSCI EAFE, 4% MSCI Emerging Market, 14% Barclays US Aggregate Bond, 6% Barclays 1-3 Year Government/Credit Bond, 9% Wilshire Liquid Alternatives, 1% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

# INVESTMENT RETURNS - CAPITAL APPRECIATION PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: August 2018

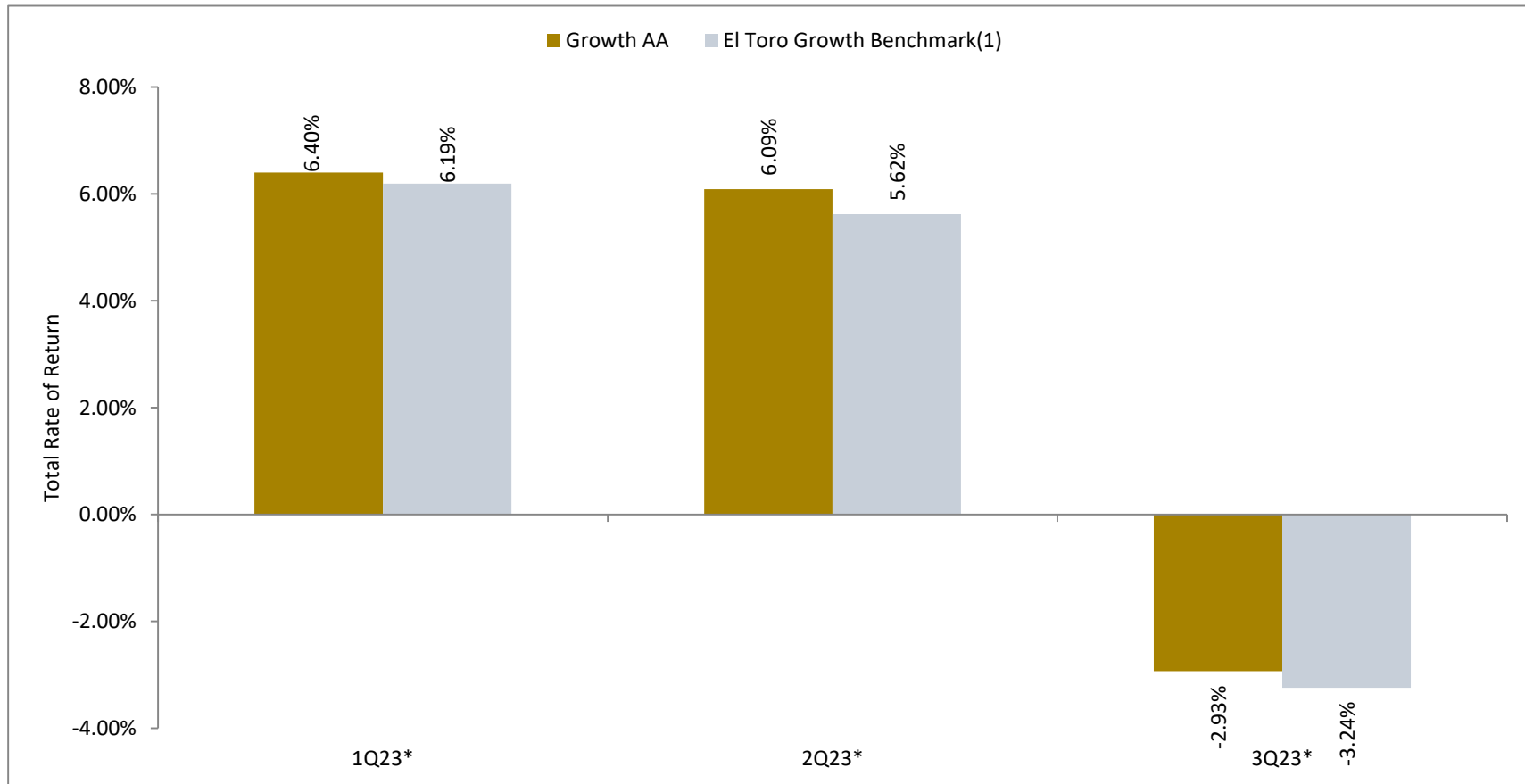
(1) El Toro Cap Appr Benchmark: 48% S&P 500, 6% Russell MidCap, 6% Russell 2000, 16% MSCI EAFE, 4% MSCI Emerging Market, 8% Barclays US Aggregate Bond, 4% Barclays 1-3 year Government/Credit, 7% Wilshire Liquid Alternatives, 1% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

# INVESTMENT RETURNS - GROWTH PORTFOLIO

El Toro Water District - 401(k) Plan

Annualized Total Rate of Return  
as of September 30, 2023



\*Returns for periods under one year are not annualized

\*\*Inception date: January 2006

(1) El Toro Growth Benchmark: 51% S&P 500, 6% Russell MidCap, 6% Russell 2000, 17% MSCI EAFE, 5% MSCI Emerging Market, 6% Barclays US Aggregate Bond, 3% Barclays 1-3 year Government/Credit, 5% Wilshire Liquid Alternatives, 1% ICE BofAML 3 Mo US T-Bill

Note: Alternatives benchmark was changed from HFRI FOF Index to Wilshire Liquid Alternatives Index as of 5/31/18

INVESTMENT RETURNS & RANKINGS - FIXED INCOME FUNDS

El Toro Water District - 401(k) Plan

		Annualized Total Rate of Return (%) as of 09/30/2023															
Ticker	Name	Exp Ratio	MStar Rtg*	3-Mos**		YTD**		1-Year		3-Years		5-Years		10-Years		3 Yr Shrp%	3 Yr SD
				Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg		
Ultra Short-Term Bond																	
VUSFX	Vanguard Ultra-Short-Term Bond Admiral	0.10	3	1.23	83	3.33	87	4.30	81	1.13	78	1.86	41	--	--	1.22	0.94
Peer Group	US Fund Short-Term Bond			-0.41		0.57		2.15		-0.32		0.94		0.87		0.69	2.52
Index	Bloomberg US Govt/Credit 1-3 Yr TR USD			0.73		1.87		2.77		-0.72		1.21		1.02		0.29	0.28
Short-Term Bond																	
VFSUX	Vanguard Short-Term Investment-Grade Adm	0.10	3	0.36	69	2.13	59	3.89	38	-1.06	68	1.47	37	1.62	24	0.95	2.74
Peer Group	US Fund Short-Term Bond			-0.41		0.57		2.15		-0.32		0.94		0.87		0.69	2.52
Index	Bloomberg US Govt/Credit 1-3 Yr TR USD			0.73		1.87		2.77		-0.72		1.21		1.02		0.29	0.28
Intermediate-Term Bond																	
DBLFX	DoubleLine Core Fixed Income I	0.44	3	-2.93	46	-0.07	31	1.10	59	-4.03	24	-0.06	72	1.57	32	0.56	4.81
DODIX	Dodge & Cox Income I	0.41	5	-2.77	35	0.35	18	3.11	7	-3.15	13	1.32	7	2.18	8	1.08	3.86
PTTRX	PIMCO Total Return Instl	0.49	3	-2.79	36	-0.59	54	1.17	57	-5.06	73	0.24	52	1.25	55	0.97	3.63
PTRQX	PGIM Total Return Bond R6	0.39	4	-2.52	23	0.57	13	2.90	10	-4.66	48	0.61	26	2.03	12	0.61	6.02
Peer Group	US Fund Intermediate Core Bond			-6.41		-0.10		3.94		5.74		2.87		6.01		1.05	3.68
Index	Bloomberg US Agg Bond TR USD			-3.23		-1.21		0.64		-5.21		0.10		1.13		0.93	3.56
Multi-Sector Bond																	
PIMIX	PIMCO Income Instl	0.62	5	-0.54	42	3.23	30	6.76	26	0.67	25	2.37	18	4.00	1	0.60	5.78
Peer Group	US Fund Multisector Bond			-3.25		12.39		20.46		9.38		9.14		11.28		0.44	6.84
Index	Bloomberg US Agg Bond TR USD			-3.23		-1.21		0.64		-5.21		0.10		1.13		0.93	3.56

\*Morningstar overall rating

\*\*Returns for periods under one year are not annualized

Returns are shown net of embedded expense ratios. Mstar Rnkg - Fund's ranking within Morningstar's category ("Peer Group"). Funds are ranked in descending order by return. For example, a Fund with a 20 ranking indicates that it is ranked in the top 20th percentile.

Source: Morningstar Direct; Wilshire Compass (Lipper Rankings)

INVESTMENT RETURNS & RANKINGS - EQUITY FUNDS

El Toro Water District - 401(k) Plan

		Annualized Total Rate of Return (%) as of 09/30/2023															
Ticker	Name	Exp Ratio	MStar Rtg*	3-Mos**		YTD**		1-Year		3-Years		5-Years		10-Years		3 Yr Shrp%	3 Yr SD
				Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg		
Large Blend																	
COFYX	Columbia Contrarian Core Inst3	0.62	4	-2.96	37	17.18	4	24.70	10	10.74	22	10.55	10	11.71	15	0.88	19.08
VGIAX	Vanguard Growth & Income Adm	0.22	4	-3.16	45	11.87	44	19.94	54	10.44	26	9.49	33	11.82	11	0.95	2.74
Peer Group	US Fund Large Blend			0.78		1.93		2.85		-0.71		1.22		1.04		0.75	18.21
Index	Russell 1000 TR USD			-3.15		13.01		21.19		9.53		9.63		11.63		0.55	19.97
Index	S&P 500 TR USD			-3.27		13.07		21.62		10.15		9.92		11.91		0.40	38.20
Large Value																	
DODGX	Dodge & Cox Stock I	0.51	4	-0.17	9	6.98	11	20.88	11	16.47	8	8.61	13	10.64	5	0.60	23.40
PKAIX	PIMCO RAE US Instl	0.40	3	0.47	4	5.12	20	20.25	12	14.96	15	7.67	26	--	--	0.57	20.89
Peer Group	US Fund Large Value			1.31		3.60		4.47		1.70		1.72		1.11		0.52	19.75
Index	Russell 1000 Value TR USD			-3.16		1.79		14.44		11.05		6.23		8.45		0.70	25.53
Large Growth																	
VIGAX	Vanguard Growth Index Admiral	0.05	4	-3.70	58	28.28	16	28.10	23	6.75	34	11.94	14	13.56	16	0.83	18.76
HNACX	Harbor Capital Appreciation Retirement	0.58	3	-3.40	47	32.28	7	30.35	14	2.43	74	10.46	30	13.66	14	n.a.	n.a.
Peer Group	US Fund Large Growth			1.38		3.80		4.71		1.78		1.74		1.12		0.99	19.00
Index	Russell 1000 Growth TR USD			-3.13		24.98		27.72		7.97		12.42		14.48		0.86	18.99
Mid Core																	
VIMAX	Vanguard Mid Cap Index Admiral	0.05	4	-5.07	80	3.30	59	12.61	68	7.26	81	6.49	28	9.05	17	0.83	18.76
Peer Group	US Fund Mid-Cap Blend			-1.03		-0.14		1.94		-0.95		0.89		0.97		0.56	22.07
Index	Russell Mid Cap TR USD			-4.68		3.91		13.45		8.09		6.38		8.98		0.50	23.17

\*Morningstar overall rating

\*\*Returns for periods under one year are not annualized

Returns are shown net of embedded expense ratios. Mstar Rnkg - Fund's ranking within Morningstar's category ("Peer Group"). Funds are ranked in descending order by return. For example, a Fund with a 20 ranking indicates that it is ranked in the top 20th percentile.

Source: Morningstar Direct; Wilshire Compass (Lipper Rankings)

INVESTMENT RETURNS & RANKINGS - EQUITY FUNDS

El Toro Water District - 401(k) Plan

		Annualized Total Rate of Return (%) as of 09/30/2023															
Ticker	Name	Exp Ratio	MStar Rtg*	3-Mos**		YTD**		1-Year		3-Years		5-Years		10-Years		3 Yr Shrp%	3 Yr SD
				Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg		
Small Value																	
UBVFX	Undiscovered Managers Behavioral Val R6	0.80	4	-1.04	30	-0.69	80	12.99	59	23.70	8	6.09	20	9.07	6	0.45	31.71
Peer Group	US Fund Small Value			1.31		3.60		4.47		1.70		1.72		1.11		0.44	27.64
Index	Russell 2000 Value TR USD			-2.96		-0.53		7.84		13.32		2.59		6.19		0.87	21.55
Small Blend																	
DCZRX	Delaware Small Cap Core R6	0.69	3	-6.44	93	0.28	85	7.58	91	10.49	56	3.68	53	7.93	17	0.59	24.50
Peer Group	US Fund Small Blend			0.91		2.50		3.93		-0.31		1.71		1.65		0.50	25.15
Index	Russell 2000 TR USD			-5.13		2.54		8.93		7.16		2.40		6.65		0.49	26.96
Small Growth																	
FGROX	Emerald Growth Institutional	0.82	3	-8.54	83	3.58	59	10.08	44	1.05	63	2.43	70	7.73	47	1.08	3.86
Peer Group	US Fund Small Growth			0.78		1.93		2.85		-0.71		1.22		1.04		0.80	24.61
Index	Russell 2000 Growth TR USD			-7.32		5.24		9.59		1.09		1.55		6.72		0.61	25.70

\*Morningstar overall rating

\*\*Returns for periods under one year are not annualized

Returns are shown net of embedded expense ratios. Mstar Rnkg - Fund's ranking within Morningstar's category ("Peer Group"). Funds are ranked in descending order by return. For example, a Fund with a 20 ranking indicates that it is ranked in the top 20th percentile.

Source: Morningstar Direct; Wilshire Compass (Lipper Rankings)

INVESTMENT RETURNS & RANKINGS - EQUITY FUNDS

El Toro Water District - 401(k) Plan

		Annualized Total Rate of Return (%) as of 09/30/2023															
Ticker	Name	Exp Ratio	MStar Rtg*	3-Mos**		YTD**		1-Year		3-Years		5-Years		10-Years		3 Yr Shrp%	3 Yr SD
				Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg		
Foreign Large Blend																	
DFALX	DFA Large Cap International I	0.17	4	-3.87	29	6.87	30	25.26	31	6.73	15	3.71	22	4.10	24	0.34	18.56
Peer Group	US Fund Foreign Large Blend			-0.83		0.65		2.20		-2.93		1.02		1.27		0.33	17.57
Peer Group	US Fund Europe Stock			-2.03		-0.86		2.16		-1.71		1.03		1.44		0.36	19.16
Index	MSCI EAFE NR USD			-4.11		7.08		25.65		5.75		3.24		3.82		0.58	18.17
Foreign Large Value																	
DODFX	Dodge & Cox International Stock I	0.62	3	-1.32	39	9.26	38	26.74	58	12.13	19	4.43	18	4.08	16	0.22	23.35
Peer Group	US Fund Foreign Large Value			-0.81		0.28		1.30		-3.21		0.68		0.80		0.19	19.55
Index	MSCI EAFE Value NR USD			0.59		9.92		31.51		11.11		2.81		2.97		0.44	19.50
Foreign Large Growth																	
MGRDX	MFS International Growth R6	0.70	4	-7.80	54	3.69	54	18.46	50	2.54	13	4.69	21	5.72	18	0.66	15.68
Peer Group	US Fund Foreign Large Growth			-1.03		-0.14		1.94		-0.95		0.89		0.97		0.60	16.68
Index	MSCI EAFE Growth NR USD			-8.64		4.31		20.00		0.37		3.23		4.42		0.35	19.16
Index	MSCI ACWI Ex USA Growth NR USD			-7.31		2.61		15.84		-1.86		2.54		3.92		0.34	17.74
Diversified Emerging Markets																	
VEMAX	Vanguard Emerging Mkts Stock Idx Adm	0.14	4	-2.16	33	2.48	61	10.89	70	-0.22	43	2.00	36	2.49	37	n.a.	n.a.
EEM	iShares MSCI Emerging Markets ETF	0.69	2	-3.65	58	1.28	75	11.30	66	-2.55	65	-0.19	78	1.40	70	n.a.	n.a.

\*Morningstar overall rating

\*\*Returns for periods under one year are not annualized

Returns are shown net of embedded expense ratios. Mstar Rnkg - Fund's ranking within Morningstar's category ("Peer Group"). Funds are ranked in descending order by return. For example, a Fund with a 20 ranking indicates that it is ranked in the top 20th percentile.

Source: Morningstar Direct; Wilshire Compass (Lipper Rankings)

INVESTMENT RETURNS & RANKINGS - ALTERNATIVE FUNDS

El Toro Water District - 401(k) Plan

		Annualized Total Rate of Return (%) as of 09/30/2023															
Ticker	Name	Exp Ratio	MStar Rtg*	3-Mos**		YTD**		1-Year		3-Years		5-Years		10-Years		3 Yr Shrp%	3 Yr SD
				Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg	Tot ROR	Mstar Rnkg		
Market Neutral																	
MERIX	The Merger Fund I	1.21	4	3.51	7	2.51	43	3.61	61	2.29	68	3.39	50	3.10	27	0.97	18.98
Managed Futures																	
AHLIX	American Beacon AHL Mgd Futs Strat R5	1.48	4	-0.58	74	-1.25	68	-6.83	67	9.24	54	7.07	30	--	--	0.63	9.13
PBAKX	BlackRock Tactical Opportunities K	0.68	4	2.96	28	5.31	21	11.54	9	5.51	30	3.69	36	3.96	17	0.66	15.68
REITs																	
FREGX	Nuveen Real Estate Securities R6	0.85	4	-7.77	46	-3.62	47	0.53	41	3.50	50	2.62	49	5.80	37	1.08	3.86

\*Morningstar overall rating

\*\*Returns for periods under one year are not annualized

Returns are shown net of embedded expense ratios. Mstar Rnkg - Fund's ranking within Morningstar's category ("Peer Group"). Funds are ranked in descending order by return. For example, a Fund with a 20 ranking indicates that it is ranked in the top 20th percentile.

Source: Morningstar Direct; Wilshire Compass (Lipper Rankings)



# APPENDIX

# GoalMaker® Performance

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

The calculated returns shown are the weighted average returns of the underlying funds for the GoalMaker portfolios based on model allocations prior to 09/30/2023. Returns are net of product expenses and fees and before any contract charges, with the exception of any fees the sponsor may have directed to be deducted from participant accounts. **Past performance does not guarantee future results.** The performance shown for the GoalMaker portfolios is for illustrative purposes only and does not reflect the actual experience of any individual participant in the program. This performance was calculated with the retroactive application of a model with the benefit of hindsight. **The performance shown 1) was rebalanced on a periodic basis as per your plan 2) assumes no changes to the asset allocation percentages or to the investment options for the relevant periods 3) assumes that an individual was enrolled in GoalMaker for the entire relevant time period and 4) assumes an initial investment but does not include the effect of periodic contributions or withdrawals.**

*Especially Prepared for El Toro Water District Retirement Savings Plan  
Calculated using Actual Investment Fund Performance*

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Conservative	Years To Retirement	26+	-2.93%	--	--	--	--
		25-21	-2.90%	--	--	--	--
		20-16	-2.93%	--	--	--	--
		15-11	-2.94%	--	--	--	--
		10-6	-2.93%	--	--	--	--
		5-0	-2.88%	--	--	--	--
	Years In Retirement	0+	-3.01%	--	--	--	--

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Moderate	Years To Retirement	26+	-2.93%	--	--	--	--
		25-21	-2.90%	--	--	--	--
		20-16	-2.93%	--	--	--	--
		15-11	-2.94%	--	--	--	--
		10-6	-2.93%	--	--	--	--
		5-0	-2.88%	--	--	--	--
	Years In Retirement	0+	-3.01%	--	--	--	--

# GoalMaker® Performance

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

*Especially Prepared for El Toro Water District Retirement Savings Plan  
Calculated using Actual Investment Fund Performance*

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Aggressive	Years To Retirement	26+	-2.93%	--	--	--	--
		25-21	-2.90%	--	--	--	--
		20-16	-2.93%	--	--	--	--
		15-11	-2.94%	--	--	--	--
		10-6	-2.93%	--	--	--	--
		5-0	-2.88%	--	--	--	--
	Years In Retirement	0+	-3.01%	--	--	--	--

# GoalMaker® Performance

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

*Especially Prepared for El Toro Water District Retirement Savings Plan  
Calculated using Actual Investment Fund Performance  
Supplemented with a Hypothetical Historical Performance for the Stable Value Asset Class*

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Conservative	Years To Retirement	26+	-2.93%	17.89%	7.87%	7.17%	--
		25-21	-2.90%	16.81%	7.19%	6.82%	--
		20-16	-2.93%	14.87%	6.10%	6.30%	--
		15-11	-2.95%	12.67%	4.99%	5.69%	--
		10-6	-2.94%	10.75%	3.68%	5.00%	--
		5-0	-2.89%	8.12%	1.82%	3.97%	--
	Years In Retirement	0+	-3.02%	5.35%	-0.12%	2.89%	--

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Moderate	Years To Retirement	26+	-2.93%	17.89%	7.87%	7.17%	--
		25-21	-2.90%	16.81%	7.19%	6.82%	--
		20-16	-2.93%	14.87%	6.10%	6.30%	--
		15-11	-2.95%	12.67%	4.99%	5.69%	--
		10-6	-2.94%	10.75%	3.68%	5.00%	--
		5-0	-2.89%	8.12%	1.82%	3.97%	--
	Years In Retirement	0+	-3.02%	5.35%	-0.12%	2.89%	--

Risk Level	Years To / In Retirement	Time Horizon	Weighted Average Total Return				
			QTD	1 Year	3 Year	5 Year	10 Year
Aggressive	Years To Retirement	26+	-2.93%	17.89%	7.87%	7.17%	--
		25-21	-2.90%	16.81%	7.19%	6.82%	--
		20-16	-2.93%	14.87%	6.10%	6.30%	--
		15-11	-2.95%	12.67%	4.99%	5.69%	--
		10-6	-2.94%	10.75%	3.68%	5.00%	--
		5-0	-2.89%	8.12%	1.82%	3.97%	--
	Years In Retirement	0+	-3.02%	5.35%	-0.12%	2.89%	--

# GoalMaker® Allocations

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

Conservative Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>Stable Value</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>
Guaranteed Income Fund	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	4.00%
<b>Fixed Income - Intermediate Core-Plus Bond</b>	<b>10.00%</b>	<b>15.00%</b>	<b>20.00%</b>	<b>27.00%</b>	<b>35.00%</b>	<b>47.00%</b>	<b>57.00%</b>
Dodge & Cox Income Fund Class I	4.00%	5.00%	7.00%	10.00%	13.00%	17.00%	20.00%
PGIM Total Return Bond Fund -Class R6 <sub>7</sub>	2.00%	5.00%	6.00%	7.00%	10.00%	14.00%	18.00%
DoubleLine Core Fixed Income Fund Class R6 <sub>1,4</sub>	4.00%	5.00%	7.00%	10.00%	12.00%	16.00%	19.00%
<b>Fixed Income - Multisector Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>2.00%</b>
PIMCO Income Fund Institutional Class	1.00%	1.00%	1.00%	1.00%	1.00%	2.00%	2.00%
<b>Fixed Income - Long Term Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Vanguard Long-Term Investment-Grade Fund Admiral Shares	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	6.00%
<b>Large Cap - Value</b>	<b>14.00%</b>	<b>14.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>4.00%</b>
Dodge & Cox Stock Fund Class I	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
PIMCO RAE US Fund Institutional Class <sub>1,9</sub>	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
<b>Large Cap - Blend</b>	<b>26.00%</b>	<b>24.00%</b>	<b>22.00%</b>	<b>19.00%</b>	<b>17.00%</b>	<b>10.00%</b>	<b>6.00%</b>
Columbia Contrarian Core Fund Institutional 3 Class <sub>6</sub>	13.00%	12.00%	11.00%	10.00%	8.00%	5.00%	3.00%
Vanguard Growth and Income Fund Admiral Shares <sub>5</sub>	13.00%	12.00%	11.00%	9.00%	9.00%	5.00%	3.00%
<b>Large Cap - Growth</b>	<b>13.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>5.00%</b>	<b>3.00%</b>
Harbor Capital Appreciation Fund Retirement Class <sub>1,7</sub>	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%	1.00%
Vanguard Growth Index Fund Admiral Shares	6.00%	6.00%	5.00%	4.00%	3.00%	3.00%	2.00%
<b>Mid Cap - Blend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Mid-Cap Index Fund Admiral Shares	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Small Cap - Value</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Undiscovered Managers Behavioral Value Fund Class R6 <sub>9</sub>	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>Small Cap - Blend</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>
Delaware Small Cap Core Fund Class R6 <sub>1</sub>	3.00%	4.00%	4.00%	4.00%	3.00%	2.00%	2.00%
<b>Small Cap - Growth</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Emerald Growth Fund Institutional Class	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>International - Large Value</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
Dodge & Cox International Stock Fund Class I	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%

# GoalMaker® Allocations

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

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Conservative Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>International - Large Blend</b>	<b>9.00%</b>	<b>8.00%</b>	<b>7.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>4.00%</b>	<b>2.00%</b>
DFA Large Cap International Portfolio Institutional Class	9.00%	8.00%	7.00%	5.00%	5.00%	4.00%	2.00%
<b>International - Large Growth</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
MFS International Growth Fund Class R6 <sub>10</sub>	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%
<b>International - Emerging Market</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Emerging Markets Stock Index Fund Admiral Shares	4.00%	4.00%	4.00%	3.00%	2.00%	1.00%	1.00%
<b>Sector - Domestic Real Estate</b>	<b>2.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Nuveen Real Estate Securities Fund Class R6 <sub>3</sub>	2.00%	2.00%	3.00%	3.00%	3.00%	4.00%	6.00%
<b>Alternative - Systematic Trend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>
American Beacon AHL Managed Futures Strategy Fund A Class	1.00%	1.00%	2.00%	3.00%	3.00%	4.00%	4.00%
<b>Alternative - Event Driven</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
The Merger Fund® Class I <sub>3</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Alternative - Macro Trading</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
BlackRock Tactical Opportunities Fund Class K Shares <sub>1</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

# GoalMaker® Allocations

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

Moderate Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>Stable Value</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>
Guaranteed Income Fund	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	4.00%
<b>Fixed Income - Intermediate Core-Plus Bond</b>	<b>10.00%</b>	<b>15.00%</b>	<b>20.00%</b>	<b>27.00%</b>	<b>35.00%</b>	<b>47.00%</b>	<b>57.00%</b>
Dodge & Cox Income Fund Class I	4.00%	5.00%	7.00%	10.00%	13.00%	17.00%	20.00%
PGIM Total Return Bond Fund -Class R6 <sub>7</sub>	2.00%	5.00%	6.00%	7.00%	10.00%	14.00%	18.00%
DoubleLine Core Fixed Income Fund Class R6 <sub>1,4</sub>	4.00%	5.00%	7.00%	10.00%	12.00%	16.00%	19.00%
<b>Fixed Income - Multisector Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>2.00%</b>
PIMCO Income Fund Institutional Class	1.00%	1.00%	1.00%	1.00%	1.00%	2.00%	2.00%
<b>Fixed Income - Long Term Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Vanguard Long-Term Investment-Grade Fund Admiral Shares	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	6.00%
<b>Large Cap - Value</b>	<b>14.00%</b>	<b>14.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>4.00%</b>
Dodge & Cox Stock Fund Class I	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
PIMCO RAE US Fund Institutional Class <sub>1,9</sub>	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
<b>Large Cap - Blend</b>	<b>26.00%</b>	<b>24.00%</b>	<b>22.00%</b>	<b>19.00%</b>	<b>17.00%</b>	<b>10.00%</b>	<b>6.00%</b>
Columbia Contrarian Core Fund Institutional 3 Class <sub>6</sub>	13.00%	12.00%	11.00%	10.00%	8.00%	5.00%	3.00%
Vanguard Growth and Income Fund Admiral Shares <sub>5</sub>	13.00%	12.00%	11.00%	9.00%	9.00%	5.00%	3.00%
<b>Large Cap - Growth</b>	<b>13.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>5.00%</b>	<b>3.00%</b>
Harbor Capital Appreciation Fund Retirement Class <sub>1,7</sub>	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%	1.00%
Vanguard Growth Index Fund Admiral Shares	6.00%	6.00%	5.00%	4.00%	3.00%	3.00%	2.00%
<b>Mid Cap - Blend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Mid-Cap Index Fund Admiral Shares	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Small Cap - Value</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Undiscovered Managers Behavioral Value Fund Class R6 <sub>9</sub>	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>Small Cap - Blend</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>
Delaware Small Cap Core Fund Class R6 <sub>1</sub>	3.00%	4.00%	4.00%	4.00%	3.00%	2.00%	2.00%
<b>Small Cap - Growth</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Emerald Growth Fund Institutional Class	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>International - Large Value</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
Dodge & Cox International Stock Fund Class I	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%

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Moderate Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>International - Large Blend</b>	<b>9.00%</b>	<b>8.00%</b>	<b>7.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>4.00%</b>	<b>2.00%</b>
DFA Large Cap International Portfolio Institutional Class	9.00%	8.00%	7.00%	5.00%	5.00%	4.00%	2.00%
<b>International - Large Growth</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
MFS International Growth Fund Class R6 <sub>10</sub>	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%
<b>International - Emerging Market</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Emerging Markets Stock Index Fund Admiral Shares	4.00%	4.00%	4.00%	3.00%	2.00%	1.00%	1.00%
<b>Sector - Domestic Real Estate</b>	<b>2.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Nuveen Real Estate Securities Fund Class R6 <sub>3</sub>	2.00%	2.00%	3.00%	3.00%	3.00%	4.00%	6.00%
<b>Alternative - Systematic Trend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>
American Beacon AHL Managed Futures Strategy Fund A Class	1.00%	1.00%	2.00%	3.00%	3.00%	4.00%	4.00%
<b>Alternative - Event Driven</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
The Merger Fund® Class I <sub>3</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Alternative - Macro Trading</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
BlackRock Tactical Opportunities Fund Class K Shares <sub>1</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%



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Aggressive Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>Stable Value</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>
Guaranteed Income Fund	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	4.00%
<b>Fixed Income - Intermediate Core-Plus Bond</b>	<b>10.00%</b>	<b>15.00%</b>	<b>20.00%</b>	<b>27.00%</b>	<b>35.00%</b>	<b>47.00%</b>	<b>57.00%</b>
Dodge & Cox Income Fund Class I	4.00%	5.00%	7.00%	10.00%	13.00%	17.00%	20.00%
PGIM Total Return Bond Fund -Class R6 <sub>7</sub>	2.00%	5.00%	6.00%	7.00%	10.00%	14.00%	18.00%
DoubleLine Core Fixed Income Fund Class R6 <sub>1,4</sub>	4.00%	5.00%	7.00%	10.00%	12.00%	16.00%	19.00%
<b>Fixed Income - Multisector Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>2.00%</b>
PIMCO Income Fund Institutional Class	1.00%	1.00%	1.00%	1.00%	1.00%	2.00%	2.00%
<b>Fixed Income - Long Term Bond</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Vanguard Long-Term Investment-Grade Fund Admiral Shares	1.00%	1.00%	2.00%	3.00%	4.00%	4.00%	6.00%
<b>Large Cap - Value</b>	<b>14.00%</b>	<b>14.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>4.00%</b>
Dodge & Cox Stock Fund Class I	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
PIMCO RAE US Fund Institutional Class <sub>1,9</sub>	7.00%	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%
<b>Large Cap - Blend</b>	<b>26.00%</b>	<b>24.00%</b>	<b>22.00%</b>	<b>19.00%</b>	<b>17.00%</b>	<b>10.00%</b>	<b>6.00%</b>
Columbia Contrarian Core Fund Institutional 3 Class <sub>6</sub>	13.00%	12.00%	11.00%	10.00%	8.00%	5.00%	3.00%
Vanguard Growth and Income Fund Admiral Shares <sub>5</sub>	13.00%	12.00%	11.00%	9.00%	9.00%	5.00%	3.00%
<b>Large Cap - Growth</b>	<b>13.00%</b>	<b>12.00%</b>	<b>10.00%</b>	<b>8.00%</b>	<b>6.00%</b>	<b>5.00%</b>	<b>3.00%</b>
Harbor Capital Appreciation Fund Retirement Class <sub>1,7</sub>	7.00%	6.00%	5.00%	4.00%	3.00%	2.00%	1.00%
Vanguard Growth Index Fund Admiral Shares	6.00%	6.00%	5.00%	4.00%	3.00%	3.00%	2.00%
<b>Mid Cap - Blend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Mid-Cap Index Fund Admiral Shares	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Small Cap - Value</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Undiscovered Managers Behavioral Value Fund Class R6 <sub>9</sub>	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>Small Cap - Blend</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>
Delaware Small Cap Core Fund Class R6 <sub>1</sub>	3.00%	4.00%	4.00%	4.00%	3.00%	2.00%	2.00%
<b>Small Cap - Growth</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>0%</b>
Emerald Growth Fund Institutional Class	4.00%	3.00%	2.00%	2.00%	2.00%	1.00%	0%
<b>International - Large Value</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
Dodge & Cox International Stock Fund Class I	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%

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Aggressive Portfolio	Years To Retirement						Years In Retirement
Investment Options	26+	25-21	20-16	15-11	10-6	5-0	0+
<b>International - Large Blend</b>	<b>9.00%</b>	<b>8.00%</b>	<b>7.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>4.00%</b>	<b>2.00%</b>
DFA Large Cap International Portfolio Institutional Class	9.00%	8.00%	7.00%	5.00%	5.00%	4.00%	2.00%
<b>International - Large Growth</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>0%</b>
MFS International Growth Fund Class R6 <sub>10</sub>	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	0%
<b>International - Emerging Market</b>	<b>4.00%</b>	<b>4.00%</b>	<b>4.00%</b>	<b>3.00%</b>	<b>2.00%</b>	<b>1.00%</b>	<b>1.00%</b>
Vanguard Emerging Markets Stock Index Fund Admiral Shares	4.00%	4.00%	4.00%	3.00%	2.00%	1.00%	1.00%
<b>Sector - Domestic Real Estate</b>	<b>2.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>6.00%</b>
Nuveen Real Estate Securities Fund Class R6 <sub>3</sub>	2.00%	2.00%	3.00%	3.00%	3.00%	4.00%	6.00%
<b>Alternative - Systematic Trend</b>	<b>1.00%</b>	<b>1.00%</b>	<b>2.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.00%</b>	<b>4.00%</b>
American Beacon AHL Managed Futures Strategy Fund A Class	1.00%	1.00%	2.00%	3.00%	3.00%	4.00%	4.00%
<b>Alternative - Event Driven</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
The Merger Fund® Class I <sub>3</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Alternative - Macro Trading</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
BlackRock Tactical Opportunities Fund Class K Shares <sub>1</sub>	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

# GoalMaker® Individual Fund Performance

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The performance quoted represents past performance. The investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than original cost. Past performance does not guarantee future results. Current performance may be lower or higher than the performance data quoted. For more information current to the most recent month end, please call 800-353-2847 or visit our website at: [www.Prudential.com](http://www.Prudential.com).

Investment Option	Gross Expense Ratio	Net Expense Ratio	QTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
<b>Stable Value</b>									
Guaranteed Income Fund	--	--	0.77%	--	--	--	--	2.56%	12/02/2022
<b>Fixed Income - Intermediate Core-Plus Bond</b>									
Dodge & Cox Income Fund Class I <sub>2</sub>	0.41%	0.41%	-2.77%	3.11%	-3.15%	1.32%	2.18%	--	01/03/1989
PGIM Total Return Bond Fund -Class R6 <sub>2,7</sub>	0.40%	0.39%	-2.52%	2.90%	-4.66%	0.61%	2.03%	--	12/27/2010
DoubleLine Core Fixed Income Fund Class R6 <sub>1,2,4</sub>	0.48%	0.45%	-2.92%	1.24%	-3.97%	-0.02%	1.60%	-1.61%	07/31/2019
<b>Fixed Income - Multisector Bond</b>									
PIMCO Income Fund Institutional Class <sub>2</sub>	0.62%	0.62%	-0.54%	6.76%	0.67%	2.37%	4.00%	--	03/30/2007
<b>Fixed Income - Long Term Bond</b>									
Vanguard Long-Term Investment-Grade Fund									
Admiral Shares <sub>2</sub>	0.12%	0.12%	-7.86%	0.58%	-10.13%	-0.42%	2.71%	--	02/12/2001
<b>Large Cap - Value</b>									
Dodge & Cox Stock Fund Class I <sub>2</sub>	0.51%	0.51%	-0.17%	20.88%	16.47%	8.61%	10.64%	--	01/04/1965
PIMCO RAE US Fund Institutional Class <sub>1,2,9</sub>	0.41%	0.40%	0.47%	20.25%	14.96%	7.67%	--	8.81%	06/05/2015
<b>Large Cap - Blend</b>									
Columbia Contrarian Core Fund Institutional 3 Class <sub>2,8</sub>	0.62%	0.60%	-2.96%	24.70%	10.74%	10.55%	11.71%	--	11/08/2012
Vanguard Growth and Income Fund Admiral Shares <sub>2,5</sub>	0.27%	0.26%	-3.17%	19.93%	10.43%	9.49%	11.82%	--	05/14/2001
<b>Large Cap - Growth</b>									
Harbor Capital Appreciation Fund Retirement Class <sub>1,2,7</sub>	0.64%	0.59%	-3.40%	30.35%	2.43%	10.46%	13.66%	14.93%	03/01/2016
Vanguard Growth Index Fund Admiral Shares <sub>2</sub>	0.05%	0.05%	-3.70%	28.10%	6.75%	11.94%	13.56%	--	11/13/2000
<b>Mid Cap - Blend</b>									
Vanguard Mid-Cap Index Fund Admiral Shares <sub>2</sub>	0.05%	0.05%	-5.07%	12.61%	7.26%	6.49%	9.05%	--	11/12/2001
<b>Small Cap - Value</b>									
Undiscovered Managers Behavioral Value Fund									
Class R6 <sub>2,9</sub>	0.85%	0.80%	-1.04%	12.99%	23.70%	6.09%	9.07%	--	04/30/2013
<b>Small Cap - Blend</b>									
Delaware Small Cap Core Fund Class R6 <sub>1,2</sub>	0.69%	0.69%	-6.44%	7.58%	10.49%	3.68%	7.93%	8.72%	05/02/2016
<b>Small Cap - Growth</b>									
Emerald Growth Fund Institutional Class <sub>2</sub>	0.82%	0.82%	-8.54%	10.08%	1.05%	2.43%	7.73%	--	10/21/2008
<b>International - Large Value</b>									
Dodge & Cox International Stock Fund Class I <sub>2</sub>	0.62%	0.62%	-1.32%	26.74%	12.13%	4.43%	4.08%	--	05/01/2001
<b>International - Large Blend</b>									

# GoalMaker® Individual Fund Performance

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Investment Option	Gross Expense Ratio	Net Expense Ratio	QTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
DFA Large Cap International Portfolio Institutional Class <sub>2</sub>	0.17%	0.17%	-3.87%	25.26%	6.73%	3.71%	4.10%	--	07/17/1991
<b>International - Large Growth</b>									
MFS International Growth Fund Class R6 <sub>2,10</sub>	0.72%	0.71%	-7.80%	18.46%	2.54%	4.69%	5.72%	--	05/01/2006
<b>International - Emerging Market</b>									
Vanguard Emerging Markets Stock Index Fund Admiral Shares <sub>2</sub>	0.14%	0.14%	-2.16%	10.89%	-0.22%	2.00%	2.49%	--	06/23/2006
<b>Sector - Domestic Real Estate</b>									
Nuveen Real Estate Securities Fund Class R6 <sub>2,8</sub>	0.93%	0.85%	-7.77%	0.53%	3.50%	2.62%	5.80%	--	04/30/2013
<b>Alternative - Systematic Trend</b>									
American Beacon AHL Managed Futures Strategy Fund A Class <sub>2</sub>	1.80%	1.80%	-0.69%	-7.24%	8.89%	6.71%	--	5.09%	08/19/2014
<b>Alternative - Event Driven</b>									
The Merger Fund® Class I <sub>2,3</sub>	1.36%	1.25%	3.51%	3.61%	2.29%	3.39%	3.10%	--	08/01/2013
<b>Alternative - Macro Trading</b>									
BlackRock Tactical Opportunities Fund Class K Shares <sub>1,2</sub>	0.70%	0.70%	2.96%	11.54%	5.51%	3.69%	3.96%	5.03%	08/02/2016

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1. Performance displayed for periods beginning earlier than the "Inception Date" is based on the historical returns of the oldest share class of the fund, adjusted to reflect the fees and expenses of this share class. "Since Inception" performance when shown is based on the actual performance of this share class.

*Fixed income investment (bond) funds are subject to interest rate risk; their value will decline as interest rates rise. Fund shares are not guaranteed by the U.S. Government.*

*Fixed income investment (bond) funds are subject to interest rate risk; their value will decline as interest rates rise. Fund shares are not guaranteed by the U.S. Government.*

*Investments in large cap funds are subject to market fluctuations and may lose value. The investment risks associated with these funds may be impacted by a variety of factors, including investment style, objective, holdings, and focus in particular industries. On average, investments in large cap funds may be considered more conservative than investments in small and mid-cap funds, potentially posing less overall volatility in exchange for less aggressive growth potential.*

*Small and mid-sized companies may present greater opportunities for capital appreciation, but may also involve greater risks than larger companies. As a result, the value of stocks issued by these companies may fluctuate more than stocks of larger issuers.*

*Sector funds are subject to risks within their specific sectors because they concentrate their investments in securities of companies within certain industries. Therefore, the price of these securities can be volatile. Investing in foreign securities presents certain unique risks not associated with domestic investments, such as currency fluctuation and political and economic changes. This may result in greater share price volatility.*

*The real estate industry is greatly affected by economic downturns that may persist as well as changes in property values, interest rates, taxes, environmental issues and regulatory developments.*

*Investing in emerging markets is generally riskier than investing in foreign securities. Emerging market countries may have unstable governments and/or economies that are subject to sudden change. These changes may be magnified by the countries' emergent financial markets, resulting in significant volatility to investments in these countries. These countries may also lack the legal, business and social framework to support securities markets.*

*All investing involves risk. Alternative investments, such as commodities, derivatives, multicurrency, market neutral, and other strategies involve unique risks and may cause these investments to react differently to market conditions than traditional investments. These alternative investments may be speculative and more volatile than investments in more traditional equity and debt securities. If applicable, derivatives can increase losses and reduce opportunities for gains when market prices, interest rates, currency rate or the derivatives themselves behave in a way not anticipated by the fund.*

**Past performance is not indicative of future performance and short periods of performance may be particularly unrepresentative of long-term performance.**

The historical performance shown represents the change in net asset value of an investment over a stated period assuming the reinvestment of dividends and capital gains distributions. The performance results shown do not reflect the deduction of the sales charge that may apply if the Fund shares were purchased outside of the plans or other programs. If the sales charges were reflected, performance may be lower. This is the performance that best reflects your investment experience as sales charges do not apply to your plan. At times, certain mutual fund's performance may be extraordinarily high due to investing in sectors that achieved unprecedented returns. There can be no assurance that this performance can be repeated in the future.

These model portfolios are provided as samples and not as investment recommendations. The model portfolios are based on generally accepted investment practices and take into account the principles of modern portfolio theory, in which allocations are adjusted in an effort to achieve maximum returns for a given level of risk. Participants using GoalMaker should consider other assets, income, and investments (e.g. equity in a home, Social Security benefits, individual retirement plan investments, etc.) in addition to the interest in the plan, to the extent those items are not taken into account in the model before applying these models to their individual situation. **Past performance of investments or asset classes does not guarantee future results.**

In providing this information Prudential Retirement Insurance and Annuity Company (PRIAC) is not undertaking to provide impartial investment advice, or to give advice in a fiduciary capacity. PRIAC may benefit from advisory and other fees paid to it or its affiliates for managing, selling, or settling of proprietary mutual funds, and other investment products or securities offered by PRIAC or its affiliates. Investment vehicles sponsored or managed by a PRIAC affiliate generate more revenue for the Empower Retirement, LLC. enterprise than non-proprietary investment vehicles.

PRIAC will also benefit from participant managed account services provided by third party Registered Investment Advisers (RIA) and sales personnel will receive compensation based upon plan sponsor adoption of the managed account service provided by a third-party RIA.

PRIAC's sales personnel generally receive greater compensation if plan assets are invested in proprietary investment vehicles. Sales personnel also receive compensation if plan sponsors/employers adopt other plan features such as automatic enrollment, automatic escalation, offshore sourcing, electronic delivery, GreenPath, Wellthy and other financial wellness services.

PRIAC may benefit directly from the difference between investment earnings of PRIAC's stable value funds and the amount credited to deposits in those funds. PRIAC may also benefit from broker-dealer or other entities' co-sponsorship of PRIAC conferences.

# GoalMaker® Disclosures

PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.

Third Quarter 2023

*Investors should carefully consider a fund's investment objectives, risks, charges and expenses before investing. The prospectus and (if available) summary prospectus contain complete information about the investment options available through your plan. Please call 877-778-2100 for a free prospectus and (if available) a summary prospectus containing this and other information about our funds. You should read the prospectus and summary prospectus (if available) carefully before investing. For variable insurance products, please read and consider carefully both the contract and fund prospectuses, if applicable, carefully before investing. It is possible to lose money by investing in securities.*

**Securities products and services are offered through Prudential Investment Management Services LLC (PIMS), Newark, NJ, a Prudential Financial company.**

The Guaranteed Income Fund (GIF) is a group annuity product issued by Empower Annuity Insurance Company (EAIC), Hartford, CT. Amounts contributed to the contract are deposited in EAIC general account. Payment obligations and the fulfillment of any guarantees specified in the group annuity contract are insurance claims supported by the full faith and credit of EAIC. However, if you are a participant in an unfunded nonqualified deferred compensation plan, GIF may be only a reference account that is used to determine the plan's liability to you and may not represent an actual investment in the group annuity. EAIC periodically resets the interest rate credited on contract balances, subject to a minimum rate specified in the group annuity contract. The minimum interest rate may be greater for certain 403(b) or nonqualified plan arrangements. Contact Empower for further information. Past interest rates are not indicative of future rates. This product is neither a mutual fund nor a bank product. The obligations of EAIC are not insured by the FDIC or any other federal governmental agency. Empower refers to the products and services offered by Empower Annuity Insurance Company of America and its subsidiaries, including EAIC and Empower Retirement, LLC. Effective October 3, 2022, Prudential Retirement Insurance and Annuity Company was renamed Empower Annuity Insurance Company. Contract form # GA-2020-IA-0805 or state variation thereof.

EAIC is compensated in connection with this product when general account investment returns exceed the interest credited on contract balances. EAIC may earn fee revenue plus the foregoing compensation if your plan has agreed to pay contract charges--which are sometimes paid with respect to plan/participant recordkeeping and distribution services. For some plans, EAIC uses a portion of its aggregate compensation to satisfy the plan's request for allowances and for payments to defray plan expenses. If EAIC's aggregate compensation from this product and from other plan investment products exceeds the costs of servicing your plan, EAIC earns a profit; otherwise it incurs a loss.

This information should not be construed as an endorsement of GoalMaker. Plan participants may continue to make their own allocation decisions. As a service provider, neither Prudential Financial nor its representatives are permitted to render investment advice.

Frequent exchanging of investment options may harm long-term investors. Policies may be in effect at the plan or the investment level to detect and deter exchanges that may be abusive. Such policies may require us to modify, restrict, suspend or terminate purchase or exchange privileges and impose redemption fees. Please refer to the prospectus, if available for the investment, for information on these potential restrictions and any applicable redemption fees. Otherwise, please contact your Representative.

This information should not be considered an offer or solicitation of securities, insurance products or services. No offer is intended nor should this material be construed as an offer of any product. The information is being presented by us solely in our role as the plan's service provider and/or record keeper.

Prudential Retirement Insurance and Annuity Company and PGIM are Prudential Financial companies. PGIM is a registered investment adviser.



## NO ACTION REQUIRED: FOR YOUR INFORMATION

### Overview

On April 1, 2022, Empower Annuity Insurance Company of America (EAICA), formerly known as Great-West Life & Annuity Insurance Company, the parent company of Empower Retirement, LLC (Empower) acquired the full-service retirement business of Prudential Financial, Inc. In connection with the transaction, EAICA acquired all shares of the following entities, which are no longer affiliated with Prudential Financial, Inc.: Prudential Retirement Insurance and Annuity Company; Prudential Bank & Trust, FSB; Global Portfolio Strategies, Inc.; TBG Insurance Services Corporation; MC Insurance Agency Services, LLC; and Mullin TBG Insurance Agency Services, LLC. On October 3, 2022, Prudential Retirement Insurance and Annuity Company was renamed Empower Annuity Insurance Company. For additional information regarding the name changes, please see [www.empower.com/name-change](http://www.empower.com/name-change).

Empower is in the process of integrating the acquired full-service retirement business. Effective January 1, 2023, Global Portfolio Strategies, Inc. was merged into Empower Capital Management, LLC, an Empower affiliate. Effective March 31, 2023, Prudential Bank & Trust, FSB is merging into Empower Trust Company, LLC, an Empower affiliate, and all services performed by Prudential Bank & Trust, FSB will be assumed by Empower Trust Company, LLC.

Please use the following to determine if Empower is now the service provider for an account or product. If an individual has multiple accounts, they may be a customer of Prudential Financial, Inc. and its affiliates (together, Prudential) and Empower.

### **If an individual is an annuitant, contingent annuitant or other beneficiary under a group annuity contract issued or reinsured by Prudential's pension risk transfer business or a plan participant whose benefit is administered by Prudential's pension risk transfer business... How does an individual know if this applies?**

- They were previously issued an annuity certificate from the Prudential Insurance Company of America in connection with their employer's defined benefit plan, OR they previously received a communication from their employer that Prudential has issued a guaranteed annuity covering all or a portion of their pension benefit or pays their pension benefit.
- Service Provider...The account remains with Prudential and was not impacted by the transaction. The "Important Disclosures Regarding the Empower Transaction" listed below **do not apply** to the account.

### **If an individual independently purchased an individual annuity, life insurance or investment product with Prudential... How does an individual know if this applies?**

- They independently purchased a product from Prudential (other than a SmartSolution IRA) that is unrelated to an employer workplace plan.
- The product purchased is issued by The Prudential Insurance Company of America (PICA), Pruco Life Insurance Company, or Pruco Life Insurance Company of New Jersey.
- They purchased an investment product or service through Pruco Securities, LLC.
- Service Provider...The account remains with Prudential and was not impacted by the transaction. The "Important Disclosures Regarding the Empower Transaction" listed below **do not apply** to the account.

### **If an individual is a participant in the Prudential Employee Savings Plan (PESP); the Jennison Associates Savings Plan; the Assurance Savings Plan; the Prudential Supplemental Employee Savings Plan; the Prudential Financial, Inc. 2021 Omnibus Incentive Plan and the attendant Prudential Long-Term Incentive Program; the Prudential Financial, Inc. 2016 Deferred Compensation Plan for Non-Employee Directors; or the PGIM, Inc. Omnibus Deferred Compensation Plan... How does an individual know if this applies?**

- They receive statements and other notifications from Prudential in connection with one or more of these plans.
- Service Provider...Prudential remains the service provider for the plans. Empower is currently providing services as a sub-contractor for a transitional period. Please carefully review the "Important Disclosures Regarding the Empower Transaction" below that **apply to the account as applicable**.

### **If an individual is a participant in a retirement plan previously serviced by Prudential Retirement that may include defined benefit plans, nonqualified plans, defined contribution plans and 401(k) plans (including a plan that permits self-directed brokerage accounts), or is an account holder of a SmartSolution IRA, an Auto Roll IRA or an NFS Prudential Brokerage Account...This category includes certain Stable Value products on third party recordkeeping platforms where the service provider will transfer to Empower. These clients will be notified directly... How does an individual know if this applies?**

- They receive a notification from Prudential Retirement notifying them that Empower will become the service provider for their account.
- They receive a welcome email or letter from Empower.
- Service Provider...Empower is now the service provider for the account. However, with respect to SmartSolution IRAs and certain Auto Roll IRAs, Prudential Investment Management Services LLC (PIMS) remains the broker-dealer for a transitional period. Please carefully review the "Important Disclosures Regarding the Empower Transaction" below that **apply**.

## Important Disclosures Regarding the Empower Transaction

Effective April 1, 2022, the following will apply:

- All references to "Prudential Retirement" refer to Empower. Prudential Retirement is no longer a business unit of Prudential.
- Certain insurance products written by The Prudential Insurance Company of America were reinsured to EAICA and Empower Life & Annuity Insurance Company of New York (for New York business). Empower will become the administrator of this business acquired from Prudential.
- Empower refers to the products and services offered by EAICA and its subsidiaries, including Empower Retirement, LLC. Empower is not affiliated with Prudential or its affiliates.
- Full-service retirement sales personnel and certain service personnel are no longer registered representatives of Prudential Investment Management Services LLC (PIMS) and are registered representatives of Empower Financial Services, Inc., formerly known as GWFS Equities, Inc.. For a transition period, certain back office and service personnel will remain registered representatives of PIMS.
- During a transition period, Prudential and, as applicable, its affiliates will continue to provide services to Empower. PIMS will continue to provide certain broker-dealer services under the terms of existing services agreements for certain plans and will continue to be the broker-dealer of record for existing SmartSolution IRAs and certain Auto Roll IRAs for a transition period.
- On or about May 1, 2023, the principal underwriter and distributor for certain legacy Prudential products will change from Prudential Investment Management Services LLC to Empower Financial Services, Inc, resulting from the sale of Prudential's retirement business to Empower. The change of principal underwriter and distributor will not impact the way these products operate. You can find further details if you wish in the prospectus to be released on or about May 1, 2023, to determine which principal underwriter and distributor supports the product you are invested in.
- Any documents pertaining to fraud or security commitments by Prudential Retirement are no longer applicable and are replaced with Empower's commitments as set forth at <https://participant.empower-retirement.com/participant/#/articles/securityGuarantee>.
- If Empower is the service provider for an account, Prudential's Privacy Statements and Privacy Notices are replaced with Empower's Privacy Notice as set forth at <https://www.empower-retirement.com/privacy> for the account.

All product names, logos and brands are property of their respective owners. "EMPOWER" and all associated logos and product names are trademarks of Empower Annuity Insurance Company of America. Prudential, the Prudential logo and the Rock Design are trademarks of Prudential Financial, Inc. and its affiliates and are used under license.

Information provided herein, including linked documents, is being provided for informational or educational purposes only. By sharing it, neither PIMS nor Prudential is acting as a fiduciary as defined by the Department of Labor or otherwise. If investment advice is needed, please consult with a qualified professional. Prudential Financial, its affiliates and their financial professionals do not render tax or legal advice. Please consult with your tax and legal advisors regarding your personal circumstances.

Empower Sponsor 2.2023

## **[END] Important Information Regarding the Empower Transition.**

Data presented is as of the period specified for this report, unless otherwise specified within a table heading. Data and expense ratios presented are the most current made available at the time of production. For mutual funds, the fund company may have more recent data available on its website. Price corrections that impact performance data may occur after production of this material.

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# GoalMaker® Fund Footnotes

*PRUDENTIAL RETIREMENT. INTELLIGENT SOLUTIONS WORKING FOR YOU.*

*Third Quarter 2023*

- 3. The Adviser has contractually agreed to waive fees and/or reimburse expenses through April 30, 2024.
- 4. The Adviser has contractually agreed to waive fees and/or reimburse expenses through August 01, 2024.
- 5. The Adviser has contractually agreed to waive fees and/or reimburse expenses through August 28, 2024.
- 6. The Adviser has contractually agreed to waive fees and/or reimburse expenses through December 31, 2023.
- 7. The Adviser has contractually agreed to waive fees and/or reimburse expenses through February 29, 2024.
- 8. The Adviser has contractually agreed to waive fees and/or reimburse expenses through July 31, 2024.
- 9. The Adviser has contractually agreed to waive fees and/or reimburse expenses through October 31, 2023.
- 10. The Adviser has contractually agreed to waive fees and/or reimburse expenses through September 30, 2024.



## **STAFF REPORT**

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**To: BOARD OF DIRECTORS**

**Meeting Date: November 20, 2023**

**From: Vishav Sharma, Chief Financial Officer**

**Subject: Springbrook Implementation – Progress Update**

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

- The District has successfully implemented Springbrook's General Ledger, Bank Reconciliation, Project Management, Accounts Payable, Payroll, Cash Receipting, Accounts Receivable and Human Resources modules. Staff is utilizing these modules on daily basis and getting better comfort level with the functionality of Springbrook.
- As discussed in the last month's meeting, the District staff is working with ADP to move its payroll and time & attendance system back to ADP. The staff is working with the ADP to setup our payroll and benefit information in ADP. We expect this transition to take place in the next quarter.
- Last month four Staff members attended the Springbrook's convention. The convention was very useful and informative. Staff was able to attend various training sessions and a one on one session on Tableau analytics/report writing. It was a great opportunity for networking, training, and to ask the Springbrook experts questions.
- The modules that still need to be implemented include Utility Billing, online credit card processing, and Fixed Assets.
- Springbrook utility billing module implementation is in progress. The District staff is currently working with Springbrook System's implementation team to test billing statements and various payment processing inputs. Last month we successfully tested the work flow of uploading our meter reading equipment to Springbrook. We encountered a few programming and billing statement presentation issues during testing. Springbrook programmers are working on fixing these issues. We will perform another round of parallel testing once fixes are applied.
- We are working with Xpress Bill Pay as part of utility billing implementation so that the District can continue to accept online, over the phone, and debit & credit card payments. Springbrook has suggested to use Xpress Bill Pay service instead of Civic pay. We were able to negotiate a much lower per transaction fee and waiver of \$2,000 of implementation cost as compared to the Civic pay. The District is working with the Xpress Bill Pay to finalize the agreement.

**Springbrook Utility Billing Project Schedule as of 10/18/2023:**

Week/Day	System	Description	Complete
November 20	Utility Billing	Updated Data Review	Scheduled
November 20-30	Utility Billing	Data Testing	Scheduled
December 1-20	Utility Billing	Retest – various billing cycles	Scheduled
January 8. 2024	Utility Billing	Tentatively Go live	Scheduled



## STAFF REPORT

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**To: BOARD OF DIRECTORS**

**Meeting Date: November 20, 2023**

**From: Vishav Sharma, Chief Financial Officer**

**Subject: Presentation of the Annual Comprehensive Financial Report for the Fiscal Year ended June 30, 2023**

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Attached to this memo please find the Annual Comprehensive Financial Report for the El Toro Water District for the Fiscal Year ended June 30, 2023. Also attached are two documents that communicate information from the District's audit firm, the Additional Communications Letter and the Letter on Government Audit Standards.

Finance Staff is pleased to report that the audit opinion is unmodified (*excerpted from Page 16 of the Comprehensive Financial Statements*):

"In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District as of June 30, 2023, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America."

In addition to the unmodified opinion in the Annual Comprehensive Financial Report, the Additional Communication Letter also communicates the auditor's opinion of working with the Finance Staff:

*"Difficulties Encountered in Performing the Audit"*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

*Uncorrected Misstatements*

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

*Disagreements with Management*

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during the course of our audit."

A summary of the financial results of the District's operations for the fiscal year ended June 30, 2023 appears in the Management's Discussion and Analysis section beginning on Page 20 and ending on Page 28. Some of the significant changes during the current fiscal year include:

- The Net Position of the District increased by \$5,160,216 (8.8%), from \$58,663,439 as of June 30, 2022 to \$63,823,655 as of June 30, 2023 (*this information is extracted from Page 22 of the document from the chart entitled "Condensed Statement of Net Position"*).
- The increase in Net Position is largely attributable to reimbursements from other organizations for a joint construction project (the R-6 Cover and Liner Project) and significant improvement in investment income.
- In FY 2023, the District's operating revenues decreased \$972,466 (3.6%), from \$27,383,146 during FY 2022, to \$26,410,680 during FY 2023 (*Please see the chart "Total Revenues by Major Category" on Page 25 of the Financial Statements*). The decrease in Operating Revenues was caused by unusually wet weather in California in the Winter/Spring of 2022-2023 which decreased water and recycled water sales by the District. The decrease in Sales was offset to some extent by increases in Commodity Supply and Service Rates.
- Non-operating Revenue increased significantly, from \$1,412,188 in FY 2022 to \$2,851,828 in FY 2023 due to increases in Grants, Rebate, and Reimbursement income and Investment Income. Additional discussion of these increases and decreases can be found further along in the MD&A in the sections discussing the Condensed Statements of Revenues, Expenses and Changes in Net Position and Total Revenues by Major Category (*Page 25*).
- In FY 2023, the District's operating expenses increased \$1,218,753 or 4.05%, from \$30,078,960 in FY 2022 to \$31,297,713 in FY 2023. (*Please see the chart "Total Expenses" on Page 26*). Increases occurred in General & Administrative, Operations, **and Depreciation & Amortization** but are offset somewhat by decreases in Source of Supply and Other Operating Expenses.

**Recommended Action:** Staff recommends that the Board of Directors Receive and File the District's Annual Comprehensive Financial Report for the Fiscal Year ended June 30, 2023.

### **Attachments**

- Attachment 1 – Annual Comprehensive Financial Report for the Fiscal Year Ended June 30, 2023
- Attachment 2 – Additional Communications Letter
- Attachment 3 – Government Auditing Standards Communication



# El Toro Water District

2023 Audit Results

Joe Ludin, CPA  
Principal

WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor

# Outline

- Scope of Services
- Auditors' Opinion and Reports
- Communication with Those Charged with Governance



# Scope of Services

- Audit of the District's financial statements as of and for the year ended June 30, 2023 in accordance with Generally Accepted (US) and Government Auditing Standards





# Auditors' Opinion

- Audit of financial statements for the year ended June 30, 2023
- Management is responsible for preparation and fair presentation of the financial statements
- Auditor's responsibility is to express an opinion on the financial statements
- Standards require that the audit is planned and performed to obtain reasonable assurance that financial statements are free from material misstatement



# Auditors' Opinion

- Audit evidence is sufficient and appropriate to provide a basis of our audit opinion
- Unmodified opinion
- Other Matters
  - RSI
    - Management's Discussion and Analysis (MD&A)
    - Required Schedules for OPEB



# Report on Internal Control over Financial Reporting

- We considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate for the purpose of expressing our opinion on the financial statements,
- We did not identify material weakness or significant deficiencies



# Communication with Those Charged with Governance

- The planned scope and timing of the June 30, 2023 audit was communicated to the District in a planning meeting
- Management is responsible for the selection and use of appropriate accounting policies, which are described in note 1 to the financial statements.
- Management has selected and applied other significant accounting policies appropriately and consistently



# Communication with Those Charged with Governance

- Significant estimates reported in the financial statements include the following:
  - Fair market value of investments
  - Estimated useful lives of capital assets for depreciation purposes
  - Calculation of net OPEB liability provided by an outside actuary



# Communication with Those Charged with Governance

- We encountered no significant difficulties during our audit.
- No disagreements arose during the course of our audit with management.
- Representations related to audit obtained from management in a letter dated November 2, 2023.
- To our knowledge, the District did not consult with other accountants regarding auditing or accounting matters.
- Any questions?





Board of Directors  
El Toro Water District  
Lake Forest, California

We have audited the financial statements of El Toro Water District (the District), as of and for the year ended June 30, 2023, and have issued our report thereon dated November 2, 2023. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit in our statement of work dated June 22, 2023. Professional standards also require that we communicate to you the following information related to our audit.

### **Significant audit findings or issues**

#### ***Qualitative aspects of accounting practices***

##### *Accounting policies*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the District are described in Note 1 to the financial statements.

No new accounting policies were adopted and the application of existing policies was not changed during fiscal year 2022-2023.

We noted no transactions entered into by the entity during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

##### *Accounting estimates*

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements was:

- The actuarially determined contributions, other postemployment benefit (OPEB) expense, total OPEB liability, and corresponding deferred outflows of resources and deferred inflows of resources for the District's defined benefit OPEB plan are based upon an actuarial valuation performed by an independent third party. We evaluated the key factors and assumptions used to develop these estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

##### *Financial statement disclosures*

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosure of the District's OPEB plan in Note 7 to the financial statements.

The financial statement disclosures are neutral, consistent, and clear.

***Difficulties encountered in performing the audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.

***Uncorrected misstatements***

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

***Disagreements with management***

For purposes of this communication, a disagreement with management is a disagreement on a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

***Management representations***

We have requested certain representations from management that are included in the management representation letter dated November 2, 2023.

***Management consultations with other independent accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

***Other audit findings or issues***

We have provided a separate communication to you dated November 2, 2023, communicating internal control related matters identified during the audit.

***Required supplementary information***

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.



### **Supplementary information in relation to the financial statements as a whole**

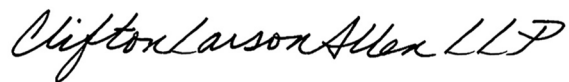
With respect to the schedule of revenue by category and schedule of expenses by category (collectively, the supplementary information) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated November 2, 2023.

### **Other information included in annual reports**

Other information (financial or nonfinancial information other than the financial statements and our auditors' report thereon) is being included in your annual report and is comprised of the introductory and statistical sections. Our responsibility for other information included in your annual report does not extend beyond the financial information identified in our opinion on the financial statements. We have no responsibility for determining whether such other information is properly stated and do not have an obligation to perform any procedures to corroborate other information contained in your annual report. We are required by professional standards to read the other information included in your annual report and consider whether a material inconsistency exists between the other information and the financial statements because the credibility of the financial statements and our auditors' report thereon may be undermined by material inconsistencies between the audited financial statements and other information. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report. Our auditors' report on the financial statements includes a separate section, "Other Information," which states we do not express an opinion or any form of assurance on the other information included in the annual report. We did not identify any material inconsistencies between the other information and the audited financial statements.

\* \* \*

This communication is intended solely for the information and use of the Board of Directors and management of the District and is not intended to be, and should not be, used by anyone other than these specified parties.



**CliftonLarsonAllen LLP**

Irvine, California  
November 2, 2023



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN  
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

Board of Directors  
El Toro Water District  
Lake Forest, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of El Toro Water District (the District), as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the District's basic financial statements, and have issued our report thereon dated November 2, 2023.

***Report on Internal Control Over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the District's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

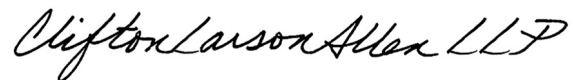
Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

***Report on Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

***Purpose of This Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

**CliftonLarsonAllen LLP**

Irvine, California  
November 2, 2023





# ANNUAL COMPREHENSIVE FINANCIAL REPORT

For the Fiscal Year Ended  
June 30, 2023



Lake Forest, California

# Annual Comprehensive Financial Report

For Fiscal Year ended June 30, 2023

El Toro Water District

Lake Forest, California

## **Board of Directors**

Kay Havens, President

Mark Monin, Vice President

Kathryn Freshley, Director

Mike Gaskins, Director

Fred Adjarian, Director

## **General Manager**

Dennis P. Cafferty

## **Prepared by:**

El Toro Water District  
Finance Department

**EL TORO WATER DISTRICT**  
**COMPREHENSIVE FINANCIAL STATEMENTS**  
**YEAR ENDED JUNE 30, 2023**

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## **INTRODUCTORY SECTION**



# El Toro Water District

*"A District of Distinction"*

Serving the Public – Respecting the Environment

November 2, 2023

## Board of Directors

Kay Havens  
*President*

Mark L. Monin  
*Vice President*

Kathryn Freshley  
*Director*

Mike Gaskins  
*Director*

Fred Adjarian  
*Director*

## General Manager

Dennis P. Cafferty

Board of Directors  
El Toro Water District

Submitted for your review and consideration are the Comprehensive Financial Statements for the El Toro Water District (the "District"), for the fiscal year ended June 30, 2023 (FY 2023). California Statute requires special purpose governments to publish a complete set of financial statements within 180 days of the close of each fiscal year. The enclosed FY 2023 Comprehensive Financial Statements are issued by the District to comply with this requirement and to enable The District Board and District residents and stakeholders to obtain a comprehensive understanding of the District's finances.

The financial statements included in this report depict the District's financial position and the changes in that financial position as of June 30, 2023. The Statements are presented in conformity with Generally Accepted Accounting Principles (GAAP) and have been audited in accordance with Generally Accepted Auditing Standards (GAAS) by a firm of licensed certified public accountants. Responsibility for the accuracy of the data presented, as well as the completeness and fairness of the presentation, including disclosures, rests with the El Toro Water District. The District staff believes the data presented is accurate in all material respects and is presented in a manner designed to fairly set forth the financial position and changes in financial position of the District. Incorporated into the financial statements are all disclosures necessary to enable the reader to gain a maximum understanding of the District's financial affairs.

The District's financial statements have been audited by CliftonLarsonAllen LLP, a firm of licensed certified public accountants experienced in auditing special purpose governments in California. The goal of the independent audit is to provide reasonable assurance that the financial statements of the District are free of material misstatements. The independent audit consisted of examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation. Based on these audit procedures, the independent auditor concluded there was a reasonable basis for rendering an unmodified opinion that the District's financial statements for the fiscal year ended June 30, 2023 are fairly presented in accordance with GAAP. The independent auditor's report is presented as the first component of the financial section of this report.

Governmental Accounting Standards Board Statement Number 34 requires the District to provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of a Management Discussion and Analysis (MD&A). This transmittal letter is designed to complement the MD&A and should be read in conjunction with it. The MD&A is found immediately following the report of the independent auditors.

### **Profile of the El Toro Water District**

The El Toro Water District was formed in 1960 and serves approximately 47,900 residents of five municipalities located in southern Orange County. The District is a fully integrated water, sewer, and recycled water retail operation with a service area that includes the entirety of the City of Laguna Woods and portions of the Cities of Aliso Viejo, Laguna Hills, Lake Forest, and Mission Viejo. The District's service area includes 5,430 acres or approximately 8.48 square miles.

The District is governed by a Board of Directors consisting of five board members who are elected by the registered voters within District boundaries. The Board of Directors establishes policy and makes decisions based on the District's mission, goals, and operations. The Board's policies are administered and implemented by the General Manager, who is appointed by the Board. Public elections are held every two years and Directors serve four-year staggered terms to ensure continuity.

The District Board takes its responsibilities as sound fiscal stewards seriously. Every quarter the District has an Agreed Upon Procedure (AUP) performed by the District's auditors to focus in detail on an aspect of internal controls. Each AUP focuses on different internal control risk areas. Additionally, in the event of a rate increase, the District prepares a full cost of service analysis to determine the fairness, justification and adequacy of its rates for the next fiscal year.

The District is very proud to have been awarded the District of Distinction Award by the Special District Leadership Foundation in each accreditation cycle since 2007, a testament to the responsible leadership that has been a long-standing tradition at the District.

### **Significant Accomplishments during Fiscal Year 2022-23**

During each budget cycle the District Board participates in a goal setting discussion for the purpose of establishing or redefining key financial goals and objectives for the upcoming budget year. District Staff utilizes the established budget goals and objectives to guide operations and spending throughout each fiscal year. The achievements in the 2022-23 fiscal year were a result of the goals and objectives established by the Board during the annual budget process and are described below:

#### **General Accomplishments**

- The District continued its investment in staff with the critical replacement of the Chief Financial Officer upon the resignation of the former Chief Financial Officer.
- The District transitioned to a new Enterprise Resource Planning software system to integrate multiple stand-alone software systems into one District wide financial system.
- The District began the process of updating all of its long-term engineering planning documents, including updating the Master Plan, beginning a comprehensive Asset Management Study.

- The District made improvements to the Administration Building by replacing the Heating, Ventilation, and Air Conditioning system and upgrading the technology in the Boardroom.

#### Financial Management

- Continued the District's commitment to superb financial management practices as demonstrated by the receipt of the Certificate of Achievement for Excellence in Financial Reporting for the FY 2021 Annual Comprehensive Financial Report, a national recognition of the District's financial reporting by the Government Finance Officers Association (GFOA) of the United States. The District has applied for the GFOA award for FY 2021-22 and its currently going thru review process and expecting a favorable result.
- The District completed a comprehensive Cost of Service Study to refine its billing rate structure by reexamining all of the assumptions that underpin the District's rate structure.
- The District also continued its commitment to fiscal discipline by approving a budget for the 2023-2024 fiscal year that is balanced and includes funding for several significant capital projects.

#### Infrastructure Improvements

- The District significantly completed the construction phase of the R-6 Reservoir Floating Cover and Liner Project during the fiscal year 2022-23. It is a \$25 million project to replace the liner and cover for the R-6 Reservoir to maintain its critical functionality for the District's water distribution system for the next 30 years.
- The District completed the R-2 Reservoir Interior Recoating Project, funded by a grant from the Department of Water Resources. The District also completed the construction of the Joint Transmission Main (JTM) Pump Station.
- The District completed the demolition of the former Water Filtration Plant, which had been vacant for more than 20 years, and completed the planning and engineering design to construct a warehouse facility in the same location.

#### **Significant Future Initiatives**

The District is committed to providing high quality services to its customers while also maintaining the infrastructure needed to provide those services. The challenge the District faces in the future is setting rates that are acceptable to residents but also provide sufficient resources to maintain service levels and complete critical capital projects that are needed to provide high quality services. The District's initiatives and significant projects in the forthcoming fiscal year are detailed below:

- A significant project that will be ongoing and completed in the 2024 fiscal year is the replacement of the R-6 Reservoir floating cover and liner. This project will have a significant impact on the District's operations and will improve the overall status of the District's water system infrastructure once complete.
- A second significant project that will occur in fiscal year 2024 construction of a vehicle and equipment storage facility on the site of the former Water Filtration Plant that was demolished in fiscal year 2023, this project is expected to be completed in 2023-24.
- The District will hopefully finalize its effort to update all of its long-term engineering planning documents by completing the Master Plan and the Asset Management Plan.

## **Financial Management**

### Internal Control Structure

District management is responsible for the establishment and maintenance of the internal control structure that ensures the assets of the District are protected from loss, theft or misuse. The internal control structure also ensures adequate accounting data is compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The District's internal control structure is designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that (1) the cost of a control should not exceed the benefits likely to be derived from it, and (2) the valuation of costs and benefits requires estimates and judgments by management.

### Budgetary Control

The District's Board of Directors annually adopts an operating and capital budget prior to the new fiscal year. The budget authorizes and provides the basis for reporting and control of financial operations and accountability for the District's enterprise operations and capital projects. The budget and reporting processes of the District are consistent with the accrual basis of accounting and financial reporting.

### Investment Policy

The Board of Directors annually reviews the investment policy to ensure it conforms to State law, District ordinances and resolutions, and prudent money management standards. The objectives of the Investment Policy are safety, liquidity and yield, in that order. District funds are invested in the State Treasurer's Local Agency Investment Fund (LAIF), California Asset Management Program (CAMP), U.S. treasury obligations, government sponsored entities securities, and institutional savings and checking accounts.

### Service Rates and District Revenues

District policy requires that revenues derived from user charges and surcharges from District customers must support all District operations including capital project funding. Accordingly, water and wastewater rates are reviewed annually to ensure they are sufficient to support the District's operations. Water and wastewater rates are user charges imposed on customers for services and are the primary component of the District's revenue. Water rates are composed of a commodity (usage) charge and fixed charges including an O&M charge and a capital charge. Similarly, waste water rates are composed of an O&M charge and capital charges.

### Audit and Financial Reporting

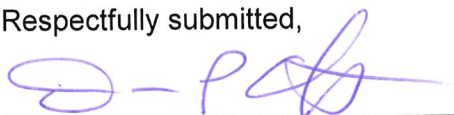
State Law and Bond covenants require the District to obtain an annual audit of its financial statements by an independent certified public accountant. The accounting firm of CliftonLarsonAllen, LLP has conducted the audit of the District's financial statements. Their unmodified Independent Auditor's Report appears in the Financial Section.

## Awards and Acknowledgements

**Awards.** The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the El Toro Water District for its Comprehensive Financial Statements for the fiscal year ended June 30, 2021. The District has applied for the GFOA award for FY 2021-22 and is currently going thru review process and expecting a favorable result. The Certificate of Achievement is a prestigious award recognizing conformance with the highest standards for preparation of state and local government financial reports. To be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized Comprehensive Financial Statements whose contents conform to program standards, Generally Accepted Accounting Principles (GAAP), and applicable legal requirements. A Certificate of Achievement is valid for one year only. The El Toro Water District has received a Certificate of Achievement for six consecutive years.

**Acknowledgements.** Preparation of this report was accomplished by the combined efforts of District staff. We appreciate the dedicated efforts and professionalism that our staff members bring to the District. We would also like to thank the members of the Board of Directors for their continued support in the planning and implementation of the El Toro Water District's fiscal policies.

Respectfully submitted,



Dennis Cafferty  
General Manager



Vishav Sharma  
Chief Financial Officer



## **List of Principal Officials**

### **Board of Directors**

Kay Havens, President

Mark Monin, Vice President

Kathryn Freshley, Director

Mike Gaskins, Director

Fred Adjarian, Director

### **District Management**

Dennis P. Cafferty, General Manager

Vishav R. Sharma, Chief Financial Officer

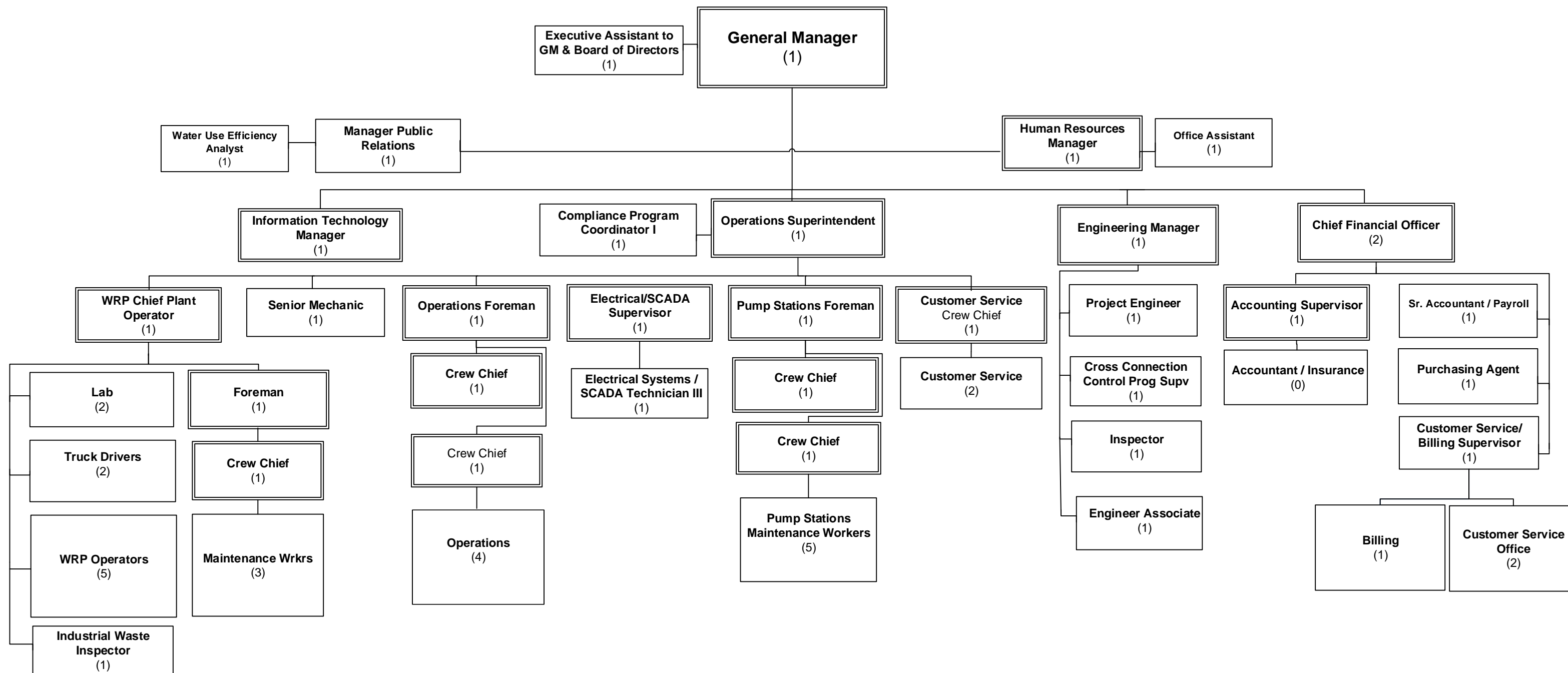
Hannah Ford, Engineering Manager

Judy Cimorell, Human Resource Manager

Michael Miazga, Information Technology Manager



# EL TORO WATER DISTRICT 2022 / 2023 ORGANIZATIONAL CHART







Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**El Toro Water District  
California**

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

June 30, 2021

*Christopher P. Morill*

Executive Director/CEO

## **FINANCIAL SECTION**



## INDEPENDENT AUDITORS' REPORT

Board of Directors  
El Toro Water District  
Lake Forest, California

### Report on the Audit of the Financial Statements

#### ***Opinion***

We have audited the accompanying financial statements of the El Toro Water District (the District) which comprise the statement of net position as of June 30, 2023, and the related statement of revenues, expenses and changes in net position, and the statement of cash flows for the year then ended, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District as of June 30, 2023, and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the District and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for 12 months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedule of changes in the total other postemployment benefit (OPEB) liability and related ratios be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### ***Supplementary Information***

Our audit for the year ended June 30, 2023, was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the District's basic financial statements. The accompanying schedules of revenue and expenses by category for the year ended June 30, 2023, are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements for the year ended June 30, 2023 and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the schedules of revenue and expenses by category are fairly stated, in all material respects, in relation to the basic financial statements as a whole for the year ended June 30, 2023.

### ***Other Information***

Management is responsible for the other information included in the annual report. The other information comprises the introductory and statistical sections but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated November 2, 2023, on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

**CliftonLarsonAllen LLP**

Irvine, California  
November 2, 2023

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

Management's Discussion and Analysis (MD&A) of activities and financial performance for the El Toro Water District (the "District") provides an introduction to the financial statements for the District for the fiscal year ended June 30, 2023 (FY 2023). We encourage readers to consider the information presented in this section of the Comprehensive Financial Statements in conjunction with the basic financial statements and related notes, which follow the MD&A.

**Financial Highlights**

- In FY 2023, the District's net position increased \$5,160,216 (8.8%), from \$58,663,439 as of June 30, 2022 (FY 2022) to \$63,823,655 as of June 30, 2023. The increase in the District's Net Position is largely attributable to reimbursements from other organizations for a joint construction project (the R-6 Cover and Liner Project) and a significant improvement in Investment Income.
- In FY 2023, the District's operating revenues decreased \$972,466 (3.6%), from \$27,383,146 during FY 2022, to \$26,410,680 during FY 2023. The decrease in Operating Revenues was caused by unusually wet weather in California in the Winter/Spring of 2022-2023 which decreased water and recycled water sales by the District. The decrease in Sales was offset to some extent by increases in Commodity Supply and Service Rates. Non-operating Revenue increased significantly, from \$1,412,188 in FY 2022 to \$2,851,828 in FY 2023 due to increases in Grants, Rebate, and Reimbursement income and Investment Income. Additional discussion of these increases and decreases can be found further along in the MD&A in the sections discussing the Condensed Statements of Revenues, Expenses and Changes in Net Position and Total Revenues by Major Category.
- In FY 2023, the District's operating expenses increased \$1,218,753 or 4.05%, from \$30,078,960 in FY 2022 to \$31,297,713 in FY 2023. Increases occurred in General & Administrative, Operations, and Depreciation and Amortization but are offset somewhat by decreases in Source of Supply and Other Operating Expenses. Additional discussion of the District's expenses can be found further along in the MD&A in the sections discussing the Condensed Statements of Revenues, Expenses and Changes in Net Position and Total Expenses by Major Category.
- Non-operating expenses increased as Interest Expense for the District's outstanding debt increased due to the issuance of the 2022 Revenue Bonds, which increased interest expense beginning in March, 2022.
- In FY 2023 the District switched to a new financial software system and this change coincided with the reclassification of revenues and expenses into new categories. Revenues and expenses for FY 2022 reflect this reclassification and therefore may not be directly comparable to the prior year document.

**Required Financial Statements**

This annual report consists of a series of financial statements, including the Statement of Net Position; the Statement of Revenues, Expenses, and Changes in Net Position; and the Statement of Cash Flows. These Statements provide information about the activities and performance of the District and are prepared in accordance with the accrual basis of accounting, similar to the accounting methods used by private sector companies. Incorporated into the Statements are the Notes to the Financial Statements which provide detailed information about the accounting methods and estimates used to prepare the Statements. The report also includes other supplementary information that provides additional details about the El Toro Water District.

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

- The Statement of Net Position depicts the District's financial position as of June 30, 2023 and includes all of the assets and liabilities of the District. The Net Position of the District is the difference between its assets plus deferred outflows of resources and its liabilities and deferred inflows of resources. The Net Position of the District is classified into three components, net investment in capital assets, restricted, and unrestricted. The Statement of Net Position can be used to evaluate the District's capital structure and assess the liquidity and financial flexibility of the District.
- The Statement of Revenues, Expenses and Changes in Net Position accounts for all of the revenues and expenses of the District during the fiscal year ended June 30, 2023. The statement measures the financial result of the District's operations during the fiscal year and can be used to determine if the District has successfully recovered all of its costs through its rates and other charges.
- The Statement of Cash Flows provides information about changes in the District's cash balance during the reporting period. The Statement of Cash Flows reports cash receipts, cash payments and net changes in cash resulting from operating activities, non-capital and related financing activities, capital and related financing activities, and investing activities. The Statement illustrates the sources of cash, the uses of cash, and the change in the cash balance during the reporting period.
- The Notes to the Financial Statements provide additional information that is essential to achieving a full understanding of the data provided in the financial statements.
- The required supplementary information provides information about the District's progress in funding its obligation to provide Other Post-Employment Benefits to employees.
- The other supplementary information section provides additional detail about the District's revenues and expenses for FY 2022 and FY 2023.

**Financial Analysis of the District**

The following pages present financial information in condensed schedules from the Statement of Net Position and the Statement of Changes in Revenues, Expenses, and Changes in Net Position.

These two statements report the District's Net Position and changes in the Net Position. The District's net position, the difference between its assets and liabilities is one way to measure the District's financial health, or financial position. Over time, increases or decreases in the District's net position are an indicator of whether its financial health is improving or deteriorating. However, other non-financial factors such as changes in economic conditions, population growth, zoning and new or changed government legislation, such as changes in Federal and State water quality standards also need to be considered when assessing the District's financial position.

**Condensed Statement of Net Position**

Net Position is the primary indicator of the District's financial position. The Condensed Schedule of Net Position presented below provides an overview of the District's Net Position for fiscal years 2022 and 2023 and presents amount and percent changes in Net Position. The District's total Net Position was \$63,823,655 at the end of FY 2023, an increase of \$5,160,216 from the \$58,663,439 at the end of FY 2022. In FY 2023, total assets and deferred outflows of resources increased \$5,181,201 (3.6%), total liabilities and deferred inflows increased \$20,985, and the result of these changes was an increase of \$5,160,216 in Net Position.



**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

<b>Condensed Statement of Net Position</b>				
	FY 2022	FY 2023	Increase/(Decrease)	
			\$	%
			Change	Change
<b>Assets</b>				
Current Assets	\$ 22,960,237	\$ 29,278,117	\$ 6,317,880	27.52%
Restricted Assets	26,797,887	8,740,001	(18,057,886)	-67.39%
Non-current Assets, Net	88,583,513	106,575,244	17,991,731	20.31%
<b>Total Assets</b>	<b>138,341,637</b>	<b>144,593,362</b>	<b>6,251,725</b>	<b>4.52%</b>
<b>Deferred Outflow s of Resources</b>				
Deferred OPEB Outflow	4,564,293	3,493,769	(1,070,524)	-23.45%
<b>Total Deferred Outflow s of Resources</b>	<b>4,564,293</b>	<b>3,493,769</b>	<b>(1,070,524)</b>	<b>-23.45%</b>
<b>Total Assets &amp; Deferred Outflow s</b>	<b>142,905,930</b>	<b>148,087,131</b>	<b>5,181,201</b>	<b>3.63%</b>
<b>Liabilities</b>				
Current Liabilities	5,627,985	8,756,827	3,128,842	55.59%
Non-current Liabilities	77,024,552	65,798,847	(11,225,705)	-14.57%
<b>Total Liabilities</b>	<b>82,652,537</b>	<b>74,555,674</b>	<b>(8,096,863)</b>	<b>-10.86%</b>
<b>Deferred Inflow s of Resources</b>				
Deferred Amounts from Leases	636,695	583,336	(53,359)	-8.38%
Deferred Amounts from OPEB	953,259	9,124,466	8,171,207	857.19%
<b>Total Deferred Inflow s of Resources</b>	<b>1,589,954</b>	<b>9,707,802</b>	<b>8,117,848</b>	<b>83.62%</b>
<b>Net Position</b>				
Net Investment in Capital Assets	30,402,906	54,968,271	24,565,365	80.80%
Restricted	26,797,887	-	(26,797,887)	-100.00%
Unrestricted	1,462,646	8,855,384	7,392,738	505.44%
<b>Total Net Position</b>	<b>58,663,439</b>	<b>63,823,655</b>	<b>5,160,216</b>	<b>8.80%</b>
<b>Total Liabilities, Deferred Inflow s, and Net Position</b>	<b>\$ 142,905,930</b>	<b>\$ 148,087,131</b>	<b>\$ 5,181,201</b>	<b>3.63%</b>

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

The largest portion of the District's net position (52% as of June 30, 2023) reflects the District's investment in capital assets (net of accumulated depreciation) less any related debt used to acquire the assets that remains outstanding. The District uses these capital assets to provide services to customers within the District's service area; consequently, these assets are not available for future spending. During 2023, the Net Investment in Capital Assets increased significantly due to a significant increase in capital assets not being depreciated as capital projects not completed in 2023 were moved to Construction In Progress due to increase in construction in progress assets not being depreciated.

Restricted Net Position decreased substantially in FY 2023 because the unexpended portion of the 2022 Revenue Bond proceeds are recognized in this part of Net Position. As discussed in the prior paragraph, the District utilized a significant portion of the 2022 Bond proceeds in 2023 and this eliminated the Restricted Net Position in FY 2023.

At the end of FY 2022 and FY 2023, the District's Unrestricted Net Position equaled \$1,462,646 and \$8,855,384, respectively, an increase of \$7,392,738 (505.4%) during FY 2023. This portion of Net Position is available to fund current and future operations. The Unrestricted Net Position is essentially that portion of Net Position that remains after the Net Investment in Capital Assets and the Restricted Net Position are subtracted from the total Net Position (Assets minus Liabilities). The increase in Unrestricted Net Position in FY 2023 was largely caused by the significant decrease in Restricted Net Position. In future years, as Restricted Net Position is utilized for capital expenses and decreases and depreciation reduces the Net Investment in Capital Assets, Unrestricted Net Position will likely continue to increase.

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

**Condensed Statements of Revenues, Expenses, and Changes in Net Position**

The Statement of Revenues, Expenses and Changes in Net Position depicts how the District's net position changed during the fiscal year. Net Position increased \$5,160,216 in FY 2023, from \$58,663,439 at the beginning of the year to \$63,823,655 at the end of the year.

<b>Condensed Statement of Revenues, Expenses, and Changes in Net Position</b>				
			Increase/(Decrease)	
	FY 2022	FY 2023	\$ Change	% Change
<b>Revenues</b>				
Operating Revenues	\$ 27,383,146	\$ 26,410,680	\$ (972,466)	-3.55%
Non-operating Revenues	1,412,188	2,851,828	1,439,640	101.94%
<b>Total Revenues</b>	<b>28,795,334</b>	<b>29,262,508</b>	<b>467,174</b>	<b>1.62%</b>
<b>Expenses</b>				
Operations Expenses	23,976,652	26,252,384	2,275,732	9.49%
Other Operating Expenses	1,814,507	625,767	(1,188,740)	-65.51%
Depreciation & Amortization	4,287,777	4,419,562	131,785	3.07%
Non-operating Expenses	1,072,567	1,723,651	651,084	60.70%
<b>Total Expenses</b>	<b>31,151,503</b>	<b>33,021,364</b>	<b>1,869,861</b>	<b>6.00%</b>
<b>Net Loss prior to Capital Contributions</b>	<b>(2,356,169)</b>	<b>(3,758,856)</b>	<b>(1,402,687)</b>	<b>-59.53%</b>
<b>Capital Contributions</b>	<b>166,008</b>	<b>8,919,072</b>	<b>8,753,064</b>	<b>5272.68%</b>
<b>Change in Net Position</b>	<b>(2,190,160)</b>	<b>5,160,216</b>	<b>7,350,376</b>	<b>335.61%</b>
<b>Net Position</b>				
Beginning of year	60,853,624	58,663,464	(2,190,160)	-3.60%
<b>End of Year</b>	<b>\$ 58,663,464</b>	<b>\$ 63,823,680</b>	<b>5,160,216</b>	<b>8.80%</b>

The positive change in Net Position was caused by reimbursements from other local agencies for the reconstruction of the R-6 Cover and Liner, a significant improvement in Investment Income, and a substantial reduction in the District's Other Post-Employment Benefits (OPEB) liability as several assumptions related to the calculation of this liability changed. Offsetting these positive factors was a reduction in Operating Revenue due to the unusually wet winter in California which reduced water and recycled water sales.

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

**Total Revenues by Major Category:**

As depicted in the chart below, total revenues for FY 2023 increased \$9,220,238 (31.8%) when compared to revenues received in FY 2022. Operating Revenues decreased in FY 2023 due to the wet winter weather in California which caused a reduction in water and recycled water sales. The reduction in sales was offset somewhat by increases in Service and Capital Replacement Charges and an increase in Miscellaneous Operating Revenue. The increase in Service and Capital Replacement Charges were caused by rate increases. Non-operating Revenues increased substantially due to increases in Grants, Rebates, Reimbursements and Investment Income. Capital Contributions increased significantly as the District received large reimbursements from partner agencies for the construction of the R-6 Cover and Liner project.

<b>Total Revenues by Major Category</b>				
	FY 2022	FY 2023	Increase/(Decrease)	
			\$	%
			Change	Change
Operating Revenues				
Commodity Supply Charges	\$ 11,224,546	\$ 9,336,697	\$ (1,887,849)	-16.82%
Service Charges	12,592,762	13,312,690	719,928	5.72%
Capital Replacement Charges	3,005,882	3,152,552	146,670	4.88%
Reimbursements from Others	446,564	308,774	(137,790)	-30.86%
Miscellaneous Revenue	113,392	299,967	186,575	164.54%
Total Operating Revenues	27,383,146	26,410,680	(972,466)	-3.55%
Non-operating Revenues				
Property Taxes	1,121,250	1,184,149	62,899	5.61%
Grants, Rebates, Reimbursements	317,081	618,262	301,181	94.99%
Rental Revenue	227,227	234,439	7,212	3.17%
Investment Income	(259,747)	795,655	1,055,402	-406.32%
Other Non-operating Income	6,377	19,323	12,946	203.01%
Total Non-operating Revenues	1,412,188	2,851,828	1,439,640	101.94%
Capital Contributions	166,008	8,919,072	8,753,064	5272.68%
Total Revenue	\$ 28,961,342	\$ 38,181,580	9,220,238	31.84%

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

**Total Expense by Major Category**

In FY 2023, Operating Expenses increased 4.05%, from \$30,078,960 in FY 2022 to \$31,297,713 in FY 2023. The increase was caused by increases in General & Administrative, Operations, and Depreciation & Amortization. These increases were offset by decreases in Source of Supply and Other Operating Expenses. The increases in General & Administrative and Operations were primarily caused by inflationary forces as many of the District's expenses increased dramatically in FY 2023. In addition, Operations includes a new category of expenses, Operating Capital Expenses, that reflects capital expenses that will not be capitalized. The increase in Depreciation & Amortization occurred as a result of investments in Capital Assets in FY 2022 which began depreciating in FY 2023. The decrease in Source of Supply was caused by a decrease in Water Purchases as the District's water sales declined significantly, as previously discussed. The decrease in Other Operating Expenses was caused by a steep decrease in OPEB Charges as the underlying assumptions for the OPEB actuarial calculation changed, thereby causing a significant decrease in OPEB charges and liability.

Non-operating expenses increased significantly in 2023 as the District paid a full year of interest costs on the 2022 Bonds for the first time in 2023. In future years, this cost will slowly decrease as a portion of the principal is paid each year, thereby reducing interest costs.

Total Expenses by Major Category				
			Increase/(Decrease)	
	FY 2022	FY 2023	\$ Change	% Change
Operating Expenses				
General & Administrative	\$ 4,683,441	\$ 5,363,512	680,071	14.52%
Source of Supply	8,866,148	8,593,609	(272,539)	-3.07%
Operations	10,427,063	12,295,263	1,868,200	17.92%
Other Operating Expenses	1,814,529	625,767	(1,188,762)	-65.51%
Depreciation & Amortization	4,287,779	4,419,562	131,783	3.07%
Total Operating Expenses	30,078,960	31,297,713	1,218,753	4.05%
Non-operating Expenses				
Interest Expense	1,072,567	1,723,651	651,084	60.70%
Total Non-operating Expenses	1,072,567	1,723,651	651,084	60.70%
Total Expenses	\$ 31,151,527	\$ 33,021,364	1,869,837	6.00%

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

**Capital Assets**

The Capital balances were as follows:

Capital Assets				
	FY 2022	FY 2023	\$ Change	% Change
Capital Assets				
Non-depreciable Assets	\$ 12,166,341	\$ 32,033,166	\$ 19,866,825	163.29%
Depreciable Assets	164,216,160	166,832,579	2,616,419	1.59%
Accumulated Depreciation	(88,231,950)	(92,651,512)	(4,419,562)	5.01%
Total Capital Assets, Net	88,150,551	106,214,233	18,063,682	20.49%

At the end of fiscal years 2022 and 2023, the District's investment in capital assets amounted to \$88,150,551 and \$106,214,233 (net of accumulated depreciation), respectively. The investment in capital assets includes land, transmission and distribution systems, buildings, equipment, vehicles and construction-in-process (See Note 3 for further information). The increase in Capital Assets in FY 2023 was primarily caused by an increase in construction-in-process as several significant projects begun in FY 2023 were not complete at the end of the fiscal year.

During FY 2023, the District was engaged in several significant capital improvement projects, including the R6 Reservoir Cover and Liner Replacement, the JTM Pump Station Construction, the Water Filter Plant Site Reconstruction, and the R2 Recoating Project. The JTM Pump Station and R-2 Recoating Project were completed in FY 2023 but the other two projects were included in Construction in Progress at the end of the fiscal year. Once completed, the projects will be moved from construction-in-process to a Capital Asset and begin depreciating.

**EL TORO WATER DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
YEAR ENDED JUNE 30, 2023**

**Debt Administration**

Long-term debt balances were as follows:

Summary of Outstanding Debt				
	FY 2022	FY 2023	Increase/(Decrease)	
			\$	%
			Change	Change
Debt Payable				
Main Extension Contract	\$ 6,180	\$ 6,180	\$ -	0.00%
Baker Water Treatment Plant	7,677,055	7,230,781	(446,274)	-5.81%
2022 Revenue Bonds	40,905,000	39,800,000	(1,105,000)	n/a
2022 Revenue Bonds - Premium	8,648,018	8,126,192	(521,826)	n/a
Total Expenses	<u>\$ 57,236,253</u>	<u>\$ 55,163,153</u>	<u>\$ (2,073,100)</u>	<u>-3.76%</u>

The District engaged in significant debt activities in FY 2022 when the 2022 Revenue Bonds were issued in March, 2022. A portion of the proceeds were used to refinance the various State Revolving Fund (SRF) Loans the District had used to complete capital improvement projects since 2010 and therefore those Loans were paid off in FY 2022. Another portion of the proceeds will be used in future years to complete several significant capital improvement projects, including several of the projects discussed in the previous section of this MD&A. No significant debt activities occurred in FY 2023, the District continued paying the Baker Water Treatment Plant loan and began making the payments on the 2022 Revenue Bonds.

See Note 5 for further information on the long-term debt administration.

**Conditions Affecting Current Financial Position**

Management is unaware of any conditions which could have a significant impact on the District's current financial position, net position, or operating results in terms of past, present and future.

**Requests for Information**

This financial report is designed to provide the District's funding sources, customers, stakeholders and other interested parties with an overview of the District's financial operations and financial condition. Should the reader have questions regarding the information included in this report or wish to request additional financial information, please contact El Toro Water District at 24251 Los Alisos Boulevard, Lake Forest, California.

## **BASIC FINANCIAL STATEMENTS**



**EL TORO WATER DISTRICT  
STATEMENT OF NET POSITION  
JUNE 30, 2023**

**ASSETS**

Current Assets:	
Cash and Cash Equivalents	\$ 10,138,838
Investments	12,335,376
Receivables, Net:	
Accounts Receivables	3,607,796
Accounts Receivables - Grants	2,389,321
Interest	76,777
Taxes	18,035
Lease	250,687
Materials and Supply Inventory	260,700
Prepaid Expenses	200,587
Restricted - Cash and Cash Equivalents	4,386,674
Restricted - Investments	4,353,327
Total Current Assets	<u>38,018,118</u>
Noncurrent Assets:	
Lease Receivable	361,011
Capital Assets:	
Nondepreciable	32,033,166
Depreciable, Net of Accumulated Depreciation	74,181,067
Total Noncurrent Assets	<u>106,575,244</u>
Total Assets	<u>144,593,362</u>

**DEFERRED OUTFLOWS OF RESOURCES**

OPEB-Related Deferred Outflows of Resources	3,493,769
Total Deferred Outflows of Resources	<u>3,493,769</u>

**LIABILITIES**

Current Liabilities:	
Accounts Payable and Accrued Expenses	6,365,798
Accrued Salaries and Related Payables	150,618
Customer Deposits	49,231
Accrued Interest Payable	162,721
Long-Term Liabilities - Due Within One Year:	
Compensated Absences	182,171
Bonds Payable	1,380,000
Loans Payable	466,288
Total Current Liabilities	<u>8,756,827</u>
Noncurrent Liabilities:	
Long-Term Liabilities - Due in More than One Year:	
Compensated Absences	1,431,790
Total Other Post Employment Benefits Liability	11,050,192
Bonds Payable	46,546,192
Loans Payable	6,770,673
Total Noncurrent Liabilities	<u>65,798,847</u>
Total Liabilities	<u>74,555,674</u>

**DEFERRED INFLOWS OF RESOURCES**

Deferred Amounts from Leases	583,336
Deferred Amounts from OPEB	9,124,466
Total Deferred Inflows of Resources	<u>9,707,802</u>

**NET POSITION**

Net Investment in Capital Assets	54,968,271
Unrestricted	8,855,384
Total Net Position	<u>\$ 63,823,655</u>

See accompanying Notes to Basic Financial Statements.

**EL TORO WATER DISTRICT  
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION  
YEAR ENDED JUNE 30, 2023**

**OPERATING REVENUES**

Commodity Supply Charges	\$ 9,336,697
Service Charges	13,312,690
Capital Replacement Charges	3,152,552
Reimbursement from Others	308,774
Miscellaneous Revenue	299,967
Total Operating Revenues	<u>26,410,680</u>

**OPERATING EXPENSES**

General & Administrative	5,363,512
Source of Supply	8,593,609
Operations	12,295,263
Other Operating Expenses	625,767
Depreciation & Amortization	4,419,562
Total Operating Expenses	<u>31,297,713</u>

**OPERATING LOSS** (4,887,033)

**NONOPERATING REVENUES (EXPENSES)**

Property Taxes	1,184,149
Grants, Rebates, Reimbursements	618,262
Rental Revenue	234,439
Investment Income	795,655
Interest Expense	(1,723,651)
Nonoperating Revenue	19,323
Total Nonoperating Revenues (Expenses)	<u>1,128,177</u>

**NET LOSS BEFORE CAPITAL CONTRIBUTIONS** (3,758,856)

**CAPITAL CONTRIBUTIONS** 8,919,072

**CHANGES IN NET POSITION** 5,160,216

Net Position - Beginning of Year 58,663,439

**NET POSITION - END OF YEAR** \$ 63,823,655

See accompanying Notes to Basic Financial Statements.

**EL TORO WATER DISTRICT  
STATEMENT OF CASH FLOWS  
YEAR ENDED JUNE 30, 2023**

**CASH FLOWS FROM OPERATING ACTIVITIES**

Receipts from Customers for Water Sales and Services	\$ 26,381,218
Payments to Suppliers for Operations	(21,980,709)
Payments to Employees for Salaries and Wages	(4,961,554)
Net Cash Used by Operating Activities	<u>(561,045)</u>

**CASH FLOWS FROM NONCAPITAL AND RELATED  
FINANCING ACTIVITIES**

Proceeds from Property Taxes	1,181,961
Other Cash Paid	(1,621,352)
Net Cash Used by Noncapital and Related Financing Activities	<u>(439,391)</u>

**CASH FLOWS FROM CAPITAL  
FINANCING ACTIVITIES**

Acquisition of Capital Assets, Net	(18,171,826)
Repayment of Long-Term Debt	(1,551,274)
Interest Payments	(2,697,666)
Capital Contributions	8,919,072
Net Cash Used by Capital Financing Activities	<u>(13,501,694)</u>

**CASH FLOWS FROM INVESTING ACTIVITIES**

Sales of Investments	11,778,934
Purchases of Investments	(6,570,054)
Cash Receipts from Interest and Dividends	756,817
Proceeds from Rental Income	279,693
Net Cash Provided by Investing Activities	<u>6,245,390</u>

**NET DECREASE IN CASH AND CASH EQUIVALENTS** (8,256,740)

Cash and Cash Equivalents - Beginning of Year 22,782,252

**CASH AND CASH EQUIVALENTS - END OF YEAR** \$ 14,525,512

**CASH AND CASH EQUIVALENTS**

Cash and Cash Equivalents	\$ 10,138,838
Restricted - Cash and Cash Equivalents	4,386,674
Total Cash and Investments	<u><u>\$ 14,525,512</u></u>

See accompanying Notes to Basic Financial Statements.

**EL TORO WATER DISTRICT  
STATEMENT OF CASH FLOWS (CONTINUED)  
YEAR ENDED JUNE 30, 2023**

**RECONCILIATION OF OPERATING LOSS TO NET  
CASH PROVIDED BY OPERATING ACTIVITIES**

Operating Loss	\$ (4,887,033)
Adjustment to Reconcile Operating Loss to Net	
Cash Provided by Operating Activities:	
Depreciation	4,419,562
(Increase) Decrease in Assets:	
Accounts Receivable - Sales and Services	(3,257)
Accounts Receivable - Other	27,154
Inventories	521,649
Prepaid Expenses	55,500
Deferred Outflow - OPEB	1,070,524
Increase (Decrease) in Liabilities:	
Accounts Payable	(1,038,303)
Accrued Payroll Liabilities	39,556
Deposits	(4,916)
Compensated Absences	101,745
Total OPEB Liability	(8,981,074)
Deferred Inflow - Leases	(53,359)
Deferred Inflow - OPEB	8,171,207
Total Adjustments	<u>4,325,988</u>
Net Cash Used by Operating Activities	<u>\$ (561,045)</u>

**NONCASH CAPITAL FINANCING ACTIVITY**

Change in accounts payable related to capital acquisition costs	\$ 4,311,418
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*See accompanying Notes to Basic Financial Statements.*

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**A. Organization and Operations of the Reporting Entity**

El Toro Water District (the District) was organized in September 1960, under provisions of the California Water District Act (Sections 34000 *et seq.* of the Water Code of the state of California). The District is governed by a Board of Directors made up of five members elected by qualified voters in the District. The purpose of the District is to finance, construct, operate, and maintain a water and wastewater system to serve properties within the District's boundaries.

The criteria used in determining the scope of the financial reporting entity is based on the provisions of accounting principles generally accepted in the United States of America (U.S. GAAP). The District is the primary governmental unit based on the foundation of a separately elected governing board that is elected by the citizens in a general popular election. Component units are legally separate organizations for which the elected officials of the primary government are financially accountable. The District is financially accountable for a component unit that has substantively the same governing body as the District's governing body, and additionally, (1) the primary government and the component unit have a financial benefit or burden relationship or (2) management (below the level of the elected officials) of the primary government has operational responsibility for the activities of the component unit.

The El Toro Water District Financing Authority (the Authority) was organized on January 24, 2022, pursuant to the Joint Exercise Powers Act, of the state of California (Code 6500 *et seq.* (the JPA Act) solely for the purpose of assisting the District in financing and refinancing capital improvement projects of the District and in financing working capital for the District. The Authority, an entity legally separate from the District, is governed by substantially all the board members of the District and has an agreement with the District for the receipt of revenues to pay debt service on behalf of the District. As a result of these two factors, the Authority is a blended component unit of the District.

**B. Basic Financial Statements**

The basic financial statements are composed of the statements of net position, the statements of revenues, expenses, and changes in net position, the statements of cash flows, and the notes to the basic financial statements.

**C. Basis of Presentation**

The accounts of the District are that of an enterprise fund. An enterprise fund is a proprietary type fund used to account for operations (a) that are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the costs (expenses) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**D. Measurement Focus and Basis of Accounting**

Measurement focus is a term used to describe which transactions are recorded within the various financial statements. Basis of accounting refers to when transactions are recorded regardless of the measurement focus applied. The accompanying financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Under the economic measurement focus, all assets, deferred outflows of resources, liabilities, and deferred inflows of resources (whether current or noncurrent) associated with these activities are included on the statement of net position. The statement of revenues, expenses, and changes in net position presents increases (revenues) and decreases (expenses) in total net position. Under the accrual basis of accounting, revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

**E. Cash and Cash Equivalents**

Substantially all the District's cash is invested in interest-bearing accounts. The District considers all highly liquid investments with a maturity of three months or less to be cash and cash equivalents.

**F. Investments and Investment Policy**

The District has adopted an investment policy directing the District's General Manager or Chief Financial Officer to invest, reinvest, sell, or exchange securities.

Investments are stated at fair value, which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Changes in fair value that occur during a fiscal year are recognized as investment income reported for that fiscal year. Investment income includes interest earnings, changes in fair value, and any gains or losses realized upon the liquidation or sale of investments.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**G. Restricted Assets**

Amounts shown as restricted assets have been restricted by either debt indenture, by law, or contractual obligations to be used for specified purposes, such as servicing debt and/or construction of capital assets.

**H. Accounts Receivable**

The District extends credit to customers in the normal course of operations. Management deems all accounts receivable as collectible at year-end. Management evaluates all accounts receivable and if it is determined that they are uncollectible, they are written off as bad debt expense. A charge of \$24,925 was made to bad debt expense for the year ended June 30, 2023.

**I. Prepaid Items**

Certain payments to vendors reflect costs or deposits applicable to future accounting periods and are recorded as prepaid items in the basic financial statements.

**J. Materials and Supplies Inventory**

Materials and supplies inventory consist of expendable supplies and are valued at cost using first-in, first-out basis.

**K. Property Taxes**

The Orange County Assessor's office assesses all real and personal property within the county each year. The Orange County Tax Collector's office bills and collects the District's share of property taxes. The Orange County Auditor-Controller's office remits current and delinquent property tax collections to the District throughout the year. Property tax in California is levied in accordance with Article 13A of the State Constitution at 1% of countywide assessed valuations. Property taxes receivable at year-end are related to property taxes collected by the County of Orange that have not been credited to the District's cash balance as of June 30. The property tax calendar is as follows:

Lien Date	January 1
Levy Date	July 1
Due Dates	First Installment - November 10 Second Installment - February 10
Collection Dates	First Installment - December 11 Second Installment - April 11

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**L. Capital Assets**

Capital assets acquired and/or constructed are capitalized at historical cost. District policy has set the capitalization threshold for reporting capital assets at \$5,000. Donated assets are recorded at acquisition value at the date of donation. Upon retirement or other disposition of capital assets, the cost and related accumulated depreciation are removed from the respective balances and any gains or losses are recognized.

Depreciation is recorded on a straight-line basis over the estimated useful lives of the assets as follows:

Building	25 to 40 Years
Vehicles	5 to 25 Years
Office Furniture and Equipment	5 to 10 Years
Computer Software	5 to 10 Years
Land Improvements	20 to 50 Years
Water Facilities:	
Reservoir	100 Years
Transmission and Distribution	20 to 60 Years
Filtration Plant	30 to 40 Years
Other Plant and Equipment	5 to 15 Years
Sanitation Facilities:	
Collection and Transmission	15 to 50 Years
Treatment and Disposal Plant	15 to 30 Years
Other Plant and Equipment	5 to 15 Years

**M. Deferred Outflows/Inflows of Resources**

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to future periods and will not be recognized as an outflow of resources (expense) until that time. The District has the following items that qualify for reporting in this category:

- Deferred outflows related to other postemployment benefit (OPEB) for an amount equal to employer payment of benefits made after the measurement date of the total OPEB liability.
- Deferred outflows related to OPEB for differences between expected and actual experiences. These amounts are amortized over a closed period equal to the average of the expected remaining service lives of all employees that are provided with benefits through the plan.



**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**M. Deferred Outflows/Inflows of Resources (Continued)**

- Deferred outflows related to OPEB for changes of assumptions. These amounts are amortized over a closed period equal to the average of the expected remaining services lives of all employees that are provided with benefits through the plan.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and will not be recognized as an inflow of resources (revenue) until that time. The District has the following items that qualify for reporting in this category:

- Deferred inflows related to OPEB for differences between expected and actual experiences. These amounts are amortized over a closed period equal to the average of the expected remaining service lives of all employees that are provided with benefits through the plan.
- Deferred inflows related to OPEB for changes of assumptions. These amounts are amortized over a closed period equal to the average of the expected remaining services lives of all employees that are provided with benefits through the plan.
- Deferred inflow related to leases, this amount is deferred and recognized as an inflow of resources based on the payment provisions in the contracts.

**N. Compensated Absences**

The District's policy is to permit employees hired prior to July 1, 1997, to accumulate earned vacation for up to a total of 160 hours and employees hired after July 1, 1997, to accumulate earned vacation for up to a total of 240 hours. The District requires employees to take a minimum of 50% of the total hours accrued of vacation each calendar year. If the employee is still not able to reduce the total accrued vacation hours below the maximum, then the amounts exceeding the limit are paid out as part of the employee's current regular compensation at the calendar year-end.

The District's sick leave policy is to permit employees to accumulate sick leave for up to a total of 960 hours. At the end of each calendar year, any amounts exceeding the limit will be transferred to vacation time for employees hired prior to July 1, 1997, using a factor of 5% times the number of complete years and capped at 100%. All hours over the maximum will be paid out at 50% to those hired after July 1, 1997, at the employee's current regular compensation rate.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**O. Net Position**

The financial statements utilize a net position presentation. Net position is categorized as follows:

**Net Investment in Capital Assets** – This amount consists of capital assets net of accumulated depreciation and reduced by outstanding debt that is attributed to the acquisition, construction, or improvement of the assets.

**Unrestricted Net Position** – This amount is all net position that does not meet the definition of net investment in capital assets or restricted net position.

When both restricted and unrestricted resources are available for use, it is the District's policy to use restricted resources first and then unrestricted resources as they are needed.

**P. Water Sales and Sewer Services**

Water sales and sewer services are billed on a monthly cyclical basis; respective revenues are recognized when they are earned.

**Q. Capital Contributions**

Capital contributions represent cash and capital asset additions contributed to the District by property owners, granting agencies, or real estate developers desiring services that require capital expenditures or capacity commitment.

**R. Leases**

The District is a lessor for a noncancellable lease of land. The District recognizes a lease receivable and a deferred inflow of resources in the statement of net position.

At the commencement of a lease, the District initially measures the lease receivable at the present value of payments expected to be received during the lease term. Subsequently, the lease receivable is reduced by the principal portion of lease payments received. The deferred inflow of resources is initially measured as the initial amount of the lease receivable, adjusted for lease payments received at or before the lease commencement date. Subsequently, the deferred inflow of resources is recognized as revenue over the life of the lease term.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**R. Leases (Continued)**

Key estimates and judgments include how the District determines (1) the discount rate it uses to discount the expected lease receipts to present value, (2) lease term, and (3) lease receipts.

- The District uses its estimated incremental borrowing rate as the discount rate for leases.
- The lease term includes the noncancellable period of the lease.
- Lease receipts included in the measurement of the lease receivable are composed of fixed payments from the lessee.

The District monitors changes in circumstances that would require a remeasurement of its lease and will remeasure the lease receivable and deferred inflows of resources if certain changes occur that are expected to significantly affect the amount of the lease receivable.

**S. Use of Estimates**

The preparation of the basic financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities. The assumptions also include disclosures of contingent assets and liabilities at the date of the financial statements and the reported changes in net position during the reporting period. Actual results could differ from those estimates.

**NOTE 2 CASH AND CASH INVESTMENTS**

**Cash and Investments**

At June 30, 2023, cash and investments were classified in the accompanying financial statements as follows:

Cash and Cash Equivalents	\$ 10,138,838
Investments	12,335,376
Restricted - Cash and Cash Equivalents	4,386,674
Restricted - Investments	4,353,327
Total	<u><u>\$ 31,214,215</u></u>

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 2 CASH AND INVESTMENTS (CONTINUED)**

**Cash and Investments (Continued)**

At June 30, 2023, cash and investments consisted of the following:

Cash on Hand	\$ 700
Demand Deposits Held with Financial Institutions	14,524,812
Investments	16,688,703
Total	<u>\$ 31,214,215</u>

**Investments Authorized by the California Government Code and the District's Investment Policy**

The table below identifies the investment types that are authorized for the District by the California Government Code (or the District's investment policy, where more restrictive). The table also identifies certain provisions of the California Government Code (or the District's investment policy, where more restrictive) that address interest rate risk, credit risk, and concentration of credit risk.

Authorized Investment Type	Maximum Maturity	Maximum Percentage of Portfolio	Maximum Investment in One Issuer
State or Local Agency Bonds	5 Years	10%	None
U.S. Treasury Obligations	5 Years	None	None
Government-Sponsored Agency Securities	5 Years	None	None
Corporate Medium-Term Notes	5 Years	30%	None
Commercial Paper	270 Days	25%	10%
Bankers Acceptance	180 Days	15%	None
Negotiable Certificates of Deposit	5 Years	30%	None
Mortgage Pass-Through Securities	5 Years	20%	None
Money Market Mutual Funds	5 Years	10%	None
Collateralized Bank Deposits	N/A	20%	None
California Local Agency Investment Fund (LAIF)	N/A	30 million	None
California Asset Management Program (CAMP)	N/A	60%	None
Supranationals	5 Years	30%	None
Placement Service Deposit	5 Years	30%	None

N/A - Not applicable

**EL TORO WATER DISTRICT**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

**NOTE 2 CASH AND INVESTMENTS (CONTINUED)**

**Disclosures Relating to Interest Rate Risk**

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the fair values of investments with longer maturities have greater sensitivity to changes in market interest rates. The District's investment policy follows the California Government Code as it relates to limits on investment maturities as a means of managing exposure to fair value losses arising from increasing interest rates. The District has elected to use the segmented time distribution method of disclosure for the maturities of its investments as related to interest rate risk as noted in the table above.

Information about the sensitivity of the fair values of the District's investments to market interest rate fluctuations is provided by the following tables that show the distribution of the District's investments by maturity as of June 30, 2023.

Investment Type	Remaining Maturity (in Months)			Total
	12 Months or Less	13 to 24 Months	25 to 60 Months	
U.S. Treasury Obligations	\$ 1,474,406	\$ 662,271	\$ 2,893,438	\$ 5,030,115
Government-Sponsored Entities Securities	446,291	176,185	-	622,476
Supranationals	-	174,345	-	174,345
Municipal Bonds	-	18,754	-	18,754
Corporate Medium-Term Notes	929,308	856,863	220,833	2,007,004
Negotiable Certificates of Deposit	2,427,766	1,925,561	-	4,353,327
Asset-Backed Securities	-	38,144	799,574	837,718
LAIF	2,860,887	-	-	2,860,887
CAMP - Money Market	784,077	-	-	784,077
Total	<u>\$ 8,922,735</u>	<u>\$ 3,852,123</u>	<u>\$ 3,913,845</u>	<u>\$ 16,688,703</u>

**Disclosures Relating to Credit Risk**

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Presented in the following table are the minimum ratings required by (where applicable) the California Government Code, the District's investment policy, or debt agreements and the actual Moody's credit rating as of June 30, 2023, for each investment type.

Investment Type	Minimum Legal Rating	Total as of June 30, 2023	Not Rated	Aaa	A
U.S. Treasury Obligations	N/A	\$ 5,030,115	\$ -	\$ 5,030,115	\$ -
Government-Sponsored Entities Securities	AA	622,476	-	622,476	-
Supranationals	AA	174,345	-	174,345	-
Municipal Bonds	A	18,754	-	-	18,754
Corporate Medium-Term Notes	A	2,007,004	-	160,923	1,846,081
Negotiable Certificates of Deposit	AA	4,353,327	-	4,353,327	-
Asset-Backed Securities	AA	837,718	-	837,718	-
LAIF	N/A	2,860,887	2,860,887	-	-
CAMP - Money Market	N/A	784,077	784,077	-	-
Total		<u>\$ 16,688,703</u>	<u>\$ 3,644,964</u>	<u>\$ 11,178,904</u>	<u>\$ 1,864,835</u>

**EL TORO WATER DISTRICT**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

**NOTE 2 CASH AND INVESTMENTS (CONTINUED)**

**Concentration of Credit Risk**

The investment policy of the District contains no limitations on the amount that can be invested in any one issuer beyond that stipulated by the California Government Code with the exception of banker's acceptances, commercial paper, and money market funds, which are limited to an investment in any one issuer of 5%, 5%, and 10%, respectively.

**Custodial Credit Risk**

Custodial credit risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, the District will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the District will not be able to recover the value of its investment or collateral securities that are in the possession of another party. With respect to investments, custodial credit risk generally applies only to direct investments in marketable securities. Custodial credit risk does not apply to a local government's indirect investment in securities through the use of mutual funds or government investment pools (such as the Local Agency Investment Fund (LAIF)).

The California Government Code and the District's investment policy do not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits or investments, other than the following provision for deposits: The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure District deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits.

As of June 30, 2023, all of the District's deposits with financial institutions were covered by federal depository insurance limits or were held in collateralized accounts.

**Investment in State Investment Pool**

The District is a voluntary participant in LAIF that is regulated by California Government Code Section 16429 under the oversight of the California State Treasurer. The fair value of the District's investment in this pool is reported in the accompanying financial statements at amounts based upon the District's pro rata share of the fair value provided by LAIF for the entire LAIF portfolio (in relation to the amortized cost of that portfolio).

**EL TORO WATER DISTRICT**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

**NOTE 2 CASH AND INVESTMENTS (CONTINUED)**

**Investment in California Asset Management Program**

The California Asset Management Program (CAMP) is a public joint powers authority that provides California public agencies with investment management services for surplus funds and comprehensive investment management, accounting, and arbitrage rebate calculation services for proceeds of tax-exempt financings. CAMP currently offers the cash reserve portfolio, a short-term investment portfolio, as a means for public agencies to invest these funds. Public agencies invest in the pool (participants) purchase shares of beneficial interest. Participants may also establish individual, professionally managed investment accounts (individual portfolios) by separate agreement with an investment advisor.

**Fair Value Measurements**

The District categorizes its fair value measurement within the fair value hierarchy established by U.S. GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the assets. Level 1 inputs are quoted prices in active markets for identical assets, Level 2 inputs are quoted prices for similar assets in active markets, and Level 3 inputs are significant unobservable inputs.

<b>June 30, 2023</b>	<b>Quoted Prices Level 1</b>	<b>Observable Inputs Level 2</b>	<b>Unobservable Inputs Level 3</b>	<b>Total</b>
U.S. Treasury Obligations	\$ -	\$ 5,030,115	\$ -	\$ 5,030,115
Government-Sponsored Entities				
Securities	-	622,476	-	622,476
Supranationals	-	174,345	-	174,345
Municipal Bonds	-	18,754	-	18,754
Corporate Medium-Term Notes	-	2,007,004	-	2,007,004
Negotiable Certificates of Deposit	-	4,353,327	-	4,353,327
Asset-Backed Securities	-	837,718	-	837,718
Total Leveled Investments	<u>\$ -</u>	<u>\$ 13,043,739</u>	<u>\$ -</u>	<u>13,043,739</u>
LAIF*				2,860,887
CAMP - Money Market*				<u>784,077</u>
Total Investments				<u><u>\$ 16,688,703</u></u>

\* Not subject to fair value measurement hierarchy.

**EL TORO WATER DISTRICT**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

**NOTE 3 CAPITAL ASSETS**

Major capital asset additions during the year include upgrades and extensions of the District's water and wastewater pumping, water transmission and distribution systems, and plant facilities in the following schedules.

A summary of changes in capital assets for the year ended June 30, 2023 is as follows:

	Balance at June 30, 2022	Reclassifications	Additions	Deletions	Balance at June 30, 2023
Capital Assets, Not Depreciated:					
Land, Mineral, and Water Rights	\$ 7,451,586	\$ -	\$ -	\$ -	\$ 7,451,586
Construction in Progress	4,714,755	-	22,034,185	(2,167,360)	24,581,580
Total Capital Assets, Not Depreciated	12,166,341	-	22,034,185	(2,167,360)	32,033,166
Capital Assets, Being Depreciated:					
Capacity Rights	342,382	-	-	-	342,382
Source of Supply	20,010,128	(1,984,596)	-	-	18,025,532
Pumping	22,232,123	-	1,116,869	-	23,348,992
Treatment	40,752,294	1,984,596	491,531	-	43,228,421
Transmission and Collection	65,967,397	-	-	-	65,967,397
General Plant Facilities	14,911,836	-	1,008,019	-	15,919,855
Total Capital Assets, Being Depreciated	164,216,160	-	2,616,419	-	166,832,579
Less Accumulated Depreciation for:					
Capacity Rights	(260,232)	-	(6,846)	-	(267,078)
Source of Supply	(12,305,083)	2,497,330	(166,764)	-	(9,974,517)
Pumping	(15,049,852)	750	(879,742)	-	(15,928,844)
Treatment	(31,003,973)	(2,498,080)	(806,842)	-	(34,308,895)
Transmission and Collection	(16,697,959)	-	(1,306,392)	-	(18,004,351)
General Plant Facilities	(12,914,851)	-	(1,252,976)	-	(14,167,827)
Total Accumulated Depreciation	(88,231,950)	-	(4,419,562)	-	(92,651,512)
Total Capital Assets, Being Depreciated, Net	75,984,210	-	(1,803,143)	-	74,181,067
Total Capital Assets, Net	<u>\$ 88,150,551</u>	<u>\$ -</u>	<u>\$ 20,231,042</u>	<u>\$ (2,167,360)</u>	<u>\$ 106,214,233</u>

**Construction in Progress**

The District is involved in various construction projects throughout the year. Once completed, those projects are capitalized and depreciated over the life of the asset. The balance of construction in progress was \$24,581,580 as of June 30, 2023.

Construction in progress consisted of the following projects as of June 30:

Project Description	2023
R6 Reservoir Floating Cover	\$ 18,419,419
Oso Lift Station Improvement	2,574,428
Filter Plant Site	1,613,773
R2 Recoating Project	743,199
Aeration Basin Diffuser	258,434
Various Other Minor Projects <\$200,000	972,327
Total Construction in Progress	<u>\$ 24,581,580</u>



**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 4 COMPENSATED ABSENCES**

A summary of changes to compensated absences for the year ended June 30, 2023 is as follows:

Balance July 1, 2022	Additions	Deletions	Balance June 30, 2023	Current Portion	Noncurrent Portion
\$ 1,512,216	\$ 603,356	\$ (501,611)	\$ 1,613,961	\$ 182,171	\$ 1,431,790

**NOTE 5 LONG-TERM DEBT**

The following is a summary of long-term debt at June 30, 2023:

	July 1, 2022	Additions	Deletions	June 30, 2023	One Year	Than One Year
Direct Borrowings:						
Loans Payable:						
Main Extension Contract	\$ 6,180	\$ -	\$ -	\$ 6,180	\$ 6,180	\$ -
Baker Water Treatment Plant - Refinance Loan	7,677,055	-	(446,274)	7,230,781	460,108	6,770,673
Total Loans Payable	7,683,235	-	(446,274)	7,236,961	466,288	6,770,673
Bonds Payable:						
Revenue Bonds, Series 2022A	40,905,000	-	(1,105,000)	39,800,000	1,380,000	38,420,000
Premium, Series 2022A	8,648,018	-	(521,826)	8,126,192	-	8,126,192
Total Bonds Payable	49,553,018	-	(1,626,826)	47,926,192	1,380,000	46,546,192
Total	\$ 57,236,253	\$ -	\$ (2,073,100)	\$ 55,163,153	\$ 1,846,288	\$ 53,316,865

**Main Extension Contracts**

Main extension contracts are payable to developers without interest. The payments are based on a percentage of revenue received from units served by the water main. The contracts must be repaid in not more than 25 years but may be paid off in advance at the option of the District. The outstanding balance at June 30, 2023 was \$6,180.

**Baker Water Treatment Plant Agreement and Direct Borrowing**

In December 2013, the District entered into the Baker Water Treatment Plant Agreement, along with five other public entities relating to the Baker treatment plant. In January 2014, the District entered into an installment sale agreement with the Irvine Ranch Water District (IRWD) for the purchase of the District's portion of rights, title, and interest to the capacity not-to-exceed amount of \$12,500,000.

In 2017, the District refinanced IRWD's installment sale agreement with a loan from a financial institution for \$9,715,035 with an interest rate of 3.10%. The loan is scheduled to mature in 2036. Principal and interest are payable annually at the interest rate of 3.10%.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 5 LONG-TERM DEBT (CONTINUED)**

Future annual debt service requirements on the loan are as follows:

<u>Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 460,108	\$ 224,154	\$ 684,262
2025	474,372	209,891	684,263
2026	489,077	195,185	684,262
2027	504,239	180,024	684,263
2028	519,870	164,393	684,263
2029 - 2033	2,851,317	569,996	3,421,313
2034 - 2036	1,931,798	120,990	2,052,788
Total	<u>\$ 7,230,781</u>	<u>\$ 1,664,633</u>	<u>\$ 8,895,414</u>

**Water and Wastewater Revenue Bonds, Series 2022A**

In March 2022, the El Toro Water District Financing Authority issued the Water and Wastewater Revenue Bonds, Series 2022A in the amount of \$40,905,000 to refund the State Revolving Fund Loan 2010 – Northline Lift Station Improvement Project, State Revolving Fund Loan 2013 – Recycled Water Treatment Plan Project, State Revolving Fund Loan 2018 – Phase II Recycled Water Distribution System Expansion Project, and to finance certain capital improvements to the District's potable water system, recycled water system and sanitary sewer system, and to pay the costs of issuance of the 2022A Revenue Bonds. Principal is payable in annual installments ranging from \$835,000 to \$1,850,000 maturing in 2052 at an interest rate of 5%.

Future annual debt service requirements on the loan are as follows:

<u>Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 1,380,000	\$ 1,952,560	\$ 3,332,560
2025	1,450,000	1,883,650	3,333,650
2026	1,525,000	1,811,150	3,336,150
2027	1,600,000	1,734,900	3,334,900
2028	1,680,000	1,654,900	3,334,900
2029 - 2033	8,160,000	6,991,500	15,151,500
2034 - 2038	5,685,000	5,163,050	10,848,050
2039 - 2043	5,185,000	4,055,200	9,240,200
2044 - 2048	6,585,000	2,657,750	9,242,750
2049 - 2052	6,550,000	838,750	7,388,750
Total	<u>\$ 39,800,000</u>	<u>\$ 28,743,410</u>	<u>\$ 68,543,410</u>

**NOTE 6 DEFINED CONTRIBUTION AND DEFERRED COMPENSATION PLANS**

The District contributes to the El Toro Water District Retirement Savings Plan and Trust (the Plan), which is a qualified defined contribution pension plan under Section 401(k) of the Internal Revenue Code (IRC). The Plan is administered by the District. The District's Board of Directors has approved the funding of this benefit and may change the percentage as deemed necessary.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 6    DEFINED CONTRIBUTION AND DEFERRED COMPENSATION PLANS (CONTINUED)**

Additionally, the District offers a 457 deferred compensation plan. In accordance with GASB Statement No. 32, *Accounting and Financial Reporting/or Internal Revenue Code Section 457 Deferred Compensation Plans*, the District has little administrative involvement and does not perform the investing function for the Plan, and the assets and related liabilities are not presented in the accompanying financial statements in accordance with GASB Statement No. 84 and No. 97.

As of February 1, 2016, the District executed an amendment to the Plan authorizing the District (as employer) to match an amount equal to 75% of each participant's total contributions to either 401(k) or 457 plans, but no more than 10% of their annual compensation. However, the District's contributions can be deposited to the 401(k) plan only.

In addition, the District contributes an amount equal to 9% of compensation for a Plan year for all qualified participants regardless of whether they are an employee on the last day of the Plan year and regardless of whether they made any salary deferrals to the Plan. Employees are immediately vested in their employer contributions. District contributions to the 401(k) plan were \$1,126,923 as of June 30, 2023.

**NOTE 7    OTHER POSTEMPLOYMENT BENEFITS**

**Plan Description**

The District pays all or a portion of the cost of health insurance for retirees (including prescription drug benefits) under any group plan offered by the Association of California Water Agencies/Joint Powers Insurance Authority (ACWA/JPIA) Health Program, subject to certain restrictions as determined by the District. The District's plan is a single employer plan.

**Benefits**

The District offers postemployment medical benefits to retired employees who satisfy the eligibility rules. Certain spouses and surviving spouses are also eligible to receive benefits. Retirees may enroll in any medical plan available through the District's ACWA/JPIA Health Program. The contribution requirements of eligible retired employees and the District are established and may be amended by the Board of Directors.

**Employees Covered**

At the June 30, 2022, measurement date, the following current and former employees were covered by the benefit terms:

Inactive Employees or Beneficiaries Currently	
Receiving Benefits	25
Active Employees	59
Total	<u>84</u>

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 7 OTHER POSTEMPLOYMENT BENEFITS (CONTINUED)**

**Actuarial Assumptions**

The total OPEB liability, measured as of June 30, 2022, was determined using the following actuarial assumptions:

Valuation Date	June 30, 2022
Measurement Date	June 30, 2022
Actuarial Assumptions:	
Discount Rate	3.54%
Projected Salary Increase	2.75% Per Year
Inflation	2.50% Per Year
Mortality, Retirement, Disability, Termination	CalPERS 2000-2019 Experience Study (2% @ 55 Rates for Tier 1, Modified Rates for Tier 2)
Mortality Improvement	Mortality Projected Fully Generational with Scale MP-2020
Medical Trend	
Non-Medicare	8.5% for 2024, Decreasing to 3.45% in 2076
Medicare (Non-Kaiser)	7.5% for 2024, Decreasing to 3.45% in 2076
Medicare (Kaiser)	6.25% for 2024, Decreasing to 3.45% in 2076
Healthcare Participation at Retirement	
Actives	95% Tier 1, 90% Tier 2
Retirees	100%
Spouse Healthcare Participation at Retirement	
Spouse Currently Covered	100% Tier 1, 50% Tier 2
Spouse not Currently Covered	0%
Medical Plan Election at Retirement	Same as Currently Elected

**Contribution**

The obligation of the District to contribute to the plan is established and may be amended by the Board of Directors. The contribution required to be made is based on a pay-as-you-go basis (i.e., as medical insurance premiums become due) and an implied subsidy determined by an actuary. For the year ended June 30, 2023, the District made payments of \$263,362 for premiums and the implied subsidy was \$54,158, thereby resulting in payments of \$317,520.

**Discount Rate**

The discount rate used to measure the 2022 total OPEB liability was 3.54%. This discount rate is the Bond Buyer 20-Bond GO index.

**Sensitivity of the Total OPEB Liability to Changes in the Discount Rate**

The following presents the total OPEB liability of the District, as well as what the total OPEB liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate for the measurement period ended June 30, 2022:

	1% Decrease (2.54%)	Discount Rate (3.54%)	1% Increase (4.54%)
Total OPEB Liability	\$ 12,669,618	\$ 11,050,192	\$ 9,727,133

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 7 OTHER POSTEMPLOYMENT BENEFITS (CONTINUED)**

**Sensitivity of the Total OPEB Liability to Changes in Healthcare Cost Trend Rates**

The following presents the total OPEB liability of the District, as well as what the total OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower or one percentage point higher than the current rates for the measurement period ended June 30, 2022:

	<u>1% Decrease</u>	Healthcare Cost Trend Rates (a)	<u>1% Increase</u>
Total OPEB Liability	\$ 9,581,250	\$ 11,050,192	\$ 12,873,277

(a) Non-Medicare - 8.5% for 2024, Decreasing to 3.45% in 2076

Medicare (Non-Kaiser) - 7.5% for 2024, Decreasing to 3.45% in 2076

Medicare (Kaiser) - 6.25% for 2024, Decreasing to 3.45% in 2076

**Change in Total OPEB Liability**

A summary of change in the total OPEB liability for the measurement date June 30, 2022 is as follows:

Balance at June 30, 2021 (Measurement Date)	\$ 20,031,266
Changes in the Year:	
Service Cost	625,561
Interest on the Total OPEB Liability	442,766
Differences Between Actual and Expected	
Experience	(7,913,790)
Changes in Assumptions	(1,818,868)
Benefit Payments	(316,743)
Net Changes	(8,981,074)
Balance at June 30, 2022 (Measurement Date)	<u>\$ 11,050,192</u>

**OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB**

For the year ended June 30, 2023, OPEB expense in the amount of \$578,179 is included in the accompanying statement of revenues, expenses and changes in net position. As of June 30, 2023, the District reported deferred outflows or inflows of resources related to OPEB due to the initial valuation of OPEB under GASB Statement No. 75 as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Payment of OPEB Benefits Subsequent to Measurement Date	\$ 317,520	\$ -
Differences Between Actual and Expected Experience	282,116	(7,561,779)
Change in Assumptions	2,894,133	(1,562,689)
Total	<u>\$ 3,493,769</u>	<u>\$ (9,124,468)</u>

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 7 OTHER POSTEMPLOYMENT BENEFITS (CONTINUED)**

**OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB  
(Continued)**

The \$317,520 reported as deferred outflows of resources related to OPEB resulting from the District's payments of OPEB benefits subsequent to the measurement date, will be recognized as a reduction of the total OPEB liability in the year ending June 30, 2024.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB for measurement period June 30, 2022 are recognized as OPEB expense as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2024	\$ (490,148)
2025	(490,151)
2026	(997,609)
2027	(1,114,620)
2028	(1,347,815)
Thereafter	(1,507,876)

**Change of Assumptions**

The following assumption was changed from the June 30, 2020 actuarial valuation to the June 30, 2022 actuarial valuation. (1) the discount rate was updated from 2.16% to 3.54 % (2) mortality improvement scale was updated from Scale MP-2020 to Scale MP-2021 (3) Healthcare trend changed from 7% non-Medicare, 6.1% for Medicare (non-Kaiser) and 5% Medicare (Kaiser) to 8.5% non-Medicare, 7.5% for Medicare (non-Kaiser) and 6.25% for Medicare (Kaiser) (4) Mortality, Retirement, Disability, Termination went from the CalPERS 1997-2015 Experience Study to the CalPERS 2000-2019 Experience Study.

**NOTE 8 LEASES**

The District, acting as lessor, leases land under a long-term, noncancelable lease agreements. The leases expire at various dates through February 2028. During the year ended June 30, 2023, the District recognized \$234,439 and \$20,904 in lease revenue and interest revenue, respectively, pursuant to these contracts.

The leases provide for increases in future minimum annual rental payments based on defined increases and increases based on the Consumer Price Index, subject to certain minimum increases.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 9 NET POSITION**

Net investment in capital assets at June 30, 2023 consisted of the following:

Capital Assets - Not Being Depreciated	\$ 32,033,166
Capital Assets, Net - Being Depreciated	74,181,067
Loans Payable	(7,236,961)
Bonds Payable, Less Unspent Proceeds	(39,186,191)
Retention	(927,267)
Accounts Payable for Construction Projects	(3,895,543)
Net Investment in Capital Assets	<u>\$ 54,968,271</u>

**NOTE 10 RISK MANAGEMENT**

The District is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The District is a member of the ACWA/JPIA, an intergovernmental risk-sharing joint powers authority created to provide self-insurance programs for California water agencies. The purpose of the ACWA/JPIA is to arrange and administer programs of self-insured losses and to purchase excess insurance coverage. At June 30, 2023, the District participated in the liability and property programs of the ACWA/JPIA as follows:

In addition to the above, the District also has the following insurance coverage:

- General and auto liability and public officials' and employees' errors and omissions: The JPIA pools for the first \$5 million. The JPIA purchases additional excess coverage layers: \$55 million per occurrence for general, auto, and public officials' liability, which increases the limits on the insurance coverage noted above. Additionally, there are lower limits related to terrorism (\$5 million), communicable disease (\$10 million), PFAS (\$10 million) subsidence (\$45 million), lead (\$45 million), and mold (\$45 million).
- Employee dishonesty coverage of up to \$3,000,000 with a \$1,000 deductible per loss, includes public employee dishonesty, forgery or alteration, and use of computer to transfer covered property coverage.
- Property loss coverage for boiler and machinery is up to \$100,000,000 with a \$25,000 deductible except for turbine or power generation equipment which is \$50,000. Coverage for earthquakes is up to \$2,500,000 in program aggregate, with a deductible of 5% of the total insurable value which is \$56,235,549. Coverage for floods is up to \$25,000,000, with a deductible of \$100,000. Real property has a deductible of \$1,000; the ACWA/JPIA is self-insured for up to \$100,000; excess insurance has been purchased.
- For underground storage tank pollution liability, the District is insured for up to \$3,000,000 with a \$10,000 deductible; the ACWA/JPIA is self-insured for up to \$500,000; excess insurance coverage has been purchased to cover losses up to \$3,000,000.

**EL TORO WATER DISTRICT  
NOTES TO BASIC FINANCIAL STATEMENTS  
JUNE 30, 2023**

**NOTE 10 RISK MANAGEMENT (CONTINUED)**

- Dam failure liability coverage of up to \$9,000,000 million per occurrence; the ACWA/JPIA is self-insured up to \$1,000,000; excess insurance coverage has been purchased.
- Workers' compensation insurance for up to California statutory limits for all work-related injuries/illnesses covered by California law. The ACWA/JPIA is self-insured for up to \$2.0 million; excess insurance coverage has been purchased with a \$4,000,000 aggregate limit.
- Cyber security coverage is \$5,000,000 per occurrence and \$5,000,000 in aggregate with a deductible up to \$1000,000 per occurrence based on annual revenues.
- Fiduciary liability coverage of up to \$3,000,000 with a deductible of \$15,000 for claims resulting from a breach in fiduciary duty associated with its retirement pension plan.

Settled claims have not exceeded any of the coverage amounts, and there were no reductions in the District's insurance coverage during the year ended June 30, 2023. Liabilities are recorded when it is probable that a loss has been incurred, and the amount of the loss can be reasonably estimated net of the respective insurance coverage.

Liabilities include an amount for claims that have been incurred but not reported (IBNR). There were no IBNR claims payable as of June 30, 2023.

**NOTE 11 COMMITMENTS AND CONTINGENCIES**

**Construction Contracts**

The District has a variety of agreements with private parties relating to the installation, improvement, or modification of water and wastewater facilities and distribution systems within its service area. The financing of such construction contracts is being provided primarily from the District's replacement reserves and capital contributions. As of June 30, 2023, the District had engineering design and construction commitments of approximately \$10,758,000.

**Litigation**

In the ordinary course of operations, the District is subject to claims and litigation from outside parties. After consultation with legal counsel, the District believes the ultimate outcome of such matters, if any, will not materially affect its financial condition.



**EL TORO WATER DISTRICT  
SCHEDULE OF CHANGES IN THE TOTAL OPEB LIABILITY AND RELATED RATIOS  
LAST TEN FISCAL YEARS\***

Fiscal Year	6/30/2023	6/30/2022	6/30/2021	6/30/2020	6/30/2019	6/30/2018
Measurement Date	6/30/2022	6/30/2021	6/30/2020	6/30/2019	6/30/2018	6/30/2017
Total OPEB Liability:						
Service Cost	\$ 625,561	\$ 598,651	\$ 468,321	\$ 410,098	\$ 267,270	\$ 260,117
Interest on Total OPEB Liability	442,766	433,004	600,602	598,626	430,926	409,009
Differences Between Actual and Expected Experience	(7,913,790)	-	(1,334,563)	-	987,411	-
Assumption Changes	(1,818,868)	160,868	2,875,924	923,090	2,564,813	-
Benefit Payments	(316,743)	(311,125)	(304,295)	(292,405)	(237,713)	(228,570)
Net Change in Total OPEB Liability	(8,981,074)	881,398	2,305,989	1,639,409	4,012,707	440,556
Total OPEB Liability - Beginning of Year	20,031,266	19,149,868	16,843,879	15,204,470	11,191,763	10,751,207
Total OPEB Liability - End of Year (a)	<u>\$ 11,050,192</u>	<u>\$ 20,031,266</u>	<u>\$ 19,149,868</u>	<u>\$ 16,843,879</u>	<u>\$ 15,204,470</u>	<u>\$ 11,191,763</u>
Covered - Employee Payroll	\$ 6,743,824	\$ 6,174,982	\$ 5,980,908	\$ 5,889,881	\$ 5,709,337	\$ 5,696,461
Total OPEB Liability as Percentage of Covered - Employee Payroll	163.86%	324.39%	320.18%	285.98%	266.31%	196.47%

Notes to Schedule:

Benefit Changes:

There were no changes in benefits.

Changes in Assumptions:

From measurement date of June 30, 2019 to June 30, 2020:

Discount rate was updated based on municipal bond rate as of the measurement date from 3.5% to 2.21%

Mortality schedule updated from Scale MP-2018 to Scale MP-2020

From measurement date of June 30, 2020 to June 30, 2021:

Discount rate was updated based on municipal bond rate as of the measurement date from 2.21% to 2.16%

From measurement date of June 30, 2021 to June 30, 2022:

Discount rate was updated based on municipal bond rate as of the measurement date from 2.16% to 3.54%

Mortality improvement scale was updated to Scale MP-2021

CalPERS 2000-2019 Experience Study was used for demographic assumptions

\* Fiscal year 2018 was the first year of implementation and therefore only six years are shown.

## **SUPPLEMENTARY INFORMATION**

**EL TORO WATER DISTRICT  
SCHEDULE OF REVENUE BY CATEGORY  
YEAR ENDED JUNE 30, 2023**

**OPERATING REVENUES**

Water Consumption Sales:	
Unrestricted	\$ 7,611,597
Restricted - Conservation	-
Restricted - Recycled Water	535,391
Recycled Consumption Sales	1,189,709
Total Water Consumption Sales	<u>9,336,697</u>

Service Charges:	
Water Service Charges	4,228,716
Wastewater Service Charges	8,659,161
Recycled Service Charges	424,813
Total Service Charges	<u>13,312,690</u>

Capital Replacement Charges:	
Water Capital Charges	1,296,285
Wastewater Capital Charges	1,724,493
Recycled Capital Charges	131,774
Total Capital Replacement Charges	<u>3,152,552</u>

Reimbursements from Others:	
Recycled Water Rebates	292,185
Shared Facility Charges	16,589
Total Reimbursements from Others	<u>308,774</u>

Miscellaneous Revenue	<u>299,967</u>
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<b>TOTAL OPERATING REVENUES</b>	<b>26,410,680</b>
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**NONOPERATING REVENUES**

Property Taxes:	
Water System	473,659
Wastewater System	615,578
Recycled Water System	94,912
Grants, Rebates, Reimbursements	618,262
Rental Revenue	234,439
Investment Income (Loss)	795,655
Other Nonoperating Revenue	19,323

<b>TOTAL NONOPERATING REVENUES</b>	<b><u>2,851,828</u></b>
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<b>TOTAL REVENUE</b>	<b><u><u>\$ 29,262,508</u></u></b>
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**EL TORO WATER DISTRICT  
SCHEDULE OF EXPENSES BY CATEGORY  
YEAR ENDED JUNE 30, 2023**

**OPERATING EXPENSES**

General & Administrative:	
Administration	\$ 1,259,486
Finance and Risk Management	1,348,000
Human Resources	583,071
Technology Services	780,198
Public Relations & Conservation	473,722
Customer Service	919,035
Total General & Administrative	<u>5,363,512</u>
Source of Supply	8,593,609
Operations:	
Engineering	826,614
Operations Support	1,641,418
Fleet Services	568,707
Pumping Operations	1,605,505
Transmission & Distribution	2,111,156
Wastewater Collections	1,287,015
Treatment Operations	4,254,848
Total Operations	<u>12,295,263</u>
Other Operating Expenses	625,767
Depreciation & Amortization	<u>4,419,562</u>

<b>TOTAL OPERATING EXPENSES</b>	<b>31,297,713</b>
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**NONOPERATING EXPENSES**

Interest Expense	1,723,651
<b>TOTAL NONOPERATING EXPENSES</b>	<u><b>1,723,651</b></u>

<b>TOTAL EXPENSES</b>	<u><u><b>\$ 33,021,364</b></u></u>
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**STATISTICAL SECTION (UNAUDITED)**

**EL TORO WATER DISTRICT  
INDEX TO STATISTICAL SECTION  
YEAR ENDED JUNE 30, 2023**

Page  
Number

<b>FINANCIAL TRENDS:</b>	55
These schedules contain information to help the reader understand how the District's financial performance and well-being have changed over time.	
<b>REVENUE CAPACITY:</b>	57
These schedules contain information to help the reader assess the District's most significant own-source revenue, water sales.	
<b>DEBT CAPACITY:</b>	64
These schedules present information to help the reader assess the affordability of the District's current levels of outstanding debt and the District's ability to issue additional debt in the future.	
<b>DEMOGRAPHIC INFORMATION:</b>	66
This schedule offers demographic indicators to help the reader understand the environment within which the District's financial activities take place.	
<b>OPERATING INFORMATION:</b>	69
This schedule contains service and infrastructure data to help the reader understand how the information in the District's financial report relates to the service the District provides.	

**EL TORO WATER DISTRICT  
CHANGES IN NET POSITION AND NET POSITION BY COMPONENT  
LAST TEN FISCAL YEARS**

	Fiscal Year				
	2014	2015	2016	2017	2018
<b>CHANGES IN NET POSITION</b>					
Operating Revenues (See Schedule 2)	\$ 216,108	\$ 294,329	\$ 459,926	\$ 24,032,874	\$ 610,360
Operating Expenses (See Schedule 3)	24,484,521	24,469,909	(23,990,984)	25,287,726	26,859,040
Operating Income (Loss)	24,700,629	24,764,238	(23,531,058)	49,320,600	27,469,400
Nonoperating Revenues (Expenses):					
Property Taxes Ad-Valorem	774,568	815,554	843,301	888,973	927,672
Rental revenue	165,282	246,196	172,665	181,491	188,183
Investment Income <sup>(1)</sup>	51,881	76,804	147,447	75,113	124,001
Interest Expense <sup>(2)</sup>	(185,655)	(132,375)	(397,680)	(706,683)	(790,753)
Grants, Rebates, Reimbursements <sup>(3)</sup>	56,564	218,824	188,701	152,710	59,653
Other Nonoperating revenue	-	-	-	-	-
Total Nonoperating Revenues (Expenses), Net	862,640	1,225,003	954,434	591,604	508,756
<b>NET INCOME BEFORE CAPITAL CONTRIBUTIONS</b>	25,563,269	25,989,241	(22,576,624)	49,912,204	27,978,156
<b>CAPITAL CONTRIBUTIONS</b>	1,648,257	-	577,471	85,821	45,853
<b>CHANGES IN NET POSITION</b>	<u>\$ 27,211,526</u>	<u>\$ 25,989,241</u>	<u>\$ (21,999,153)</u>	<u>\$ 49,998,025</u>	<u>\$ 28,024,009</u>
<b>NET POSITION BY COMPONENT</b>					
Net Investment in Capital Assets Restricted:	\$ 57,218,606	\$ 52,204,625	\$ 57,306,311	\$ 57,194,565	\$ 60,300,968
Debt Service <sup>(4)</sup>	2,772,564	2,285,068	1,602,958	1,602,958	1,602,958
Capital Projects <sup>(5)</sup>	83,771	571,268	577,471	23,081	45,853
Total Restricted	2,856,335	2,856,336	2,180,429	1,626,039	1,648,811
Unrestricted <sup>(6)</sup>	9,522,511	14,415,785	10,047,708	10,136,417	1,008,665
Total Net Position	<u>\$ 69,597,452</u>	<u>\$ 69,476,746</u>	<u>\$ 69,534,448</u>	<u>\$ 68,957,021</u>	<u>\$ 62,958,444</u>

(1) Refund to Golden Rain Foundation the Sinking fund balance in connection with the agreement that ETWD to provide Disinfected Tertiary Recycled Water for irrigation within the Laguna Woods Village Golf Course.

(2) In FY 13/14 the District created a separate line item for cell tower rental income. In the prior years this revenue was included with other nonoperating revenues.

(3) Starting with FY 16/17 expenses included the Baker Water Treatment Plant loan interests with Texas Capital.

(4) The decrease/increase in Unrestricted due to the implementation of GASB Statement No. 75 in recording OPEB liability.

(5) Investment Earnings increase was resulted from higher interests rate earned on short-term LAIF and CAMP investments.

(6) The increase was attributed to a refund from South Orange County Waste Water Authority (SOCWA).

**EL TORO WATER DISTRICT  
CHANGES IN NET POSITION AND NET POSITION BY COMPONENT (CONTINUED)  
LAST TEN FISCAL YEARS**

	Fiscal Year				
	2019	2020	2021	2022	2023
<b>CHANGES IN NET POSITION</b>					
Operating Revenues (See Schedule 2)	\$ 469,391	\$ 571,434	\$ 26,709,979	\$ 27,383,146	\$ 26,410,680
Operating Expenses (See Schedule 3)	26,928,835	27,981,030	(29,244,287)	(30,078,960)	(31,297,713)
Operating Income (Loss)	27,398,226	28,552,464	(2,534,308)	(2,695,814)	(4,887,033)
Nonoperating Revenues (Expenses):					
Property Taxes Ad-Valorem	1,012,576	1,037,335	1,097,589	1,121,250	1,184,149
Rental revenue	204,160	242,187	236,357	227,227	234,439
Investment Income <sup>(1)</sup>	500,786	424,110	21,511	(259,747)	795,655
Interest Expense <sup>(2)</sup>	(753,794)	(777,511)	(758,339)	(1,072,567)	(1,723,651)
Grants, Rebates, Reimbursements <sup>(3)</sup>	910,351	40,917	42,826	323,458	618,262
Other Nonoperating revenue	-	-	-	-	19,323
Total Nonoperating Revenues (Expenses), Net	1,874,079	967,038	639,944	339,621	1,128,177
<b>NET INCOME BEFORE CAPITAL CONTRIBUTIONS</b>	29,272,305	29,519,502	(1,894,364)	(2,356,193)	(3,758,856)
<b>CAPITAL CONTRIBUTIONS</b>	1,985,903	2,894	8,708	8,708	8,919,072
<b>CHANGES IN NET POSITION</b>	<u>\$ 31,258,208</u>	<u>\$ 29,522,396</u>	<u>\$ (1,885,656)</u>	<u>\$ (2,347,485)</u>	<u>\$ 5,160,216</u>
<b>NET POSITION BY COMPONENT</b>					
Net Investment in Capital Assets	\$ 56,355,138	\$ 55,486,027	\$ 56,108,404	\$ 30,402,906	\$ 54,968,271
Restricted:					
Debt Service <sup>(4)</sup>	2,012,004	2,270,150	2,270,150	-	-
Capital Projects <sup>(5)</sup>	64,514	2,895	2,895	26,797,887	-
Total Restricted	2,076,518	2,273,045	2,273,045	26,797,887	-
Unrestricted <sup>(6)</sup>	6,121,392	4,980,208	2,472,175	1,462,646	8,855,384
Total Net Position	<u>\$ 64,553,048</u>	<u>\$ 62,739,280</u>	<u>\$ 60,853,624</u>	<u>\$ 58,663,439</u>	<u>\$ 63,823,655</u>

(1) Refund to Golden Rain Foundation the Sinking fund balance in connection with the agreement that ETWD to provide Disinfected Tertiary Recycled Water for irrigation within the Laguna Woods Village Golf Course.

(2) In FY 13/14 the District created a separate line item for cell tower rental income. In the prior years this revenue was included with other nonoperating revenues.

(3) Starting with FY 16/17 expenses included the Baker Water Treatment Plant loan interests with Texas Capital.

(4) The decrease/increase in Unrestricted due to the implementation of GASB Statement No. 75 in recording OPEB liability.

(5) Investment Earnings increase was resulted from higher interests rate earned on short-term LAIF and CAMP investments.

(6) The increase was attributed to a refund from South Orange County Waste Water Authority (SOCWA).



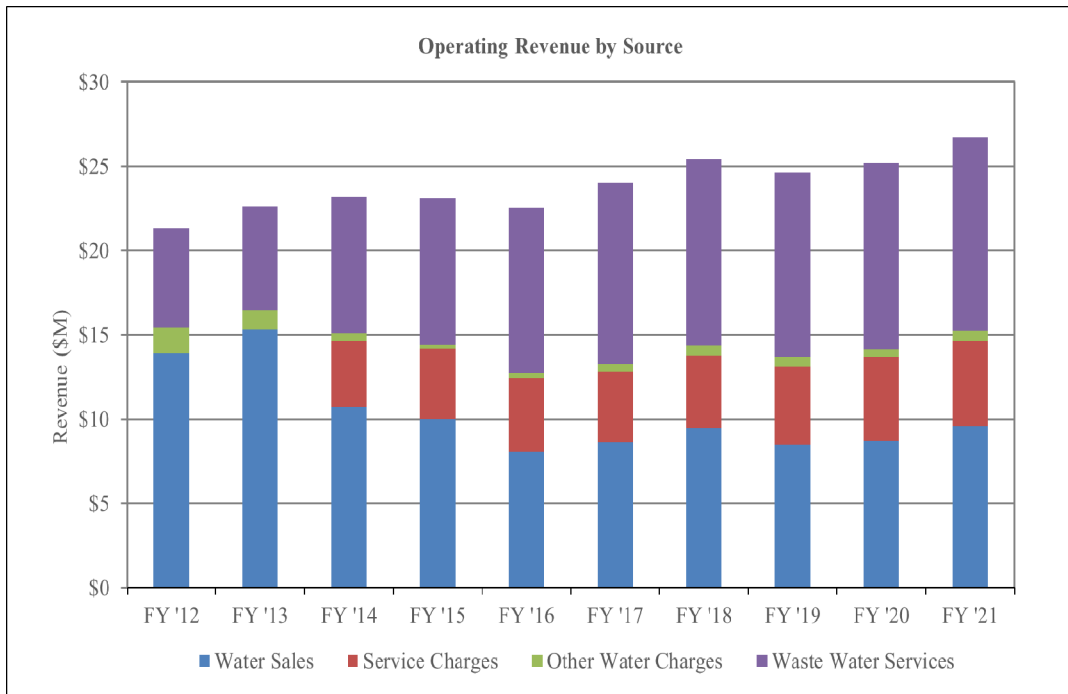
**EL TORO WATER DISTRICT  
OPERATING REVENUES BY SOURCE  
LAST TEN FISCAL YEARS**

Fiscal Year	Water Sales	Service Charges	Other Water Charges	Waste Water Services	Total Operating Revenue
2014	\$ 10,687,396	\$ 3,979,752	\$ 443,673	\$ 8,077,870	\$ 23,188,691
2015	9,998,985	4,183,699	216,108	8,725,408	23,124,200
2016	8,069,726	4,381,402	294,329	9,771,324	22,516,781
2017	8,635,462	4,177,505	459,926	10,759,981	24,032,874
2018	9,459,453	4,325,454	574,644	11,085,710	25,445,261
2019	8,474,791	4,623,068	610,360	10,955,238	24,663,457
2020	8,705,986	4,977,611	469,391	11,044,342	25,197,330
2021	9,571,562	5,070,326	571,434	11,496,657	26,709,979
2022	9,212,404	5,430,565	559,954	12,180,223	27,383,146
2023	9,336,697	13,312,690	3,152,552	608,741	26,410,680

**Other Water Charges - by Category**

Fiscal Year	Standby Charge	Reimbursement	Other	Total Other Water Charges
2014	\$ 10,623	\$ 124,353	\$ 308,697	\$ 443,673
2015	4,818 (1)	116,957	94,333	216,108
2016	3,292	233,000	58,037	294,329
2017	1,525	331,179	127,222	459,926
2018	418	403,445	170,781	574,644
2019	247	383,810	226,303	610,360
2020	63	328,310	141,018	469,391
2021	-	401,225	170,209	571,434
2022	-	446,564	113,390	559,954
2023	-	308,774	299,967	608,741

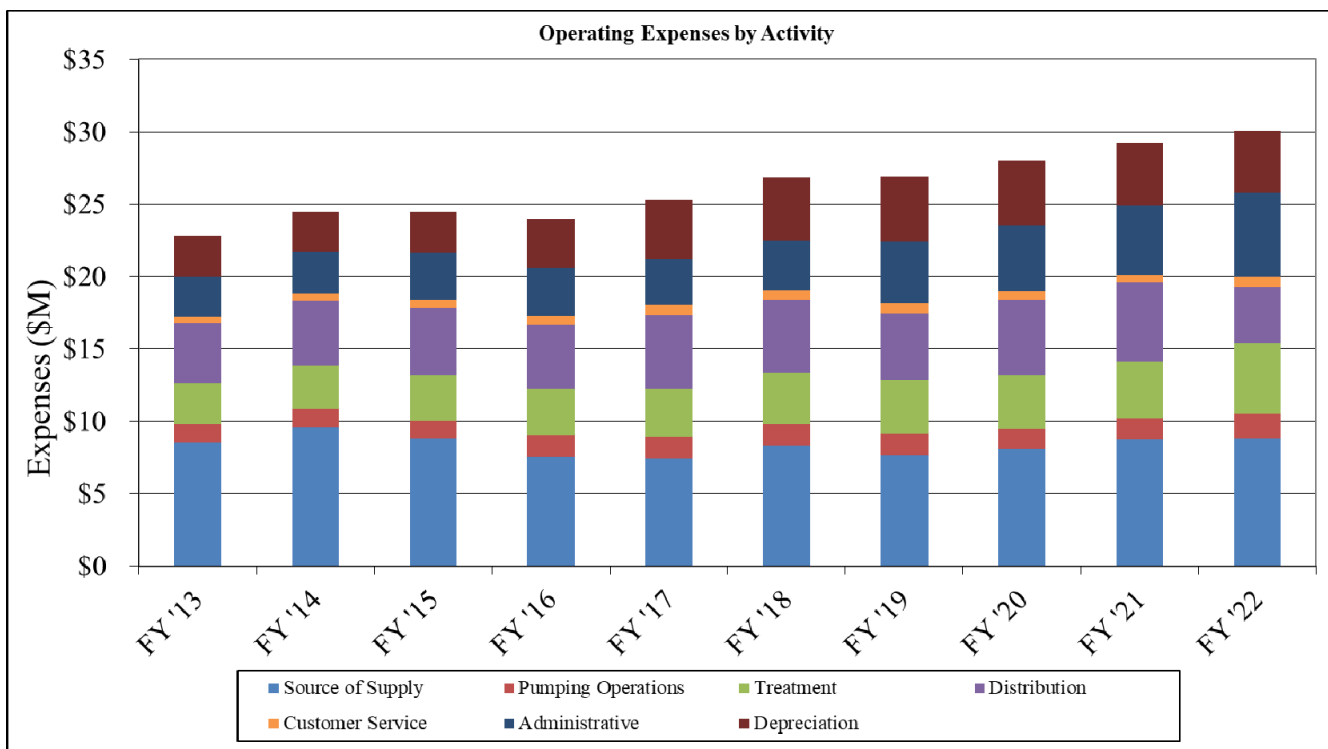
(1) The Standby Charge was for the Water Recycling Project, and collections of this fee were not needed after FY 12/13.



Source: 2011 to 2020 Audited Financial Statements.

**EL TORO WATER DISTRICT  
OPERATING EXPENSES BY ACTIVITY  
LAST TEN FISCAL YEARS**

Fiscal Year	Source of Supply	Operations	Other Operations	General and Administrative	Depreciation	Total Operating Expenses
2014	\$ 9,584,718	\$ 8,739,512	\$ 465,163	\$ 2,913,731	\$ 2,781,397	\$ 24,484,521
2015	8,771,110	9,096,117	516,361	3,255,140	2,831,181	24,469,909
2016	7,555,626	9,098,822	592,405	3,365,722	3,378,409	23,990,984
2017	7,435,534	9,877,746	694,479	3,211,224	4,068,743	25,287,726
2018	8,294,019	10,094,015	686,217	3,434,736	4,350,053	26,859,040
2019	7,650,468	9,785,781	720,714	4,305,441	4,466,431	26,928,835
2020	8,085,299	10,302,552	603,473	4,506,099	4,483,607	27,981,030
2021	8,763,806	10,827,016	533,039	4,774,869	4,345,557	29,244,287
2022	8,866,148	10,443,014	662,834	5,819,185	4,287,779	30,078,960
2023	8,593,609	12,295,263	625,767	5,363,512	4,419,562	31,297,713

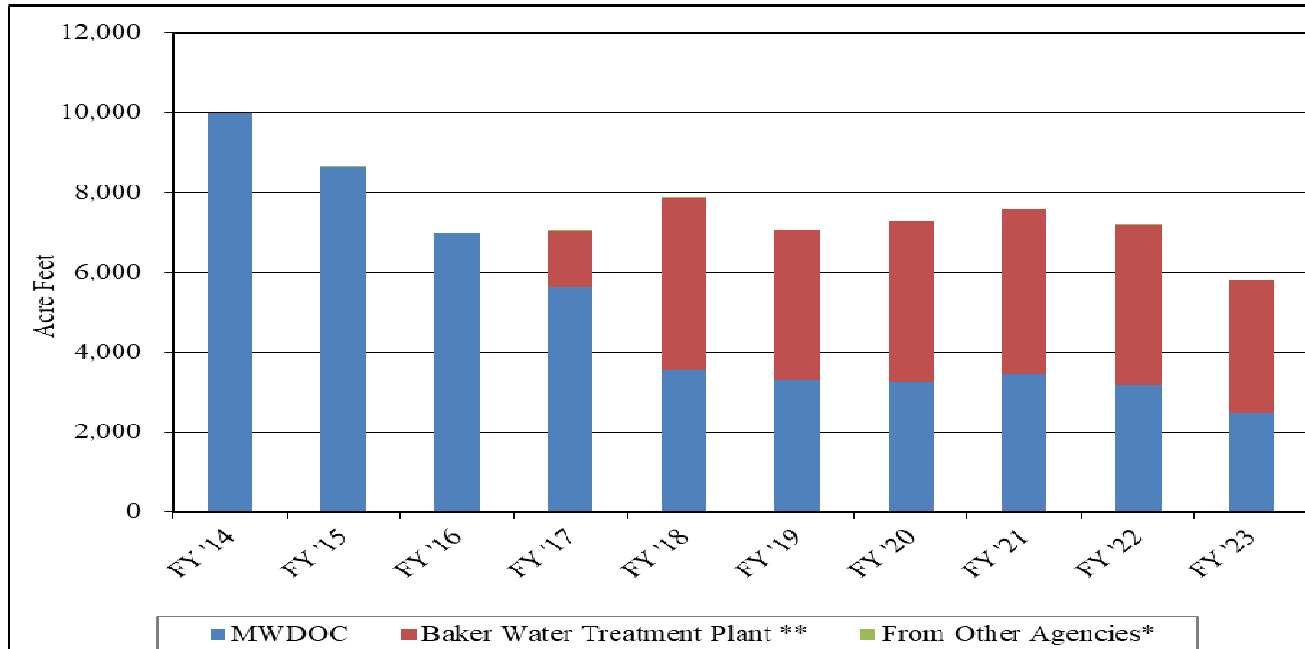


Source: 2011 to 2020 Audited Financial Statements.

**EL TORO WATER DISTRICT  
SOURCE OF WATER FOR SALES  
LAST TEN FISCAL YEARS**

Source of Water for Sales (AF)

Fiscal Year	MWDOC	From The Baker WTP **	From Other Agencies*	Total Production
2014	9,986	-	-	9,986
2015	8,631	-	19	8,650
2016	6,967	-	8	6,976
2017	5,616	1,417	1	7,034
2018	3,559	4,312	3	7,874
2019	3,297	3,754	-	7,051
2020	3,245	4,032	-	7,277
2021	3,460	4,121	-	7,581
2022	3,171	4,004	1	7,176
2023	2,471	3,338	131	5,939



**Note:** See Schedule 2 "Operating Revenue by Source" for information regarding water revenues.

\* The District has inter-connections with Moulton Niguel Water District, Irvine Ranch Water District, and Santa Margarita Water District. Water is purchased from one of the three agencies in the case of repairs or upgrades to the District's infrastructure, which would necessitate a temporary alternate source of water.

\*\* The Baker Water Treatment Plant (WTP) is a joint regional project by five South Orange County water districts, located in the City of Lake Forest, provides 28.1 million gallons per day (mgd) of drinking water. The District has the capacity right of 3.2 mgd.

**EL TORO WATER DISTRICT  
WATER OPERATION RATES AND CHARGES  
LAST TEN FISCAL YEARS**

Water Rates <sup>(1)</sup>						
Rate per CCF <sup>(2)</sup>						Rate per AF
Fiscal Year	Tier 1	Tier 2	Tier 3	Tier 4		Commercial/ Industrial
2014	\$ 2.19	\$ 2.59	\$ 4.91	\$ 6.47		\$ 2.42
2015	2.34	2.68	5.04	7.04		2.63
2016	2.46	2.83	5.61	7.18		2.79
2017	2.46	2.83	5.61	7.18		2.79
2018	2.52	2.91	6.08	7.82		2.89
2019	2.52	2.91	6.08	7.82		2.89
2020	2.58	2.97	6.14	7.88		2.95
2021	2.65	3.04	6.21	7.95		3.02
2022	2.72	3.11	6.78	8.52		3.14
2023	2.82	3.18	6.50	8.35		3.31

Monthly Water Service Charge					
Fiscal Year	5/8" Meter	3/4" Meter	1" Meter	1 1/2" Meter	2" Meter
2014	\$ 9.31	\$ 12.42	\$ 18.61	\$ 34.12	\$ 65.15
2015	9.98	13.31	19.95	36.56	69.81
2016	9.98	13.31	19.95	36.56	69.81
2017	10.93	14.58	21.86	40.06	76.48
2018	11.80	15.82	23.85	43.92	84.07
2019	12.96	17.37	26.20	48.25	92.36
2020	14.14	18.99	28.70	52.98	101.52
2021	15.17	20.33	30.66	56.48	108.11
2022	16.56	22.24	33.60	62.00	118.80
2023	17.46	23.62	35.93	66.70	128.25

Monthly Water Capital Replacement and Refurbishment (CR&R) Charge					
Fiscal Year	5/8" Meter	3/4" Meter	1" Meter	1 1/2" Meter	2" Meter
2014	\$ 4.66	\$ 4.66	\$ 7.78	\$ 18.91	\$ 47.47
2015	4.66	4.66	7.78	18.91	47.47
2016	4.66	4.66	7.78	18.91	47.47
2017	4.66	4.66	7.78	18.91	47.47
2018	4.66	4.66	7.78	18.91	47.47
2019	4.66	4.66	7.78	18.91	47.47
2020	4.66	4.66	7.78	18.91	47.47
2021	4.66	4.66	7.78	18.91	47.47
2022	4.66	4.66	7.78	18.91	47.47
2023	5.09	5.09	8.50	20.65	51.84

Notes:

(1) The District is required to follow the rules of Proposition 218 when raising or adjusting its rates.

For more information, go to [http://www.lao.ca.gov/1996/120196\\_prop\\_218/understanding\\_prop218\\_1296.html](http://www.lao.ca.gov/1996/120196_prop_218/understanding_prop218_1296.html)

(2) CCF = 100 Cubic Feet = 748 gallons

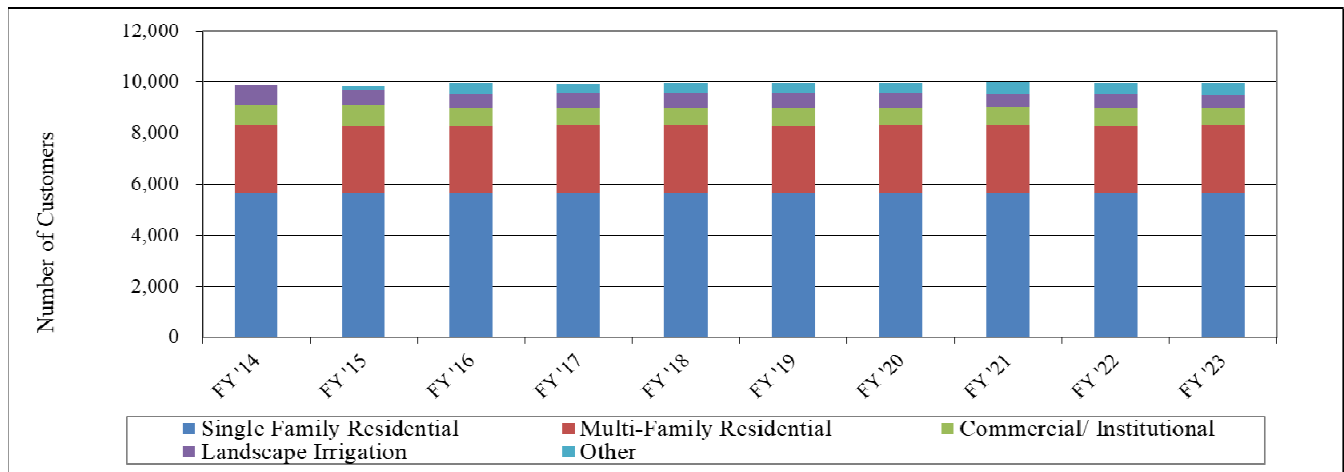
For more information on the District's rate structure, visit <http://etwd.com/governance/rate-structure/>

# EL TORO WATER DISTRICT SEWER OPERATION RATES AND CHARGES LAST TEN FISCAL YEARS

Sewer Rates by Customer Class										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential Rates (monthly charge per EDU):										
Residential Unrestricted	\$ 18.99	\$ 20.50	\$ 22.02	\$ 23.11	\$ 23.63	\$ 24.30	\$ 24.30	\$ 24.30	\$ 25.76	\$ 34.67
Multi-Family Restricted	15.06	16.26	17.46	18.33	18.74	19.28	19.28	19.28	20.44	16.47
Multi-Family Unrestricted	17.90	19.33	20.76	21.79	22.28	22.92	22.92	22.92	24.30	25.34
Commercial Rates (per ccf of water used):										
Animal Kennel / Hospital	\$ 3.11	\$ 3.36	\$ 3.61	\$ 3.79	\$ 3.88	\$ 3.99	\$ 3.99	\$ 3.99	\$ 4.23	Medium Strength
Car Wash	3.09	3.34	3.59	3.77	3.86	3.97	3.97	3.97	4.21	Medium Strength
Department / Retail Store	3.11	3.36	3.61	3.79	3.88	3.99	3.99	3.99	4.23	Medium Strength
Dry Cleaners	2.72	2.94	3.16	3.32	3.40	3.50	3.50	3.50	3.71	Medium Strength
Golf Course / Camp / Park	2.71	2.93	3.15	3.31	3.39	3.49	3.49	3.49	3.70	Medium Strength
Health Spa	3.10	3.35	3.60	3.78	3.87	3.98	3.98	3.98	4.22	Medium Strength
Hospital / Convalescent Home	2.72	2.94	3.16	3.32	3.40	3.50	3.50	3.50	3.71	Medium Strength
Hotel	4.71	5.09	5.47	5.74	5.87	6.04	6.04	6.04	6.41	Medium Strength
Market	6.17	6.67	7.17	7.53	7.70	7.92	7.92	7.92	8.40	High Strength
Mortuary	6.15	6.64	7.14	7.50	7.67	7.89	7.89	7.89	8.37	High Strength
Nursery / Greenhouse	2.76	2.98	3.20	3.36	3.44	3.54	3.54	3.54	3.76	Medium Strength
Professional / Financial Office	3.11	3.36	3.61	3.79	3.88	3.99	3.99	3.99	4.23	Medium Strength
Public Institution	3.05	3.30	3.55	3.73	3.82	3.93	3.93	3.93	4.17	Medium Strength
Repair / Service Station	3.10	3.35	3.60	3.78	3.87	3.98	3.98	3.98	4.23	Medium Strength
Restaurant	2.93	3.17	3.41	3.58	3.66	3.77	3.77	3.77	4.00	Medium Strength
Schools	3.21	3.47	3.73	3.92	4.01	4.13	4.13	4.13	4.38	Medium Strength
Theater	3.11	3.36	3.61	3.79	3.88	3.99	3.99	3.99	4.23	Medium Strength
Warehouse / Storage	2.45	2.65	2.85	3.00	3.07	3.16	3.16	3.16	3.35	Low Strength
Basic Commercial	2.72	2.94	3.16	3.32	3.40	3.50	3.50	3.50	3.71	Medium Strength
Commercial (Flow Strength) *										
Low Strength	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.10
Medium Strength	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.07
High Strength	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.49
Restaurants	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.15
Monthly Sewer Capital Replacement and Refurbishment (CR&R) Charge										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential Charge (Per EDU):										
Single Family	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 7.09
Multi-Family Restricted	3.95	3.95	3.95	3.91	3.91	3.91	3.91	3.91	3.91	3.37
Multi-Family Unrestricted	4.69	4.69	4.69	4.65	4.65	4.65	4.65	4.65	4.65	5.18
Commercial (per Meter):										
5/8" Meter	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	\$ 4.34	Flow Charge
3/4" Meter	7.34	7.34	7.34	7.34	7.34	7.34	7.34	7.34	7.34	Flow Charge
1" Meter	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	Flow Charge
1 1/2" Meter	24.07	24.07	24.07	24.07	24.07	24.07	24.07	24.07	24.07	Flow Charge
2" Meter	70.96	70.96	70.96	70.96	70.96	70.96	70.96	70.96	70.96	Flow Charge
Public Authority (per Meter):										
1" Meter	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	\$ 4.93	Flow Charge
1 1/2" Meter	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	Flow Charge
2" Meter	39.71	39.71	39.71	39.71	39.71	39.71	39.71	39.71	39.71	Flow Charge

# **EL TORO WATER DISTRICT WATER CUSTOMERS BY TYPE \* LAST TEN FISCAL YEARS**

Number of Customers by Type						
As of June 30	Single Family Residential	Multi-Family Residential	Commercial/ Institutional	Landscape Irrigation	Other	Total
2014	5,683	2,610	774	813	-	9,880
2015	5,662	2,610	785	583	187	9,827
2016	5,667	2,612	709	526	439	9,953
2017	5,668	2,616	694	559	406 (1)	9,943
2018	5,668	2,618	700	555	407	9,948
2019	5,665	2,614	706	556	408	9,949
2020	5,667	2,615	707	554	434	9,977
2021	5,670	2,617	707	511	478	9,983
2022	5,666	2,614	705	510	482	9,977
2023	5,667	2,618	692	508	479	9,964



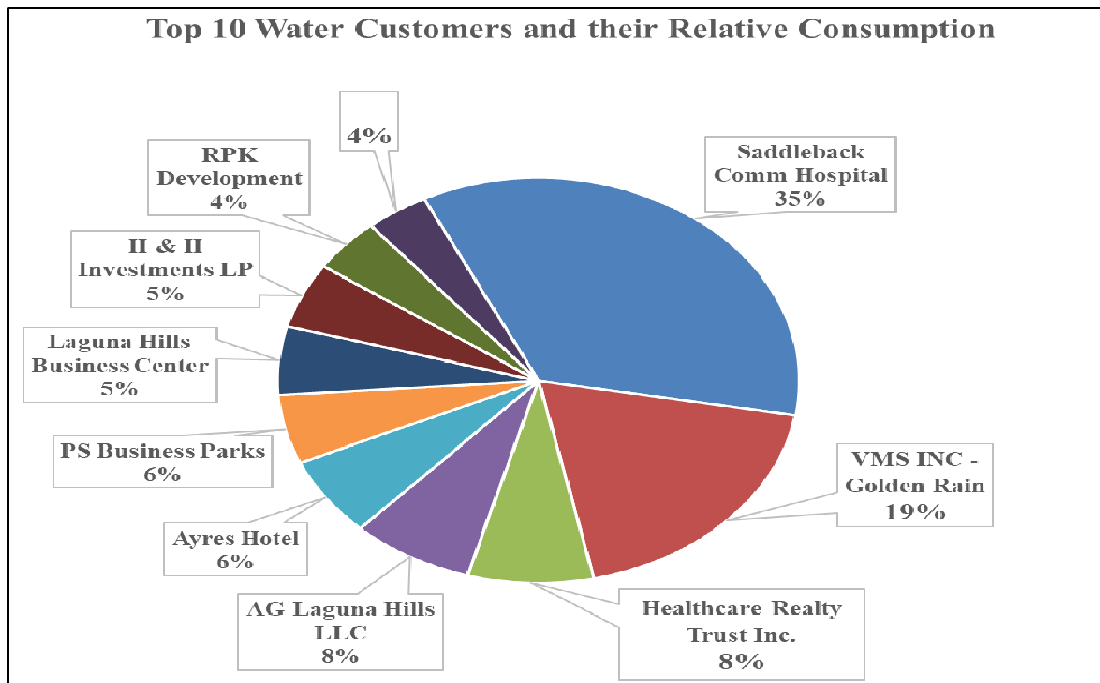
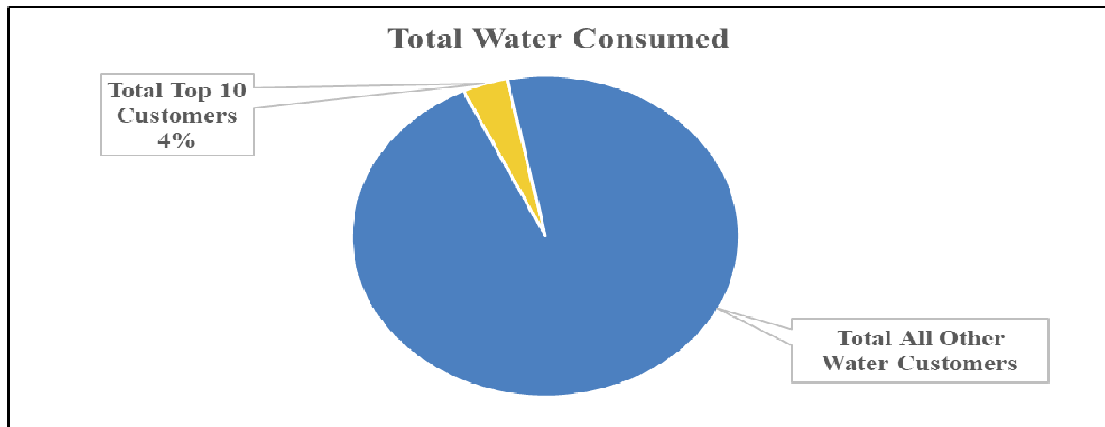
(1) The District did not track "Other" connections in total prior to FY 14/15.

\* The District is completely built out and has had 8,950 sewer connections for the past 10 years.

# **EL TORO WATER DISTRICT TOP TEN WATER CUSTOMERS LAST TEN FISCAL YEARS**

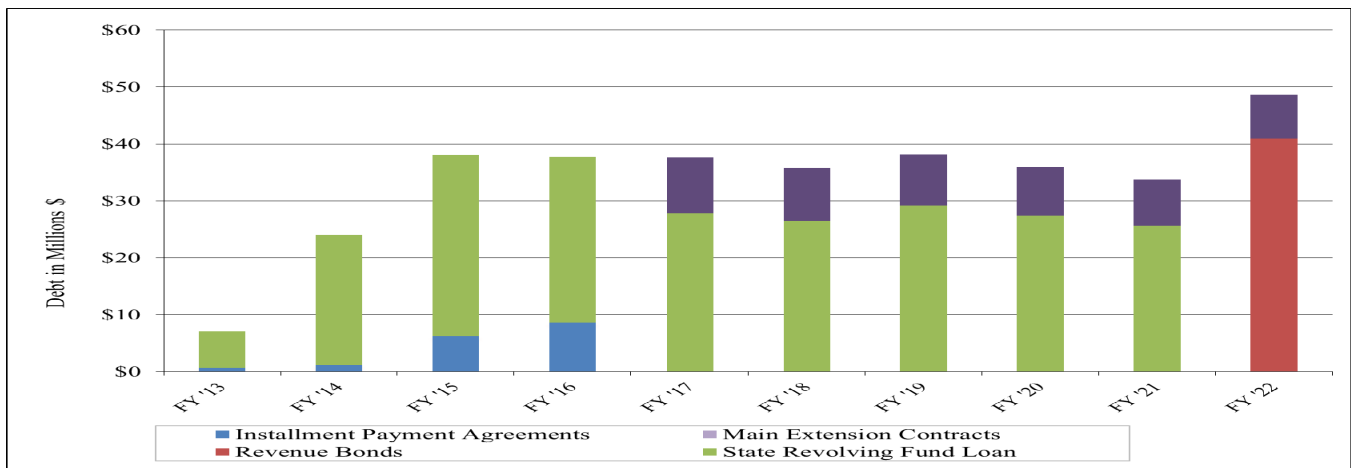
Customer	FY '14		Customer	FY '23	
	Annual Usage (HCF)	Percent of Total		Annual Usage (HCF)	Percent of Total
Saddleback Comm Hospital	53,935	1.32%	Saddleback Comm Hospital	38,055	1.32%
Country Villa Laguna Hills	12,773	0.31%	VMS INC - Golden Rain	20,503	0.71%
VMS, Inc - Golden Rain	11,288	0.28%	Healthcare Realty Trust Inc.	8,484	0.29%
PS Business Parks	11,221	0.27%	AG Laguna Hills LLC	8,244	0.29%
MGP Fund Laguna Hills, LLC	7,507	0.18%	Ayres Hotel	6,944	0.24%
Westridge Commercial	6,560	0.16%	PS Business Parks	6,001	0.21%
RPK Development	6,454	0.16%	Laguna Hills Business Center	5,939	0.21%
Ayres Hotel	6,158	0.15%	H & H Investments LP	5,702	0.20%
Laguna Hills Business Center	5,835	0.14%	RPK Development	4,698	0.16%
Aura Associates	5,443	0.13%	CPSC Inc./Commercial Property Services	4,238	0.15%
Total Top 10 Customers	127,174	3.11%	Total Top 10 Customers	108,808	3.78%
Total All Other Water Customers	3,966,668	96.89%	Total All Other Water Customers	2,768,799	96.22%
Total Water Consumed	4,093,842	100.00%	Total Water Consumed	2,877,607	100.00%

HCF = 100 cubic feet



# **EL TORO WATER DISTRICT OUTSTANDING DEBT BY TYPE LAST TEN FISCAL YEARS**

Fiscal Year	Certificates of Participation	Installment Payment Agreements	State Revolving Fund Loan	Main Extension Contracts	Private Placement	Total Debt	Total Debt per Capita	Total Debt as % of Personal Income
2014	-	1,123,184 (1)	22,823,592 (2)	6,180	-	23,952,956	494	0.86%
2015	-	6,215,863 (1)	31,873,740 (2)	6,180	-	38,095,783	784	1.28%
2016	-	8,562,088 (1)	29,159,616 (2)	6,180	-	37,727,884	778	1.24%
2017	-	-	27,827,408	6,180	9,715,035	37,548,623	766	1.17%
2018	-	-	26,470,867	6,180	9,331,939 (1)	35,808,986	736	1.06%
2019	-	-	29,175,315	6,180	8,936,967	38,118,462	791	1.10%
2020	-	-	27,415,579	6,180	8,529,750	35,951,509	750	1.01%
2021	-	-	25,637,656	6,180	8,109,910	33,753,746	701	0.94%
2022	40,905,000	-	-	-	7,677,055	48,582,055	1,006	1.35% (3)
2023	39,800,000	-	-	-	7,230,781	47,030,781	916	1.13% (3)



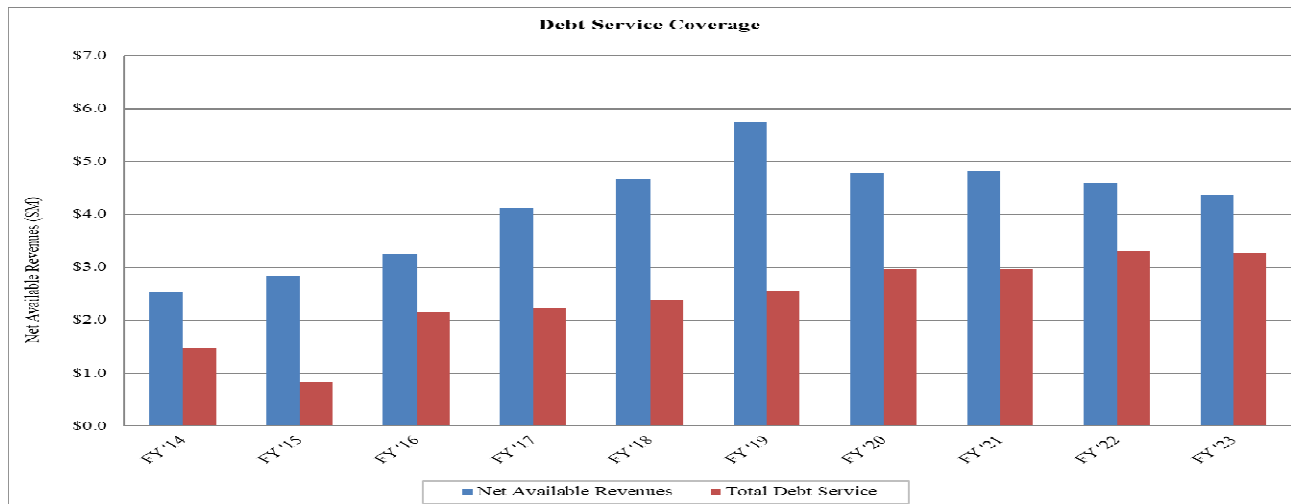
## **Notes:**

- (1) In Dec 2013 the District entered into an agreement for the Baker Water Treatment Plant with five other entities. Additions in 2013 and 2014 were \$1,123,184 and \$5,092,679 respectively. This project was completed and refinanced in December 2016 with Texas Capital Bank for a lower interest rate.
- (2) In 2013 the District entered into a loan agreement with the State Water Resources Control Board for the Recycled Water Treatment Plan Project. Additions in 2013 and 2014 were \$16,995,763 and \$9,741,814 respectively. Interest rate on the loan is 1.7% per annum.
- (3) Personal Income data is not available for 2022 & 2023. The Bureau of Economic Analysis typically releases this information in late November of the following year.



# EL TORO WATER DISTRICT DEBT SERVICE COVERAGE LAST TEN FISCAL YEARS

Fiscal Year	Net Revenue			Debt Service			
	Total Revenues	Operating Expenses <sup>(1)</sup>	Net Available Revenues	Principal	Interest	Total Debt Service	Coverage Coverage Ratio
2014	\$ 24,236,986	\$ 21,703,124	\$ 2,533,862	\$ 1,299,923	\$ 179,490	\$ 1,479,413	1.71
2015	24,481,578	21,638,728	2,842,850	691,667	137,746	829,413	3.43
2016	23,868,895	20,612,575	3,256,320	1,697,913	459,070	2,156,983	1.51
2017	25,331,161	21,218,983	4,112,178	1,532,173	691,970	2,224,143	1.85
2018	26,744,770	22,068,431	4,676,339	1,739,638	655,145	2,394,783	1.95
2019	27,291,330	21,549,152	5,742,178	1,776,305	769,061	2,545,366	2.26
2020	26,941,879	22,155,520	4,786,359	2,166,953	787,460	2,954,413	1.62
2021	28,108,262	23,283,264	4,824,998	2,197,763	756,649	2,954,412	1.63
2022	28,795,334	24,195,620	4,599,714	2,242,878	1,072,567	3,315,445	1.39
2023	29,262,508	24,893,841	4,368,667	1,551,274	1,723,651	3,274,925	1.33

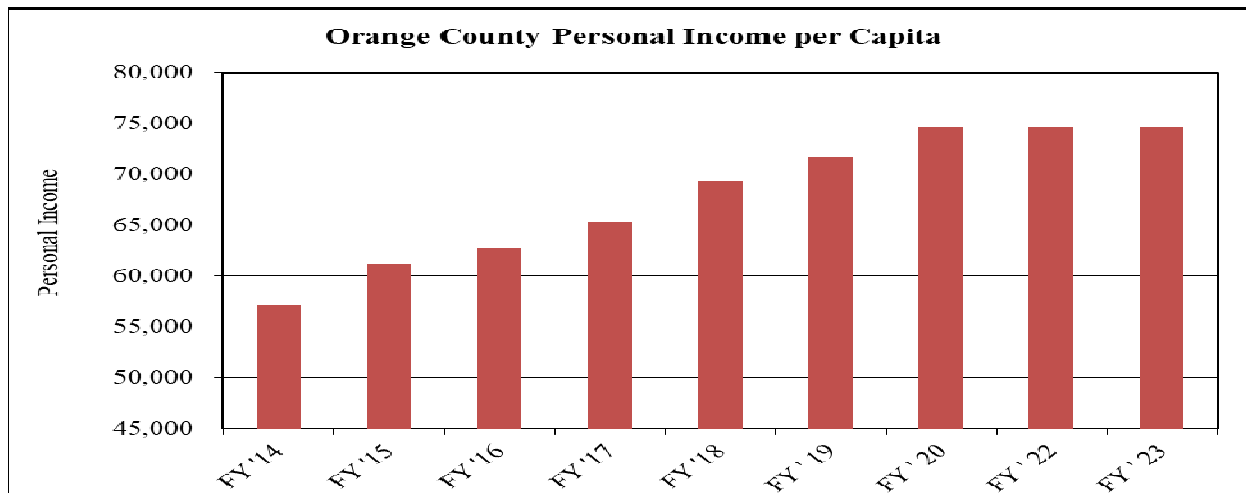
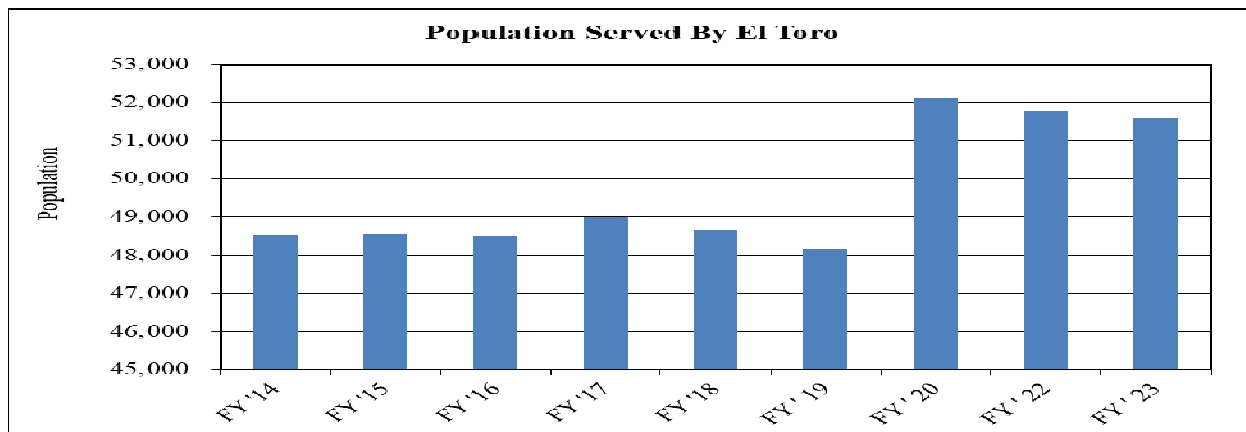


## Notes:

(1) Operating expenses less depreciation, amortization, and OPEB Accounting Charges.

**EL TORO WATER DISTRICT  
DEMOGRAPHICS AND ECONOMIC STATISTICS – COUNTY OF ORANGE  
LAST TEN FISCAL YEARS**

Calendar Year	Population Served by El Toro <sup>1</sup>	Orange County		
		Personal Income <sup>2</sup> (thousands \$)	Personal Income per Capita	Unemployment Rate at 6/30
2014	48,529	\$ 179,141,029	\$ 57,110	5.5%
2015	48,579	193,358,936	61,178	4.5%
2016	48,498	199,441,555	62,763	4.3%
2017	49,003	208,653,019	65,400	3.8%
2018	48,657	220,684,684	69,268	3.3%
2019	48,174	227,732,561	71,711	3.0%
2020	47,911	227,732,561	71,711	13.6%
2021	48,135	227,732,561	71,711	6.4%
2022 <sup>(3)</sup>	48,303	236,303,451	74,618	2.9%
2023 <sup>(3)</sup>	51,343	256,700,438	81,034	3.7%



Source: State of California, Employment Development Department, <http://www.edd.ca.gov>

Source: Municipal Water District of Orange County (MWD OC)

N/A - Data not available for time period

1 The district population data is estimated by the Center for Demographic Research (CDR) at California State University Fullerton.

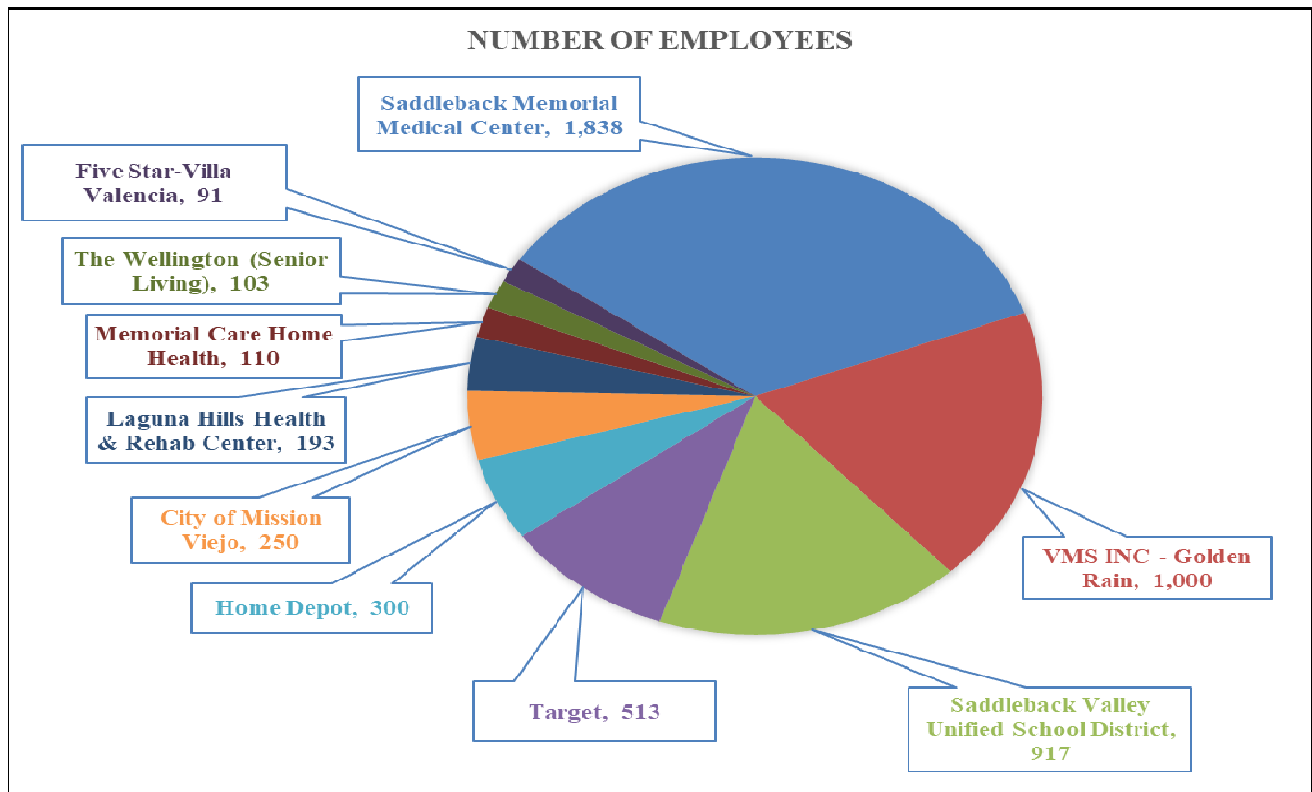
2 Data from the Bureau of Economic Analysis, <http://www.bea.gov>

3 The income data for 2022 and 2023 was not available at the time this report was published

**EL TORO WATER DISTRICT  
PRINCIPAL EMPLOYERS  
CURRENT FISCAL YEAR**

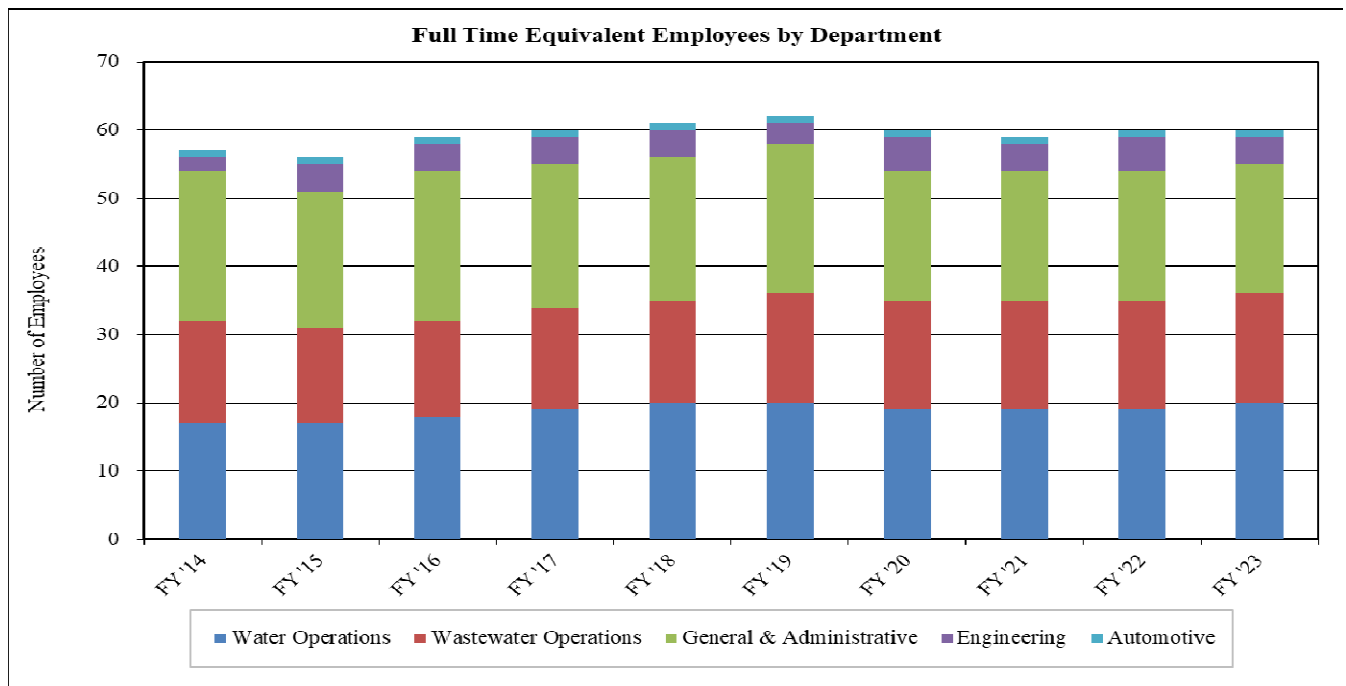
Employer	Number of Employees at 6/30/2023	Percent of Total
Saddleback Memorial Medical Center	1,838	34.58 %
VMS INC - Golden Rain	1,000	18.81
Saddleback Valley Unified School District	917	17.25
Target	513	9.65
Home Depot	300	5.64
City of Mission Viejo	250	4.70
Laguna Hills Health & Rehab Center	193	3.63
Memorial Care Home Health	110	2.07
The Wellington (Senior Living)	103	1.94
Five Star-Villa Valencia	91	1.71
<b>Total Principal Employers</b>	<b>5,315</b>	<b>100.00 %</b>

Service Area: Covers about 5,430 acres including all of the city of Laguna Woods (36%), and portions of the cities of Laguna Hills (21%), Mission Viejo (12%), Lake Forest (27%) and Aliso Viejo (4%). The district used data from the fiscal year end 2022 ACFRs for the service area cities listed. Nine years prior information comparison is not available since the district started filing for the CAFR from fiscal year end 2016.



**EL TORO WATER DISTRICT  
FULL TIME EQUIVALENT EMPLOYEES BY DEPARTMENT  
LAST TEN FISCAL YEARS**

Fiscal Year	Water Operations	Wastewater Operations	General and Administrative	Engineering	Automotive	Total
2014	17	15	22	2	1	57
2015	17	14	20	4	1	56
2016	18	14	22	4	1	59
2017	19	15	21	4	1	60
2018	20	15	21	4	1	61
2019	20	16	22	3	1	62
2020	19	16	19	5	1	60
2021	19	16	19	4	1	59
2022	19	16	19	5	1	60
2023	20	16	19	4	1	60



**EL TORO WATER DISTRICT  
OPERATING AND CAPACITY INDICATORS  
LAST TEN FISCAL YEARS**

Fiscal Year	Water System			
	Miles of Water Mains	Service Connections	Annual Potable Import (MG)	Average Daily Potable Import (MGD)
2014	170	9,880	3,254	8.91
2015	170	9,828	2,819	7.72
2016	170	9,953	2,273	6.23
2017	170	9,943	2,292	6.28
2018	170	9,948	2,566	7.03
2019	170	9,949	2,298	6.29
2020	170	9,977	2,371	6.50
2021	170	9,983	2,470	6.77
2022	170	9,977	2,338	6.41
2023	170	9,964	1,935	5.30

Fiscal Year	Sewer System			
	Miles of Sewers Lines	Service Connections	Annual Sewerage (MG)	Daily Sewerage (MGD)
2014	114	9,880	1,262	3.46
2015	114	9,828	1,242	3.40
2016	114	9,953	1,096	3.00
2017	114	9,943	1,146	3.14
2018	114	9,948	1,105	3.03
2019	114	9,949	1,122	3.07
2020	114	9,977	1,140	3.12
2021	114	9,983	1,057	2.90
2022	114	9,977	1,169	3.20
2023	114	9,964	1,273	3.49

Fiscal Year	Recycled Water			
	Miles of Recycled Pipe	Service Connections	Annual Production (MG)	Daily Production (MGD)
2014	19	1	142.58	0.39
2015	19	70 (1)	159.56	0.44
2016	19	138 (1)	337.87	0.93
2017	19	210 (1)	462.49	1.27
2018	26 (2)	210	502.12	1.38
2019	26	210	418.89	1.15
2020	26	229	447.32	1.23
2021	26	275	583.58	1.60
2022	26	276	574.81	1.57
2023	26	276	385	1.05

**Notes:**

MG - Millions of Gallons

MGD - Millions of Gallons per Day

(1) The increase in Recycled Connections was a result of Recycled Water Project to transition irrigation customers to recycled water.

(2) The increase in Miles of Recycled Pipe was due to the completion of The Phase II Recycled Water Distribution System Expansion Project.



## STAFF REPORT

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**To: Board of Directors**

**Meeting Date: November 20, 2023**

**From: Vishav Sharma, Chief Financial Officer**

**Subject: October 2023 bills for Approval and Monthly Financial Report**

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

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

- The Statement of Net Position increased in October compared to September as increases in assets in October were greater than increases in liabilities. The District received reimbursements from R6 project participants and also incurred significant construction & water purchase expenses during the month of October. These activities affected the assets and liabilities of the District. Please note that this report contains preliminary numbers.
- The Statement of Revenues, Expenses, and Changes in Net Position indicates the District currently has a year to date positive Change in Net Position of \$3,479,375 at the end of October.
- The Cash and Investments report shows a total of \$19,041,075 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. The 2022 Bond Proceeds cash and investments equaled \$8,258,975. These are the funds available for certain capital projects.
- The total payment summary for the month of October 2023 is \$3,329,184.23. These disbursements include five checks greater than \$50,000, with the total equal to \$2,771,606.29. These expenses exceed the General Manager's purchase authority and Staff recommends the Board approve these checks. In addition, \$646,372.98 in payroll expenses occurred during the month of October. District employees were reimbursed \$1,832.59 for education, meals, and certification related expenses; and Directors were reimbursed \$1,577.43 in travel expenses.

Attachment 1

Cash Sheet for the Month ending October 31, 2023

**EL TORO WATER DISTRICT**  
**Payment Summary**  
**For the month ending October 31, 2023**

<b>CHECK NUMBER</b>	<b>PAYMENT DATE</b>	<b>VENDOR NAME</b>	<b>PAYMENT AMOUNT</b>
10294	10/25/2023	Layfield USA Corp	1,039,646.75
10182	10/09/2023	Municipal Water District of Orange County	893,559.69
10280	10/25/2023	ACWA JPIA	338,879.06
10288	10/25/2023	Dumarc Corporation	294,335.17
10239	10/18/2023	Southern California Edison Company	205,185.62
<b>TOTAL CHECKS OVER \$50,000</b>			<b>\$ 2,771,606.29</b>
<b>TOTAL CHECKS IN REGISTER</b>			<b>\$ 3,329,184.23</b>

**DEBIT TRANSFERS**

10/06/2023	PAYROLL DIRECT DEPOSIT	173,921.96
10/06/2023	FEDERAL DEPOSIT LIABILITY	36,812.91
10/06/2023	SDI & STATE TAX	15,199.41
10/06/2023	WAGE GARNISHMENTS	190.00
10/06/2023	EMPOWER (401K)	68,367.94
10/06/2023	EMPOWER (457)	17,324.95
10/06/2023	HEALTH SAVINGS ACCOUNT	25.00
10/13/2023	PAYROLL BOARD OF DIRECTOR	4,935.31
10/13/2023	SS, MEDICARE, SDI & STATE TAX	1,275.13
10/13/2023	EMPOWER (457)	2,848.98
10/13/2023	HEALTH SAVINGS ACCOUNT	404.00
10/20/2023	PAYROLL DIRECT DEPOSIT	180,686.38
10/20/2023	FEDERAL DEPOSIT LIABILITY	38,575.59
10/20/2023	SDI & STATE TAX	16,065.18
10/20/2023	WAGE GARNISHMENTS	190.00
10/20/2023	EMPOWER (401K)	69,137.23
10/20/2023	EMPOWER (457)	18,383.92
10/20/2023	HEALTH SAVINGS ACCOUNT	25.00
10/31/2023	BANK FEES	2,004.09
<b>TOTAL INTERBANK WIRES / DEBIT TRANSFERS</b>		<b>\$ 646,372.98</b>

**TOTAL DISBURSEMENTS \$ 3,975,557.21**

**REIMBURSEMENTS TO ETWD EMPLOYEES**

<b>CHECK NUMBER</b>	<b>PAYMENT DATE</b>	<b>PAYEE (DESCRIPTION)</b>	<b>PAYMENT AMOUNT</b>
10210	10/13/2023	Daniel Lopez (Certificate Prep Course, Exam & Renewal)	459.99
10190	10/09/2023	Rick Brown (Work Boots)	344.70
10258	10/19/2023	Jeff Webster (Water Treatment Review)	299.90
10264	10/19/2023	Rick Brown (Distribution Course)	250.00
10277	10/19/2023	Vincent Coppola (Certification)	205.00
10215	10/13/2023	Jeff Webster (Certification)	90.00
10206	10/13/2023	Cheyne Madero (Certification)	70.00
10257	10/19/2023	Jake Knoke (Certification)	60.00
10228	10/13/2023	Rick Brown (Class A Driver's Licence)	53.00
<b>TOTAL CHECKS TO EMPLOYEES</b>			<b>\$ 1,832.59</b>

**REINBURSEMENTS TO ETWD DIRECTORS**

<b>CHECK NUMBER</b>	<b>PAYMENT DATE</b>	<b>PAYEE (DESCRIPTION)</b>	<b>PAYMENT AMOUNT</b>
10180	10/09/2023	Mark Monin (Travel Expenses)	1,453.26
10221	10/13/2023	Michael Gaskins (Travel Expenses)	63.95
10217	10/13/2023	Kathryn Freshley (Travel Expenses)	60.22
<b>TOTAL CHECKS TO DIRECTORS</b>			<b>\$ 1,577.43</b>



Attachment 2

Statement of Net Position for the October, 2023

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

	6/30/2023 Ending	9/30/2023 Interim	10/31/2023 Interim	Change
<b>Assets</b>				
Current Assets				
Cash & Cash Equivalents	10,138,838	10,693,044	11,528,808	835,764
Investments	16,688,703	15,659,771	15,620,377	(39,394)
Accounts Receivable	6,342,616	6,129,746	8,004,616	1,874,870
Materials & Supply Inventory	260,700	260,700	260,700	-
Prepaid Expenses	200,587	233,276	440,823	207,547
Restricted - Cash & Cash Equivalents	4,386,674	141,488	141,525	37
Current Assets - Sub-total	38,018,118	33,118,026	35,996,850	2,878,824
Non-Current Assets				
Lease Receivable	361,011	361,011	361,011	-
Land & Easements	7,451,585	7,451,585	7,451,585	-
Capacity Rights	342,382	342,382	342,382	-
Capital Assets				
Water System	37,781,450	37,781,450	37,781,450	-
Wastewater System	57,334,500	57,334,500	57,334,500	-
Recycled System	55,454,389	55,454,389	55,454,389	-
Combined Assets	15,919,853	15,919,853	15,919,853	-
Construction in Progress	24,581,587	26,830,235	29,207,917	2,377,682
Accumulated Depreciation	(92,651,512)	(93,697,517)	(94,046,187)	(348,670)
Non-Current Assets - Sub-total	106,575,244	107,777,888	109,806,900	2,029,012
<b>Total Assets</b>	<b>144,593,362</b>	<b>140,895,913</b>	<b>145,803,749</b>	<b>4,907,836</b>
<b>Deferred Outflows of Resources</b>				
OPEB Deferred Outflow of Resources	3,493,769	3,493,769	3,493,769	-
<b>Liabilities</b>				
Current Liabilities				
Accounts Payable & Accrued Expenses	6,365,798	2,949,220	4,894,179	1,944,959
Accrued Salaries & Related Payables	150,618	(45,964)	(75,763)	(29,799)
Customer Deposits	49,231	14,950	14,050	(900)
Accrued Interest Payable	162,721	726,250	915,932	189,682
Long Term Liabilities - Due in One Year				
Compensated Absences	182,171	182,171	182,171	-
Loans Payable	1,846,288	1,846,288	1,846,288	-
Current Liabilities - Sub-total	8,756,827	5,672,915	7,776,857	2,103,942
Non-Current Liabilities				
Compensated Absences	1,431,790	1,431,791	1,431,791	-
Other Post-Employment Benefits Liability	11,050,192	11,050,192	11,050,192	-
Loans Payable	53,316,865	52,073,850	52,027,845	(46,005)
Non-Current Liabilities - Sub-total	65,798,847	64,555,832	64,509,827	(46,005)
<b>Total Liabilities</b>	<b>74,555,674</b>	<b>70,228,747</b>	<b>72,286,684</b>	<b>2,057,937</b>
<b>Deferred Inflows of Resources</b>				
Deferred Amounts from Leases	583,336	583,336	583,336	-
Deferred Amounts from OPEB	9,124,466	9,124,468	9,124,468	-
Total Deferred Inflows of Resources	9,707,802	9,707,804	9,707,804	-
<b>Net Position</b>				
Net Investment in Capital Assets	54,965,376	53,857,750	55,932,767	2,075,017
Restricted - Capital Projects	2,895	2,895	2,895	-
Restricted - Debt Service	-	8,228,052	8,228,052	-
Unrestricted	8,855,384	2,364,434	3,139,316	774,882
<b>Total Net Position</b>	<b>63,823,655</b>	<b>64,453,131</b>	<b>67,303,030</b>	<b>2,849,899</b>

Attachment 3

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

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

	District		Water System		Wastewater System		Recycled System		Capital Improvements	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Operating Revenues										
Commodity Supply Charges	\$ 11,989,100	\$ 4,267,634	\$ 10,027,100	\$ 3,465,076	\$ -	\$ -	\$ 1,962,000	\$ 802,558	\$ -	\$ -
Service Provision Charges	14,490,200	4,678,130	4,691,400	1,521,162	9,350,200	3,017,557	448,600	139,411	-	-
Capital Facilities Charge	4,093,900	1,245,994	-	-	-	-	-	-	4,093,900	1,245,994
Charges for Services	125,000	600	125,000	600	-	-	-	-	-	-
Miscellaneous Operating Income	42,100	24,030	31,000	9,740	10,100	14,290	1,000	-	-	-
Grants, Rebates, Reimbursements	4,101,300	3,379,284	-	3,122	5,300	4,059	96,000	44,602	4,000,000	3,327,501
Total Operating Revenues	34,841,600	13,595,672	14,874,500	4,999,700	9,365,600	3,035,906	2,507,600	986,571	8,093,900	4,573,495
Operating Expenses										
General & Administrative	5,262,060	1,362,740	2,110,500	564,124	2,729,480	689,376	422,080	109,239	-	-
Operations & Maintenance	21,461,900	7,474,141	12,797,500	4,874,358	7,209,100	2,104,179	1,455,300	495,604	-	-
Operating Capital Expenses	1,068,150	133,749	-	-	-	-	-	-	1,068,150	133,749
Other Operating Expenses	300,000	98,709	120,000	39,484	156,000	51,329	24,000	7,897	-	-
Depreciation & Amortization	4,906,900	1,394,680	-	-	-	-	-	-	4,906,900	1,394,680
Total Operating Expenses	32,999,010	10,464,020	15,028,000	5,477,966	10,094,580	2,844,884	1,901,380	612,740	5,975,050	1,528,429
Operating Income/(Loss)	1,842,590	3,131,652	(153,500)	(478,266)	(728,980)	191,022	606,220	373,831	2,118,850	3,045,066
Non-operating Revenues										
Property Taxes	1,155,000	382,087	460,000	152,837	600,000	198,687	95,000	30,563	-	-
Investment Earnings	250,000	352,583	100,000	84,583	130,000	104,253	20,000	16,039	-	147,708
Miscellaneous Revenue	249,400	94,924	238,000	94,924	10,400	-	1,000	-	-	-
Interest Expense	(1,928,200)	(569,191)	-	-	-	-	-	-	(1,928,200)	(569,191)
Net Non-Operating Revenues	(273,800)	260,403	798,000	332,344	740,400	302,940	116,000	46,602	(1,928,200)	(421,482)
Income/(Loss) before Contributions & Transfers	1,568,790	3,392,055	644,500	(145,922)	11,420	493,961	722,220	420,433	190,650	2,623,583
Transfers										
Transfers In	1,809,100	626,367	-	-	-	-	-	-	1,809,100	626,367
Transfers Out	(1,809,100)	(626,367)	(881,880)	(293,960)	-	-	(927,220)	(332,407)	-	-
Net Transfers	-	(0)	(881,880)	(293,960)	-	-	(927,220)	(332,407)	1,809,100	626,367
Capital Contributions										
Donations & Contributions	-	87,320	-	-	-	-	-	-	-	87,320
Total Capital Contributions	-	87,320	-	-	-	-	-	-	-	87,320
Change in Net Position	1,568,790	3,479,375	(237,380)	(439,882)	11,420	493,961	(205,000)	88,026	1,999,750	3,337,270
Beginning Net Position	63,823,655	63,823,655								
Ending Net Position	\$ 65,392,445	\$ 67,303,030								

Attachment 4

Summary of Revenues and Expenses for the October, 2023

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

Account - Description	Month Actual	YTD Actual	2023-2024 Budgeted	Budget Remaining	% of Budget Remaining
Summary of Total District Revenues					
District Totals					
Commodity Supply Charges	1,017,077	4,267,634	11,989,100	7,721,466	64.4%
Service Charges	1,209,087	4,678,130	14,490,200	9,812,070	67.7%
Capital Facility Charges	343,004	1,245,994	4,093,900	2,847,906	69.6%
Charges for Services	-	600	125,000	124,400	99.5%
Miscellaneous Revenue	22,693	118,954	301,600	182,646	60.6%
Grants, Rebates, Reimbursements	2,111,941	3,379,284	4,096,000	716,716	17.5%
Property Taxes	96,250	382,087	1,155,000	772,913	66.9%
Investment Income	47,526	352,583	250,000	(102,583)	-41.0%
Donations & Capital Contributions	40,545	87,320	-	(87,320)	N/A
Total Revenue	4,888,123	14,512,586	36,500,800	21,988,214	60.2%
Summary of Total District Expenses					
Salary Expenses					
Directors Fees	9,198	29,127	131,400	102,273	77.8%
Exempt Salaries	112,462	458,578	1,407,000	948,422	67.4%
Non-exempt Salaries	418,305	1,606,682	5,513,800	3,907,118	70.9%
Other Salary Payments	1,416	1,416	188,400	186,984	99.2%
Overtime	11,609	51,701	230,000	178,299	77.5%
Overtime - On-call	7,920	27,300	72,700	45,400	62.4%
Stipends/Allowances	4,677	19,817	74,800	54,983	73.5%
Employee Service Awards	650	1,600	5,000	3,400	68.0%
Salary Expenses Sub-total	566,238	2,196,222	7,623,100	5,426,878	71.2%
Benefit Expenses					
Medical Insurance	87,824	337,549	1,138,900	801,351	70.4%
HSA Contributions	-	262	4,500	4,238	94.2%
Dental Insurance	4,754	18,178	60,300	42,122	69.9%
Vision Insurance	1,042	3,964	13,100	9,136	69.7%
Life Insurance	3,686	14,168	36,600	22,432	61.3%
Disability Insurance	-	21	33,300	33,279	99.9%
Long-term Care Insurance	97	373	17,900	17,527	97.9%
Workers Compensation Insurance	11,073	42,762	129,100	86,338	66.9%
State Unemployment Insurance	-	-	3,060	3,060	100.0%
401k Retirement Contributions	49,700	193,831	622,600	428,769	68.9%
401k Matching Contributions	30,681	117,347	235,900	118,553	50.3%
457b Matching Contributions	8,141	34,386	235,900	201,514	85.4%
Medicare Insurance	7,706	30,013	104,800	74,787	71.4%
FICA	138	485	-	(485)	N/A
Benefit Expenses Sub-total	204,841	793,340	2,635,960	1,842,620	69.9%
Commodity Purchased for Resale					
Water Purchases - MWDOC	865,281	3,182,679	4,228,600	1,045,921	24.7%
Water Purchases - MWDOC Fixed	73,786	147,571	784,200	636,629	81.2%
Water Purchases - AMP/SAC	2,470	5,125	-	(5,125)	N/A
Regional Water Supply Expenses	449	1,795	8,000	6,205	77.6%
Water Purchases - Baker WTP	226,404	338,197	3,120,500	2,782,303	89.2%
Water Purchases - Baker O&M	1,530	(7,244)	830,500	837,744	100.9%
Water Purch - Other Agencies	3,686	4,009	-	(4,009)	N/A
MWDOC Service Connect Charge	-	128,481	125,000	(3,481)	-2.8%
Commodity Purchased for Resale Sub-total	1,173,605	3,800,612	9,096,800	5,296,188	58.2%

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

Account - Description	Month Actual	YTD Actual	2023-2024 Budgeted	Budget Remaining	% of Budget Remaining
Contracted/Purchased Services					
Consultants	1,908	4,375	61,500	57,125	92.9%
Engineering Services	-	7,280	48,000	40,720	84.8%
Audit & Accounting Services	11,920	29,420	45,600	16,180	35.5%
Technology Consultants	771	8,960	60,000	51,040	85.1%
SOCWA Contract	-	287,445	1,100,000	812,555	73.9%
Contractors	28,553	40,786	271,500	230,714	85.0%
Contracted Employees	3,145	17,035	-	(17,035)	N/A
Legal Svcs - General Counsel	6,973	19,893	90,000	70,107	77.9%
Legal Svcs - Specialty Counsel	-	-	25,000	25,000	100.0%
Other Legal Services	-	418	-	(418)	N/A
Employee Recruitmnt/Compliance	208	807	5,000	4,193	83.9%
Employee Health & Wellness	6,162	11,203	6,000	(5,203)	-86.7%
Employee Relations Expenses	500	500	1,960	1,460	74.5%
Professional Services	-	-	-	-	N/A
Landscaping Services	2,508	12,884	150,000	137,116	91.4%
Janitorial Contracts	1,322	4,051	45,000	40,949	91.0%
Equipment Rental	1,211	3,649	15,000	11,351	75.7%
Uniform Rental	1,620	5,722	15,000	9,278	61.9%
Laboratory Services	1,269	5,364	31,800	26,436	83.1%
Disposal Services	13,232	31,521	59,000	27,479	46.6%
Security Services	92	25,017	29,500	4,483	15.2%
Insurance	2,130	28,059	378,000	349,941	92.6%
Financial Service Fees	46,668	57,262	55,000	(2,262)	-4.1%
Printing & Reproduction	4,198	6,764	8,020	1,256	15.7%
Advertising & Publicity Svcs	381	716	8,100	7,384	91.2%
Postage	450	483	11,620	11,137	95.8%
Public Relations/Education	6,144	36,989	49,000	12,011	24.5%
Water Efficiency Services	-	2,541	100,000	97,459	97.5%
Licenses & Permits	4,987	14,064	200,500	186,436	93.0%
Software Maintenance/Licenses	3,243	20,335	240,900	220,565	91.6%
Electrical Power	148,326	725,147	1,786,000	1,060,853	59.4%
Natural Gas	470	616	4,500	3,884	86.3%
Cable Service	155	1,181	9,000	7,819	86.9%
Telecommunications	839	6,252	20,000	13,748	68.7%
Mobile Telecommunications	3,337	14,890	38,100	23,210	60.9%
Data Access	4,137	17,179	60,000	42,821	71.4%
Equipment Maintenance & Repair	10,199	28,601	139,000	110,399	79.4%
Pump Maintenance & Repair	6,596	6,932	142,000	135,068	95.1%
Motor Maintenance & Repair	1,185	1,185	91,000	89,815	98.7%
Electrical Maintenance/Repair	9,369	51,155	157,000	105,845	67.4%
Meter Maintenance & Repair	3,066	4,344	30,900	26,556	85.9%
Structure Maintenance & Repair	13,131	25,372	22,000	(3,372)	-15.3%
Asphalt Maintenance & Repair	1,210	(13,284)	110,600	123,884	112.0%
Contracted/Purchased Services Sub-total	351,614	1,553,114	5,721,100	4,167,986	72.9%
Commodities					
Repair Parts & Materials	34,012	143,542	437,810	294,268	67.2%
Tools & Small Equipment	1,366	6,732	78,510	71,778	91.4%
Safety Equipment	1,929	2,750	25,010	22,260	89.0%
Employee Tools/Safety Equip	2,899	9,493	23,800	14,307	60.1%
Laboratory Tools & Small Equip	2,256	2,256	6,000	3,744	62.4%
Technology Tools/Small Equip	532	4,386	46,000	41,614	90.5%
Chemicals	24,138	145,827	322,000	176,173	54.7%
Gasoline & Oil	1,475	3,953	53,000	49,047	92.5%
Operating Supplies/Accessories	40,976	60,065	140,000	79,935	57.1%
Office Supplies & Accessories	626	10,352	34,760	24,408	70.2%
Technology Supplies/Components	3,764	6,911	21,170	14,259	67.4%
Meeting/Event Supplies & Food	2,329	13,082	36,000	22,918	63.7%
Water Use Efficiency Supplies	3,613	6,193	22,000	15,807	71.9%
Commodities Sub-total	119,915	415,543	1,246,060	830,517	66.7%

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

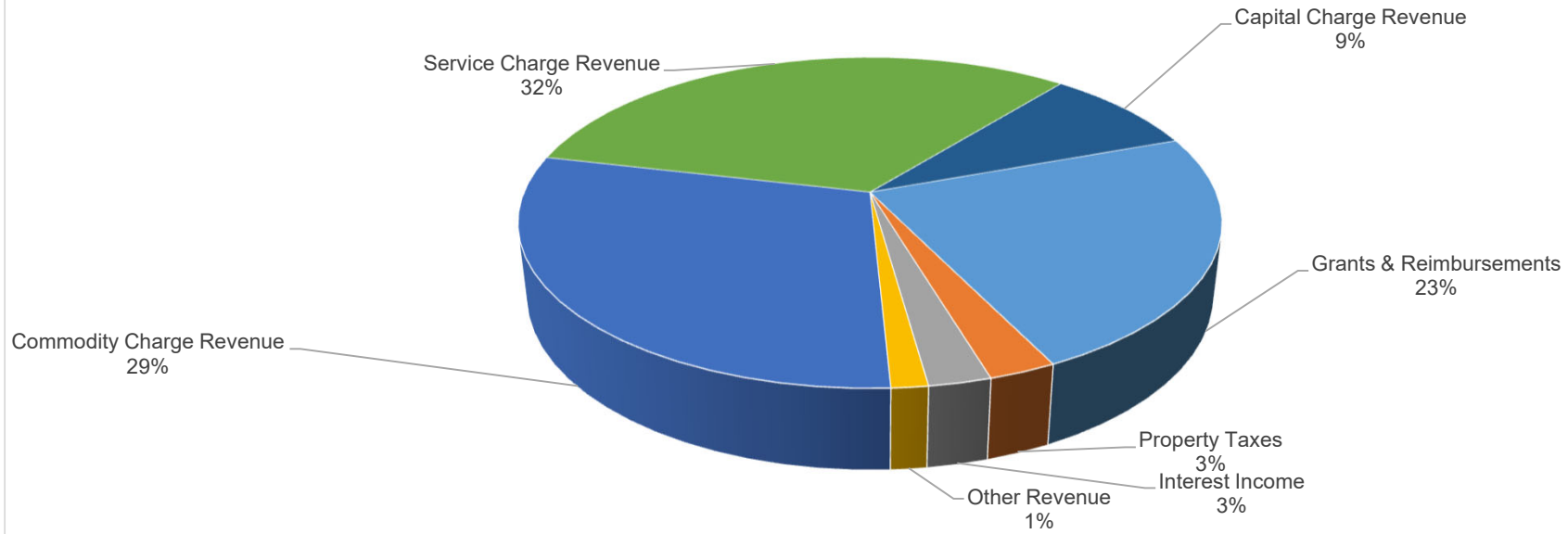
Account - Description	Month Actual	YTD Actual	2023-2024 Budgeted	Budget Remaining	% of Budget Remaining
Professional Development					
Education & Training	1,501	9,616	43,550	33,934	77.9%
Education/Training - Directors	-	-	-	-	N/A
Dues & Memberships	205	495	7,200	6,705	93.1%
Dues & Memberships - Directors	224	33,094	101,400	68,306	67.4%
Meetings & Conferences	-	-	-	-	N/A
Meetings/Conferences-Directors	1,020	5,998	36,700	30,702	83.7%
Travel Reimbursement	1,685	4,570	9,000	4,430	49.2%
Travel Reimbursement-Directors	-	8,872	38,750	29,878	77.1%
Publications & Subscriptions	1,577	935	35,000	34,065	97.3%
Professional Development Sub-total	6,213	63,581	271,600	208,019	76.6%
Miscellaneous Expenses					
Employee Appreciation Expenses	-	283	5,000	4,717	94.3%
Internal/External Event Expenses	-	-	8,000	8,000	100.0%
Election Expense	-	-	-	-	N/A
Reimbursable Repair Expense	-	-	-	-	N/A
Property Taxes	1,479	1,479	10,000	8,521	85.2%
Uncollectible Accounts	-	(301)	17,000	17,301	101.8%
NSFs & Miscellaneous Fees	1,578	4,498	18,000	13,502	75.0%
Refund Overcharges	-	1,290	2,800	1,510	53.9%
Damage/Repair Reimbursements	-	-	-	-	N/A
Miscellaneous Sub-total	3,057	7,249	60,800	53,551	88.1%
Capital Improvement Expenses					
Water System Projects					
Supply/Storage Projects	143	2,987,482	69,314	(2,918,168)	N/A
Pumping Projects	-	2,128	39,000	36,872	94.5%
Main/Service Line Projects	-	-	-	-	N/A
Wastewater System Projects	-	-	-	-	N/A
Pumping Projects	-	-	39,000	39,000	100.0%
Wastewater Treatment Projects	-	178,517	414,836	236,319	57.0%
Main/Service Line Projects	-	-	-	-	N/A
Recycled System Projects	-	-	-	-	N/A
Pumping Projects	-	-	-	-	N/A
Tertiary Treatment Projects	-	-	-	-	N/A
Main/Service Line Projects	-	-	-	-	N/A
General Projects	-	-	-	-	N/A
Operating Equipment Purchases	-	-	-	-	N/A
Vehicle & Related Equipment Purchases	-	27,762	-	(27,762)	N/A
Technoloy Projects & Purchases	-	-	64,000	64,000	100.0%
Building & Structure Improvements	-	23,694	-	(23,694)	N/A
General Capital Projects	-	223,482	442,000	218,518	49.4%
Construction in Progress	-	(3,307,618)	-	(3,307,618)	N/A
Capital Improvement Expenses Sub-total	143	135,446	1,068,150	(5,682,532)	-532.0%
Other Expenses					
Retiree Health Insurance	26,045	104,233	300,000	195,767	65.3%
Depreciation	348,670	1,394,680	4,906,900	3,512,220	71.6%
Debt Interest Expense	143,677	569,191	1,928,200	1,359,009	70.5%
Other Expenses Sub-total	518,392	2,068,104	7,135,100	5,066,996	71.0%
Total Expenses	2,944,018	11,033,211	34,858,670	17,210,223	49.4%
Change in Net Position	1,944,106	3,479,375	1,642,130		



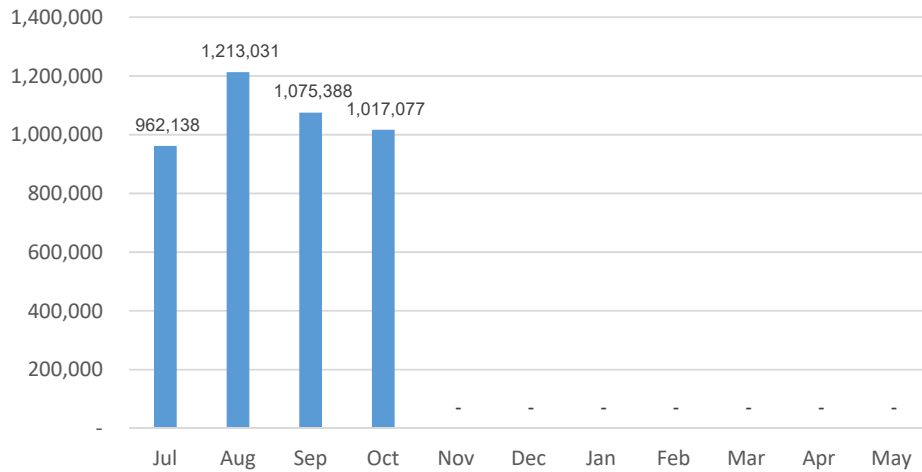
Attachment 5  
Revenue and Expense Charts for October, 2023

## Revenue Charts -October Financial Report

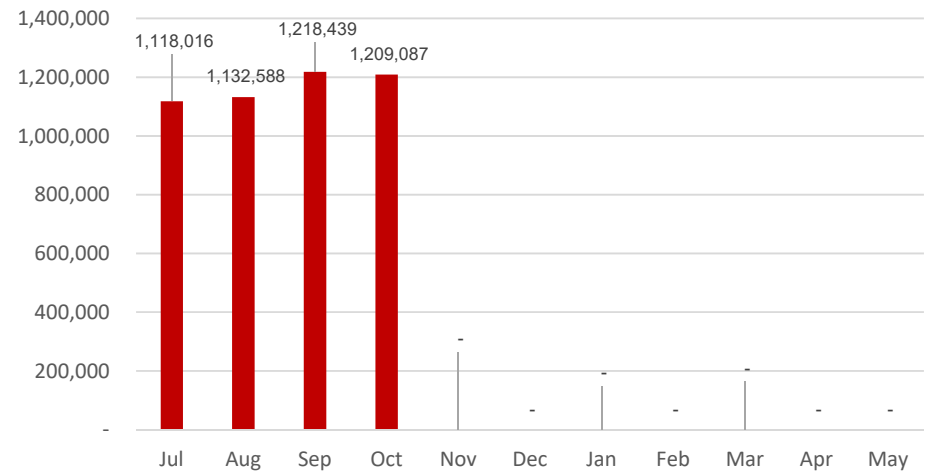
### Year to Date Distribution of Revenues



### Commodity Charge Revenue by Month

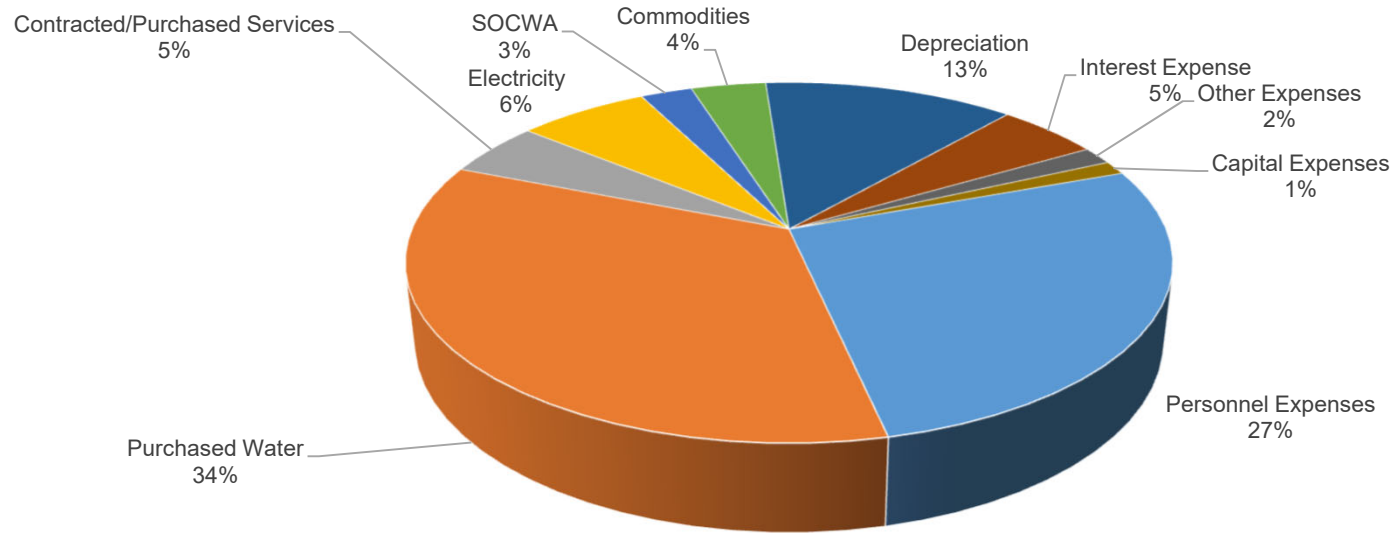


### Service Charge Revenue by Month

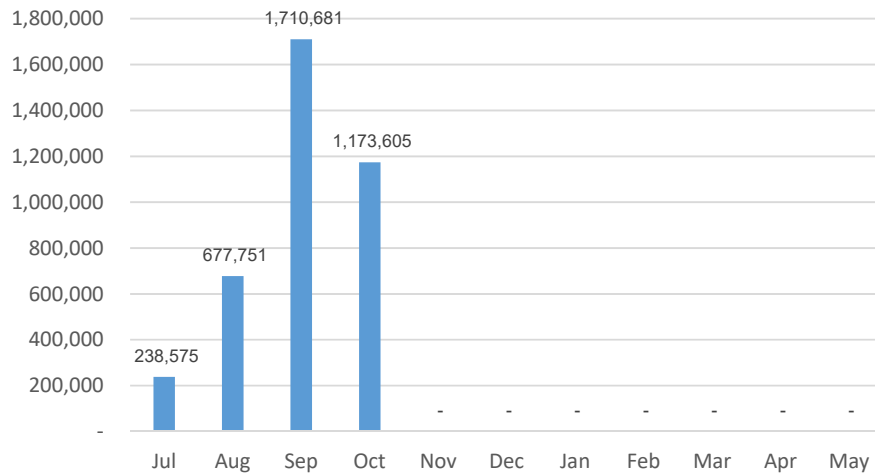


## Expense Chart - October Financial Report

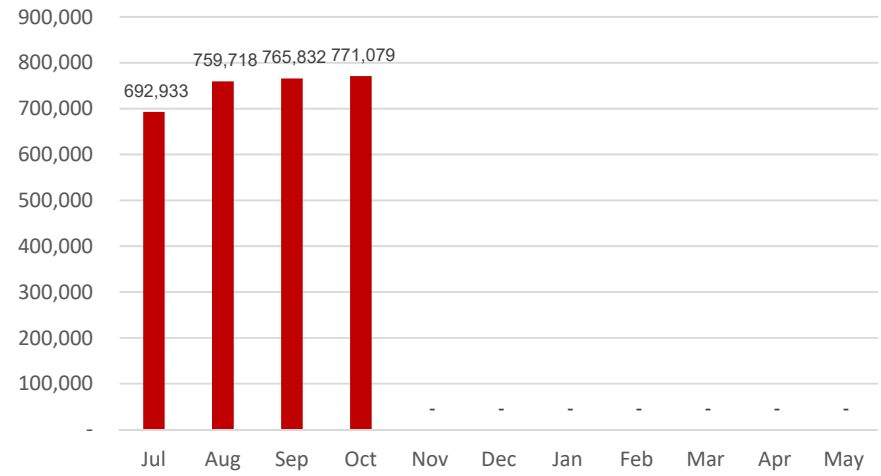
Year to Date Distribution of Expenses



Purchased Water Expenses by Month



Personnel Costs by Month



Attachment 6

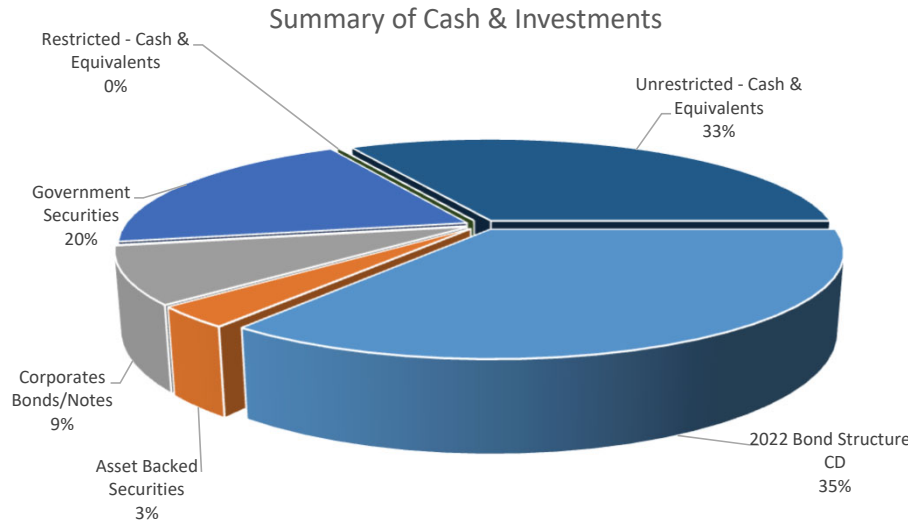
Summary of Cash & Investments at the end of October, 2023

Summary of Cash & Investments  
as of October 31, 2023

Summary of Cash & Investments

Cash & Equivalents	
Unrestricted - Cash & Equivalents	7,723,427
Unrestricted - Cash & Equivalents USB	3,870,861
Restricted - Cash & Equivalents	2,895
Investments	
Government Securities	4,667,770
Certificates of Deposit	-
Corporates Bonds/Notes	2,023,571
Asset Backed Securities	755,445
2022 Bond Structured CD	8,258,975
Total Cash & Investments	27,302,945

Operating Cash & Investments	19,041,075
2022 Bond Proceeds Cash & Investments	8,258,975
Restricted - Cash & Equivalents	2,895



Cash & Equivalents

	Account Balance	Current Yield
Cash & Equivalents		
Demand Deposit Accounts		
US Bank - Checking Account	3,870,861	
US - Capital Facilities Checking	2,895	
US Bank - 2022 Bond Proceeds Checking		
Petty Cash	700	
Money Market Accounts		
US Bank - Money Market Account	173,355	
CAMP Money Market	6,679,817	
LAIF Money Market	1,042,910	
Total Cash & Equivalents	11,770,538	

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	4,042,810	4,042,810	-	4,042,810	-	2.140%	2.14%	8/1/2022	Various
US Bank Structured Maturity CD	4,042,810	4,042,810	-	4,042,810	-	2.430%	2.43%	8/1/2022	Various
Certificates of Deposit - Total Balances	8,085,619	8,085,619	-	8,085,619	-				

## 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+	89,982	90,000	(18)	89,817	(165)	0.250%	0.26%	4/26/2021	11/15/2023
US Treasury N/B - AA+	298,734	300,000	(1,266)	295,500	(3,234)	0.250%	0.27%	3/1/2021	2/15/2024
US Treasury N/B - AA+	164,807	165,000	(193)	158,529	(6,278)	0.375%	0.42%	9/3/2021	8/15/2024
US Treasury N/B - AA+	34,854	35,000	(146)	33,485	(1,369)	0.375%	0.52%	10/7/2021	9/15/2024
US Treasury N/B - AA+	347,047	350,000	(2,953)	332,938	(14,109)	1.125%	1.42%	2/4/2022	1/15/2025
US Treasury N/B - AA+	149,566	150,000	(434)	144,539	(5,027)	2.750%	2.85%	6/1/2022	5/15/2025
US Treasury N/B - AA+	466,543	500,000	(33,457)	466,094	(449)	2.125%	4.20%	11/30/2022	5/31/2026
US Treasury N/B - AA+	464,531	500,000	(35,469)	460,469	(4,063)	2.250%	4.10%	11/30/2022	2/15/2027
US Treasury N/B - AA+	480,273	500,000	(19,727)	472,969	(7,304)	3.250%	4.25%	2/22/2023	6/30/2027
US Treasury N/B - AA+	502,500	500,000	2,500	486,719	(15,781)	4.125%	4.01%	11/30/2022	9/30/2027
US Treasury N/B - AA+	497,930	500,000	(2,070)	486,719	(11,211)	4.125%	4.22%	2/22/2023	9/30/2027
US Treasury N/B - AA+	485,332	500,000	(14,668)	474,141	(11,191)	3.500%	4.16%	2/22/2023	1/3/2028
United States Treasury Bond - Totals	3,982,100	4,090,000	(107,900)	3,901,917	(80,182)				
Supra-National Agency Bond / Note									
Inter-American Devel BK Note - AAA	184,863	185,000	(137)	176,785	(8,078)	0.500%	0.52%	9/15/2021	9/23/2024
Supra-National Agency Bond / Note Totals	184,863	185,000	(137)	176,785	(8,078)				
Municipal Bond / Note									
NJ TPK Authority TXBL Revenue Bonds - AA-	20,000	20,000	-	18,936	(1,064)	0.897%	0.90%	1/22/2021	1/1/2025
Municipal Bond / Note Totals	20,000	20,000	-	18,936	(1,064)				
Federal Agency Commercial Mortgage-Backed Security									
FHLMC Multifamily Structured Pool - AA+	80,977	80,870	107	79,155	(1,823)	3.064%	3.00%	5/25/2022	8/1/2024
FHMS K047 - AA+	90,577	90,000	577	87,029	(3,547)	3.329%	3.10%	5/19/2022	5/1/2025
Federal Mortgage-Backed Security Totals	171,554	170,870	684	166,184	(5,370)				
Federal Agency Bond / Note									
Freddie Mac Notes - AA+	155,087	155,000	87	154,888	(199)	0.250%	0.23%	1/6/2021	11/6/2023
Fannie Mae Notes - AA+	250,107	250,000	107	249,059	(1,048)	0.250%	0.24%	1/6/2021	11/27/2023
Federal Agency Bond / Note Totals	405,194	405,000	194	403,947	(1,247)				
Governmental Securities - Total Balances	4,763,711	4,870,870	(107,159)	4,667,770	(95,941)				

## 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)	69,282	(714)	0.450%	0.45%	1/6/2021	1/11/2024
John Deere Corp Notes - A	54,961	55,000	(39)	54,408	(553)	0.450%	0.48%	3/4/2021	1/17/2024
Morgan Stanley Corp Notes - A-	55,000	55,000	-	54,933	(67)	0.529%	0.53%	1/20/2021	1/25/2024
PACCAR Financial Corp Corporate Note - A+	64,925	65,000	(75)	63,979	(946)	0.350%	0.39%	1/28/2021	2/2/2024
Microsoft Corp (Callable) Note - AAA	46,864	45,000	1,864	44,695	(2,170)	2.875%	0.95%	12/1/2021	2/6/2024
National Rural Util Coop Corporate Note - A-	24,983	25,000	(17)	24,642	(341)	0.350%	0.37%	2/8/2021	2/8/2024
Apple Inc (Callable) Note - AA+	52,381	50,000	2,381	49,605	(2,775)	3.000%	0.870%	11/1/2021	2/9/2024
Goldman Sachs Corp Notes - BBB+	44,062	40,000	4,062	39,652	(4,410)	4.000%	0.690%	1/21/2021	3/3/2024
Merck & Co Inc Corp Notes	31,377	30,000	1,377	29,700	(1,677)	2.900%	0.880%	11/16/2021	3/7/2024
Charles Schwab Corp Note	29,985	30,000	(15)	29,362	(623)	0.750%	0.770%	3/16/2021	3/18/2024
Suntrust Bank (Callable) Corp Note	63,197	60,000	3,197	59,252	(3,946)	3.200%	0.960%	11/1/2021	4/1/2024
Comcast Corp (Callable) Corp Note	53,305	50,000	3,305	49,493	(3,812)	3.700%	0.960%	11/1/2021	4/15/2024
Bank of NY Mellon Corp Note	54,941	55,000	(59)	53,492	(1,449)	0.500%	0.540%	4/19/2021	4/26/2024
Novartis Capital Corp Note	53,112	50,000	3,112	49,393	(3,718)	3.400%	0.890%	11/1/2021	5/6/2024
Amazon.com Inc Corp Note	79,883	80,000	(117)	77,834	(2,050)	0.450%	0.500%	5/10/2021	5/12/2024
Unitedhealth Group Inc Corp Note	29,969	30,000	(31)	29,177	(792)	0.550%	0.590%	5/17/2021	5/15/2024
Unitedhealth Group Inc Corp Note	29,476	30,000	(524)	29,177	(299)	0.550%	1.320%	1/21/2022	5/15/2024
Caterpillar Finl Service Corp Note	44,940	45,000	(60)	43,720	(1,220)	0.450%	0.500%	5/10/2021	5/17/2024
Astrazeneca Finance LLC (Callable) Corp	49,996	50,000	(5)	48,562	(1,434)	0.700%	0.700%	5/25/2021	5/28/2024
John Deere Capital Corp Notes	9,988	10,000	(13)	9,695	(292)	0.450%	0.490%	6/7/2021	6/7/2024
Target Corp Notes	31,879	30,000	1,879	29,538	(2,341)	3.500%	1.040%	11/23/2021	7/1/2024
American Express Co Corp Notes	36,253	35,000	1,253	34,123	(2,130)	2.500%	1.140%	11/19/2021	7/30/2024
American Honda Finance Corp Notes	29,980	30,000	(20)	28,843	(1,138)	0.750%	0.770%	9/7/2021	8/9/2024
American Honda Finance Corp Notes	35,025	35,000	25	33,650	(1,375)	0.750%	0.720%	9/13/2021	8/9/2024
Caterpillar Finl Service Corp Notes	19,973	20,000	(27)	19,141	(832)	0.600%	0.650%	9/7/2021	9/13/2024
Bank of NY Mellon Corp Note	24,984	25,000	(16)	23,812	(1,172)	0.850%	0.870%	10/20/2021	10/25/2024
Apple Inc Corp Note - AA+	42,786	40,000	2,786	38,789	(3,997)	2.750%	0.890%	3/11/2021	1/13/2025
Goldman Sachs Corp Notes	10,000	10,000	-	9,875	(125)	1.757%	1.760%	1/19/2022	1/24/2025
Bank of America Corp Notes	20,000	20,000	-	19,734	(266)	1.843%	1.840%	2/1/2022	2/4/2025
Merck & Co Inc Corp Notes	21,389	20,000	1,389	19,335	(2,053)	2.750%	0.940%	3/9/2021	2/10/2025
3M Company Corp Note	69,744	70,000	(256)	66,531	(3,212)	2.000%	2.130%	3/3/2022	2/14/2025
JPMorgan Chase & Co Corp Note Call	30,000	30,000	-	29,364	(636)	0.563%	0.560%	2/9/2021	2/16/2025
Exon Mobil Corp Note	29,874	30,000	(126)	28,942	(932)	2.709%	2.860%	4/1/2022	3/6/2025
Bank of America Corp Notes	42,714	40,000	2,714	39,503	(3,211)	3.458%	1.530%	7/22/2021	3/15/2025
Intel Corp Notes	30,873	30,000	873	29,105	(1,767)	3.400%	2.400%	3/8/2022	3/25/2025
Burlington North Santa Fe Corp Note Call	21,533	20,000	1,533	19,338	(2,194)	3.000%	1.070%	3/5/2021	4/1/2025
Amazon.com Inc Corp Notes	74,881	75,000	(119)	72,477	(2,404)	3.000%	3.060%	4/11/2022	4/13/2025
Home Depot Inc Corp Note	4,991	5,000	(9)	4,807	(185)	2.700%	2.760%	3/24/2022	4/15/2025
Target Corp Note	30,015	30,000	15	28,661	(1,354)	2.250%	2.230%	3/8/2022	4/15/2025
Bank of America Corp Notes (Callable)	70,000	70,000	-	68,064	(1,936)	0.976%	0.980%	4/16/2021	4/22/2025
Bank of NY Mellon Corp Note	46,148	45,000	1,148	42,133	(4,015)	1.600%	0.970%	3/10/2021	4/24/2025
Bank of NY Mellon Corp Note	19,997	20,000	(3)	19,325	(673)	3.350%	3.360%	4/19/2022	4/25/2025
Pepsico Inc Corp Note Call	21,400	20,000	1,400	19,235	(2,165)	2.750%	1.020%	3/5/2021	4/30/2025
Citigroup Inc Corp Notes	35,000	35,000	-	33,899	(1,101)	0.981%	0.980%	4/27/2021	5/1/2025
Suntrust Banks Inc Corp Notes	36,373	35,000	1,373	33,636	(2,737)	4.000%	2.690%	3/8/2022	5/1/2025
Charles Schwab Corp Note	40,616	40,000	616	38,582	(2,034)	3.850%	3.300%	6/1/2022	5/21/2025
Morgan Stanley Corp Notes (Callable)	10,000	10,000	-	9,650	(350)	0.790%	0.790%	5/26/2021	5/30/2025
Honeywell Intl Corp Note	20,360	20,000	360	18,789	(1,572)	1.350%	0.910%	3/5/2021	6/1/2025
JPMorgan Chase & Co Corp Note	25,000	25,000	-	24,152	(848)	0.824%	0.82%	5/24/2021	6/1/2025
National Rural Util Coop Corp Note	9,997	10,000	(3)	9,643	(354)	3.450%	3.46%	5/4/2022	6/15/2025
Intel Corp Notes	35,821	35,000	821	33,887	(1,935)	3.700%	2.95%	4/4/2022	7/29/2025
Citigroup Inc Corp Notes	20,000	20,000	-	18,934	(1,066)	1.281%	1.28%	10/27/2021	11/3/2025
State Street Corp Note	20,000	20,000	-	18,841	(1,159)	1.746%	1.75%	2/2/2022	2/6/2026
Citigroup Inc Corp Notes	15,000	15,000	-	14,357	(643)	3.290%	3.29%	3/10/2022	3/17/2022
State Street Corp Note	61,208	60,000	1,208	57,311	(3,897)	2.901%	2.38%	2/17/2022	3/30/2026
JPMorgan Chase & Co (Callable)	80,000	80,000	-	77,517	(2,483)	4.080%	4.08%	4/19/2022	4/26/2026
Corporate Bonds - Total Balances	2,117,152	2,080,000	37,152	2,023,571	(93,581)				

## 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									
Harot 2021 - Aaa	5,988	5,988	-	5,896	(92)	0.270%	0.270%	2/17/2021	4/21/2025
FordO 2021 - AAA	9,297	9,297	-	9,120	(177)	0.300%	0.300%	2/17/2021	8/15/2025
Harot 2021 - Aaa	16,861	16,861	-	16,482	(379)	0.330%	0.330%	5/18/2021	8/15/2025
GMCar 2021 - AAA	4,127	4,127	-	4,055	(72)	0.350%	0.350%	1/12/2021	10/16/2025
Harot 2021 - AAA	24,549	24,549	-	23,823	(726)	0.410%	0.410%	8/17/2021	11/18/2025
Carmx 2021 - AAA	5,086	5,086	-	4,975	(111)	0.340%	0.340%	1/20/2021	12/15/2025
Harot 2021 - Aaa	20,056	20,056	-	19,317	(739)	0.880%	0.890%	11/16/2021	1/21/2026
TAOT 2021 - AAA	24,342	24,342	-	23,469	(873)	0.710%	0.710%	11/9/2021	4/15/2026
Hart 2021 - AAA	15,981	15,981	-	15,441	(539)	0.740%	0.750%	11/9/2021	5/15/2026
Harot 2022 - AAA	45,000	45,000	-	43,342	(1,658)	1.880%	1.880%	2/15/2022	5/15/2026
FordO 2022 - Aaa	21,354	21,354	-	20,665	(689)	1.290%	1.290%	1/19/2022	6/15/2026
BMWOT 2021 - AAA	25,000	25,000	-	24,403	(597)	3.210%	3.210%	5/10/2022	8/25/2026
COPAR 2021 - AAA	20,659	20,659	-	19,858	(801)	0.770%	0.770%	10/19/2021	9/15/2026
FordO 2022 - Aaa	25,000	25,000	-	24,488	(512)	3.740%	3.740%	6/22/2022	9/15/2026
TAOT 2022 - AAA	30,000	30,000	-	29,106	(894)	2.930%	2.930%	4/7/2022	9/15/2026
DCENT 2021 - AAA	55,000	55,000	-	52,452	(2,548)	0.580%	0.580%	9/20/2021	9/15/2026
GMCar 2021 - AAA	20,320	20,320	-	19,545	(774)	0.680%	0.680%	10/13/2021	9/16/2026
Hart 2022 - AAA	55,000	55,000	-	53,147	(1,853)	2.220%	2.220%	3/9/2022	10/15/2026
Comet 2021 - AAA	50,000	50,000	-	47,572	(2,428)	1.040%	1.040%	11/18/2021	11/15/2026
Ally 2022 - AAA	60,000	60,000	-	58,666	(1,334)	3.310%	3.310%	5/10/2022	11/15/2026
GMCar 2022 - AAA	18,733	18,733	-	18,039	(694)	1.260%	1.260%	1/11/2022	11/16/2026
HDMOT 2022 - AAA	33,849	33,849	-	33,137	(712)	3.060%	3.060%	4/12/2022	2/15/2027
GMCar 2022 - AAA	25,000	25,000	-	24,291	(709)	3.100%	3.100%	4/5/2022	2/16/2027
Carmx 2022 - AAA	35,000	35,000	-	34,167	(833)	3.490%	3.490%	4/21/2028	2/16/2027
Comet 2022 - AAA	70,000	70,000	-	67,211	(2,789)	2.800%	2.800%	3/23/2022	3/15/2027
Comet 2022 - AAA	65,000	65,000	-	62,780	(2,220)	3.490%	3.490%	6/6/2022	5/15/2027
Corporate Bonds - Total Balances	781,200	781,200	-	755,445	(25,755)				

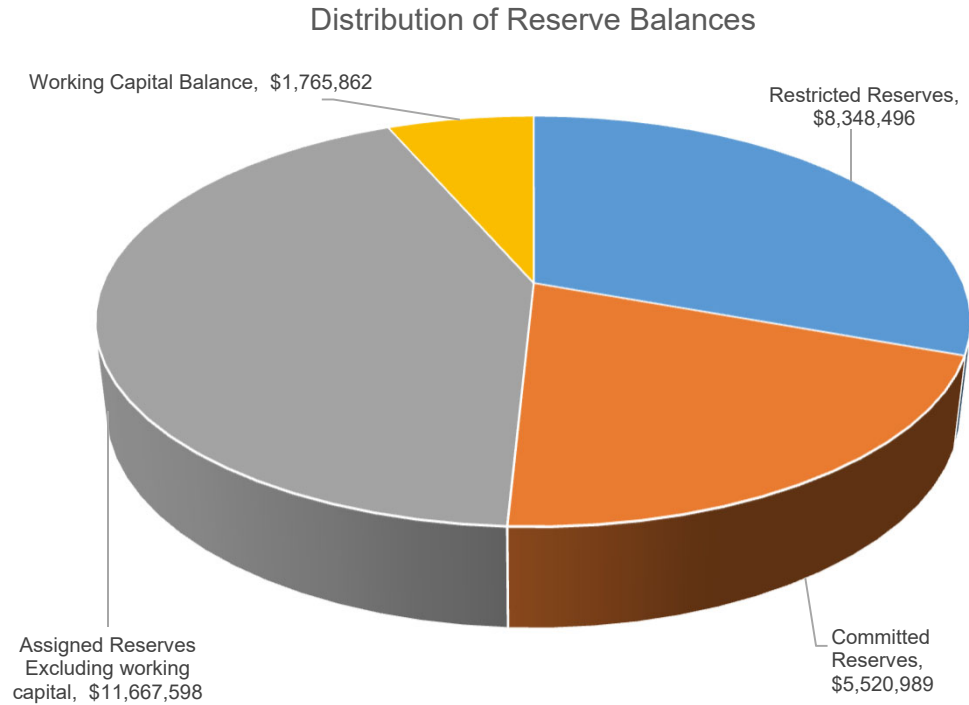


Attachment 7

Cash Reserve Balances for October, 2023

**El Toro Water District**  
**Cash Reserve Status Report for the month ended October 31, 2023**

	Cash Reserve Balances	Reserve Targets
<b>Reconciled Cash Balance</b>	<b>\$ 27,302,945</b>	
<b>Restricted Reserve</b>		
Bond Project Reserve	8,258,975	-
Capital Facilities	2,895	-
Tiered Conservation	86,626	-
<b>Restricted Reserve Total</b>	<b>8,348,496</b>	-
<b>Committed Reserves</b>		
Rate Stabilization	1,835,600	2,100,000
Operational Continuity	1,300,000	2,100,000
Capital Improvements	1,738,323	3,000,000
Current CIP Working Cash	647,066	-
<b>Committed Reserves Total</b>	<b>5,520,989</b>	<b>7,200,000</b>
<b>Assigned Reserves</b>		
Capital Improvement		
Carryover Capital	2,151,639	-
Accumulated Capital	1,835,281	-
CIP - 2022 Bond projects	4,214,213	-
SOCWA Capital Projects	3,377,017	-
Debt Service		
Baker Funding	89,448	-
O&M Working Capital	1,765,862	2,100,000
<b>Assigned Reserves Total</b>	<b>13,433,460</b>	<b>2,100,000</b>
<b>Total Cash Reserves</b>	<b>27,302,945</b>	
<b>Adjusted Cash Reserves<sup>(1)</sup></b>	<b>19,041,075</b>	<b>9,300,000</b>



(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 October, 2023

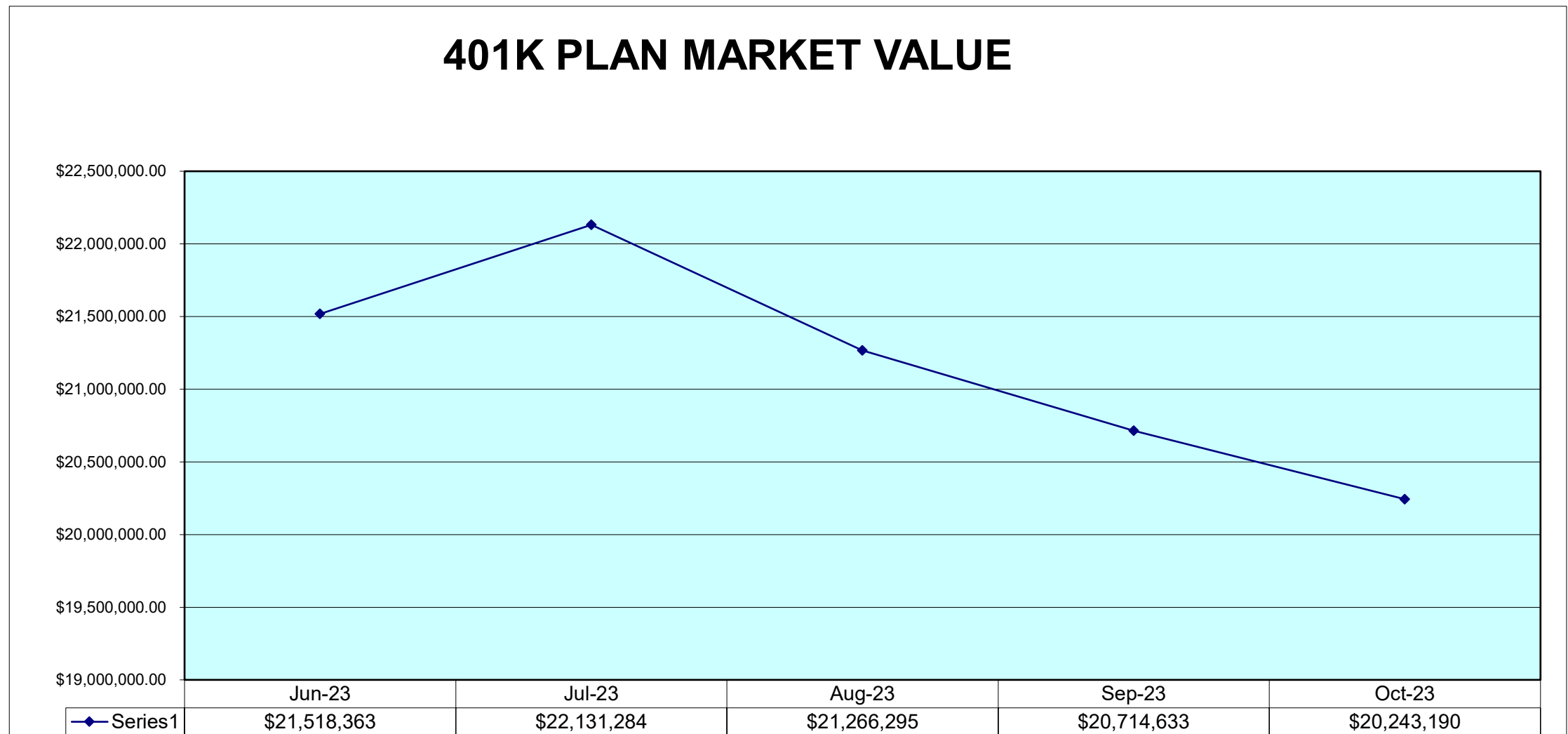
# 2023-2024 Capital Program Budget Information

General Ledger Information										2023 - 2024
Account Description	PM Task Code	Project Description	Budget Account	Total Budget	2023 - 2024 Expenses					Budget Remaining
					Jul	Aug	Sep	Oct	YTD Total	
<u>Unfinished Projects from 2022-23 continue in FY 2023-24</u>										
R-6 Reservoir Cover/Liner Project (RES-0047)	RES-0047	R-6 Reservoir Cover (CIP23)	40-000-15003/CIP23	7,984,432	-	98,183.63	3,749,894.43	1,095,850.90	4,943,928.96	3,040,503
JTM Pump statton 32-093	WPS-0093	JTM Pump statton 32-093	CIP23	96746	-	96,746.45	858.64		97,605.09	(859)
P-1 Fence Alarm Replacement	WPS-0094	P-1 Fence Alarm Replacement	CIP23	2128	-	2,128.18		18,793.42	20,921.60	(18,794)
			Total	8,083.306	-	197,058.26	3,750,753.07	1,114,644.32	5,062,455.65	3,020,850
<u>CCP</u>										
WIMS Services - Database Management System	CAP-0005	WIMS Services - Database Mgt Sys.	CCP	-	-	-	19,800.00	-	19,800.00	
Water and Sewer Master 31-049	SPS-0049	Water and Sewer Master 31-049	CCP	-	-	-	-	11,563.44	11,563.44	
Scada Server upgrade	TCP-0001	Scada Server upgrade	CCP	-	-	-	-	18,941.39	18,941.39	
Professional services through 7/31/23	GEN-0112	Professional services General	CCP	-	24,754.04	-	21,066.41	326,038.21	371,858.66	
			Total		24,754.04	-	40,866.41	356,543.04	422,163.49	0
<u>CIP24</u>										
General 23/24 CIP - VEH-0010	VEH-0010	23-24 Vehicle Purchases	40-000-15910	125,000.00	-	27,762.00	-	-	27,762.00	97,238
General Capital Projects - Consultants	CAP-0023	Asset Management Study 31-050	40-840-55100	220,000.00	-	15,527.50	-	-	15,527.50	204,473
General Capital Projects - Consultants	SPS-0053	System Arc Flash Coord Study	40-850-55100	180,000.00	-	-	-	-	-	180,000
General Capital Projects - Equipment Purchase	CAP-0054	23-24 ATS Replacements	40-840-66120	42,000.00	-	-	-	-	-	42,000
Sewer Pumping - Equipment Purchase	CAP-0051	23-24 Sewer PLC Upgrade	40-740-66120	25,000.00	-	-	-	-	-	25,000
Sewer Pumping - Equipment Purchase	CAP-0053	Sewer Station HMI Rplmnt	40-740-66120	14,000.00	-	-	-	-	-	14,000
Source of Supply - Contract Capital Expense	RCE-0010	23-24 JRWSS Capital Budget	40-710-66230	13,114.00	-	-	-	235.42	235.42	12,879
Source of Supply - Contract Capital Expense	RCE-0011	23-24 Baker WTP Capital Fund	40-710-66230	56,200.00	-	-	-	-	-	56,200
Tech 23/24 CIP - TCP-0007	TCP-0007	Core Switch Replacement	40-000-15920	63,000.00	20,389.40	-	-	-	20,389.40	42,611
Technology Projects - Equipment Purchase	TCP-0006	23-24 Security System Imprmnts	40-820-66120	50,000.00	-	-	-	-	-	50,000
Technology Projects - Equipment Purchase	TCP-0008	EOC Technology Upgrade	40-820-66120	16,000.00	-	-	-	-	-	16,000
Wastewater Treatment - Contract Capital Expenses	RCE-0012	23-24 SOCWA Capital Expenses	40-750-66230	414,836.00	103,898.00	-	-	-	103,898.00	310,938
Wastewtr 23/24 CIP - CAP-0018	CAP-0018	DAF Unit #2 Rehab 933-136	40-000-15636	94,000.00	-	-	-	-	-	94,000
Wastewtr 23/24 CIP - SLS-0001	SLS-0001	S/B SLS-0117 Mathis LS Influen	40-000-15630	0.00	-	-	-	-	14,553.00	(14,553)
Wastewtr 23/24 CIP - SLS-0118	SLS-0118	Surcharge CAP Repair - Goudy	40-000-15630	52,000.00	-	-	-	-	-	52,000
Wastewtr 23/24 CIP - SLS-0119	SLS-0119	Northline Coating Impr Project	40-000-15631	91,000.00	-	-	-	-	-	91,000
Wastewtr 23/24 CIP - SLS-0120	SLS-0120	Freeway Electrical Equip Repl	40-000-15633	110,000.00	-	-	-	-	-	110,000
Wastewtr 23/24 CIP - WRP-0131	WRP-0131	Grit Chamber Rehab 933-131	40-000-15633	861,861.00	-	49,756.88	11,563.44	13,678.99	74,999.31	786,862
Wastewtr 23/24 CIP - WRP-0137	WRP-0137	Tertiary Disinfection Optimize	40-000-15634	0.00	-	-	-	-	4,346.11	(4,346)
Wastewtr 23/24 CIP - WRP-0142	WRP-0142	Coarse Screen Rehabilitation	40-000-15634	2,926,000.00	-	-	-	-	-	2,926,000
Water 23/24 CIP - RES-0015	RES-0015	R-4 Exterior Recoating	40-000-15050	35,100.00	-	-	-	-	-	35,100
Water 23/24 CIP - RES-0016	RES-0016	Moulton/El Toro Cathodic Study	40-000-15051	100,000.00	-	-	-	-	-	100,000
Water 23/24 CIP - RES-0017	RES-0017	SRV-2 Lid Repair	40-000-15052	33,000.00	-	-	-	-	-	33,000
Water 23/24 CIP - RES-0018	RES-0018	R-6 Security Improvements	40-000-15053	84,000.00	-	-	-	-	-	84,000
Water 23/24 CIP - WRP-0095	WPS-0095	P-3 Pump Station Rehab	40-000-15054	200,000.00	-	-	-	-	-	200,000
Water CIP - CAP-0019	CAP-0019	Aliso Creek Pump Rehab 932-115	40-000-15022	826,000.00	-	-	-	-	-	826,000
Water Pumping - Equipment Purchase	CAP-0050	23-24 Water PLC Upgrade	40-720-66120	25,000.00	-	-	-	-	-	25,000
Water Pumping - Equipment Purchase	CAP-0052	Water Station HMI Rplmnt	40-720-66120	14,000.00	-	-	-	-	-	14,000
Server for WRP	CAP-0062	Other unbudgeted Capital Expense	40-820-56460	32,500.00	-	-	-	-	-	32,500
Contingency 23/24	RCE-0004	Other unbudgeted Capital Expense	Various	0.00	-	-	-	20,218.85	159,649.96	(159,650)
Unbudgeted projects	CAP-0055	Other unbudgeted Capital Expense	Various	0.00	-	13,668.00	-	-	13,668.00	(13,668)
Total			Total	6,703,611.00	124,287.40	106,714.38	11,563.44	34,133.26	435,028.70	6,268,582.30
Grand total				14,786,917.00	149,041.44	303,772.64	3,803,182.92	1,505,320.62	5,919,647.84	9,289,432.65

Attachment 9  
Interim Report on 401k Plan Holdings

## EL TORO WATER DISTRICT

### 401K PLAN SUMMARY



MARKET VALUE SUMMARY							
	Under 40 yrs. Old	40 to 44 yrs. Old	45 to 49 yrs. Old	50 to 54 yrs. Old	55 to 59 yrs. Old	60 to 64 yrs. Old	Over 65 yrs. Old
Balance at June 30, 2022	\$1,453,468.56	\$2,095,353.59	\$1,103,519.44	\$2,887,912.79	\$7,733,640.95	\$3,735,784.96	\$2,508,682.94
Balance at October 31, 2023	\$1,412,865.12	\$2,052,526.13	\$1,029,799.06	\$2,795,928.79	\$6,215,200.18	\$4,314,960.94	\$2,413,972.18

District 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.

Investments	Beginning Account Balance	Contributions	Rollover Distributions	Fees	Interest, Dividends and Appreciation Net of Fees & Chrges	Dividends / Interest	Investment Results	Ending Account Balance
American Beacon Ahl Managed Futures Strategy Fund A Class	617,261.23	3,484.20	-854.89	-25.41	-870.84	0.00	-1,199.52	617,794.77
Blackrock Tactical Opportunities Fund Class K Shares	213,849.33	1,375.02	-858.11	-265.65	-451.06	0.00	-1,182.32	212,467.20
Columbia Contrarian Core Fund Institutional 3 Class	1,645,579.37	12,128.55	-10,340.17	-2,062.78	-4,788.38	0.00	-25,422.31	1,615,094.28
Delaware Small Cap Core Fund Class R6	611,773.92	4,124.98	-2,288.18	-753.44	-1,715.86	0.00	-38,057.00	573,084.40
Dfa Large Cap International Portfolio Institutional Class	1,056,246.58	7,993.07	-7,081.85	-1,302.24	-3,019.44	0.00	-35,991.87	1,016,844.27
Dodge & Cox Income Fund Class I	2,080,647.89	15,057.64	-2,483.63	-2,152.13	-2,254.09	0.00	-34,988.01	2,053,827.66
Dodge & Cox International Stock Fund Class I	256,504.08	1,872.79	-1,554.68	-250.69	-873.87	0.00	-13,102.59	242,595.04
Dodge & Cox Stock Fund Class I	892,346.34	6,639.07	-5,470.33	-871.43	-2,608.24	0.00	-31,236.79	858,798.63
Doubleline Core Fixed Income Fund Class R6	2,153,433.08	14,357.89	-2,487.19	-2,666.23	-2,294.61	9,270.54	-50,913.82	2,118,699.65
Emerald Growth Fund Institutional Class	373,809.64	2,943.49	-3,042.43	-411.42	-823.10	0.00	-24,108.05	348,368.15
Guaranteed Income Fund	1,649,457.53	3,789.33	-2,570.86	-2,039.20	-7,471.56	0.00	4,276.79	1,645,442.02
Harbor Capital Appreciation Fund Retirement Class	695,282.56	5,544.83	-5,552.74	-878.01	-2,177.21	0.00	-8,977.15	683,242.27
Mfs International Growth Fund Class R6	252,512.88	1,872.81	-1,569.75	-312.58	-864.63	0.00	-5,376.03	246,262.70
Nuveen Real Estate Securities Fund Class R6	645,176.52	4,390.14	-1,502.34	-791.17	-1,187.09	1,459.66	-26,581.51	620,964.21
Pgim Total Return Bond Fund -class R6	2,042,061.51	12,134.86	-1,662.36	-2,527.76	-2,445.11	8,982.15	-42,961.41	2,013,581.87
Pimco Income Fund Institutional Class	210,200.54	1,769.65	-838.90	-260.74	-426.85	1,135.35	-3,708.50	207,870.53
Pimco Rae Us Fund Institutional Class	901,574.14	6,638.75	-5,618.67	-1,122.66	-2,651.28	0.00	-21,372.31	877,447.97
The Merger Fund Class I	213,170.15	1,375.12	-857.18	-212.40	-451.99	0.00	-373.42	212,650.28
Undiscovered Managers Behavioral Value Fund Class R6	374,364.82	2,943.52	-3,099.78	-459.41	-819.20	0.00	-17,631.79	355,298.16
Vanguard Emerging Markets Stock Index Fund Admiral Shares	477,855.47	3,581.80	-3,243.53	-596.87	-1,822.50	0.00	-16,345.02	459,429.35
Vanguard Growth And Income Fund Admiral Shares	1,690,897.71	12,309.85	-10,378.54	-2,119.71	-4,806.93	0.00	-29,535.68	1,656,366.71
Vanguard Growth Index Fund Admiral Shares	744,061.92	5,658.44	-4,750.98	-938.59	-2,189.92	0.00	-13,144.89	728,695.96
Vanguard Long-term Investment-grade Fund Admiral Shares	711,458.44	4,144.45	-796.09	-874.72	-752.91	3,094.05	-33,204.92	683,068.25
Vanguard Mid-cap Index Fund Admiral Shares	205,107.16	1,374.92	-776.25	-253.19	-418.82	0.00	-9,738.10	195,295.70
<b>Grand Total</b>	<b>20,714,632.80</b>	<b>137,505.17</b>	<b>-79,679.43</b>	<b>-24,148.43</b>	<b>-48,185.49</b>	<b>23,941.75</b>	<b>-480,876.22</b>	<b>20,243,190.12</b>

MINUTES OF THE REGULAR MEETING  
& OF THE  
ENGINEERING COMMITTEE MEETING

October 23, 2023

At approximately 7:57 a.m. Director Freshley called the Engineering Committee meeting to order.

Committee Members KAY HAVENS, KATHRYN FRESHLEY, MIKE GASKINS, MARK MONIN, and FRED ADJARIAN participated.

Also participating were DENNIS P. CAFFERTY, General Manager, JUDY CIMORELL, Human Resources Manager, HANNAH FORD, Engineering Manager, RORY HARNISCH, Senior Engineer, GILBERT J. GRANITO, General Counsel, VISHAV SHARMA, CFO, SCOTT HOPKINS, Operations Superintendent, SHERRI SEITZ, Public Relations Manager, VU CHU, Water Use Efficiency Analyst, VICKI TANIOUS, Payroll, (Zoom), MIKE MIAZGA, IT Manager (Zoom), CAROL MOORE, Laguna Woods City Council member (Zoom), and POLLY WELSCH, Recording Secretary.

Consent Calendar

Director Freshley asked for a Motion.

Motion: President Havens made a Motion, seconded by Director Gaskins to approve the Consent Calendar.

Roll Call Vote:

Director Adjarian	abstain (not in attendance at the meeting)
Director Gaskins	aye
Director Freshley	aye
Vice President Monin	aye
President Havens	aye

## Engineering Action Items

### Resolution No. 23-10-2 Direct Potable Reuse Strategic Plan Study Grant Application

Ms. Ford stated that in November 2021 staff did a study with Tetra Tech on what it would take to expand our non-potable recycled water system. She further stated that when the costs came back higher than expected, the results were presented to the Board to determine next steps for diversifying the District's water supply portfolio.

Ms. Ford stated that the District would like to pursue the WaterSMART Planning Grant to fund a DPR (Direct Potable Reuse) Strategic Plan. She further stated that the scope of work is structured to meet the grant requirements.

Ms. Ford stated that staff included flow charts in the Board package that illustrate the types of Potable Reuse as defined by the California Code of Regulations. She further stated that, because the District does not have a groundwater basin, surface water Reservoir, or Water Treatment Plant, we would pursue Treated Water Augmentation.

Ms. Ford further stated that this means treating wastewater to introduce directly into the distribution system with our other potable supplies. She further stated that the Study will also look at talking to neighboring agencies to explore potential collaboration, including partnership with Orange County Public Works to explore stormwater augmentation.

Ms. Ford stated that included in the report is some flow information that shows how potable water demands would consume all potentially generated through potable while still maintaining our Baker commitment. She further stated that we will also continue to do non-potable reuse, but further expanding the non-potable reuse system may not make sense given the limited additional supply, restricted use associated with



that type of supply (i.e., for irrigation), and potential for increased salinity.

Vice President Monin asked if staff discussed with neighboring agencies ideas on the grant side being successful in obtaining a grant. Ms. Ford replied that MWDOC wrote a letter of support citing their Water Supply Reliability Study, which encourages local agencies to pursue projects like this and have developed comparable unit cost of water to avoid a shortage.

Director Adjarian suggested letters of support from our neighboring agencies. Ms. Ford replied that staff has reached out to our neighboring agencies, and we have received several letters of support.

Director Freshley asked who will do the scope of work. Ms. Ford replied that if we get this grant, the contract would be awarded in July 2024 so we would issue an RFP to qualified technical consultants at that time.

Director Freshley asked which consultants are capable of doing this kind of analysis. Ms. Ford replied that Carollo Engineers, Black & Veatch, and Hazen and Sawyer are examples of who could perform this analysis.

Ms. Ford stated that this grant requires a 50% cost share, the majority of which would be covered through staff time, but there would still be some portion we would fund through our capital budget or additional grant funding.

Director Freshley asked for a Motion.

Motion: President Havens made a Motion, seconded by Director Adjarian to adopt Resolution No. 23-10-2 authorizing the General Manager or designee to apply for receive, enter into a cooperative agreement, and administer a grant for the WaterSMART Planning and Project Design for Fiscal Year FY 2023 and FY 2024.

Roll Call Vote:

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

Mathis Lift Station Inlet Piping Improvement Project

Mr. Harnisch stated that this is not a budgeted project. He further stated that, in May, Operations found a pipe section break at the inlet lower drop section at the entrance to the wet well.

Mr. Harnisch stated that staff worked with a contractor to gather potential solutions and found the best course of action at the time was to install two manholes. He further stated that staff reached out to Dudek to design construction documents for the project.

Mr. Harnisch stated that staff anticipated construction costs to be approximately \$300,000 so staff looked for a more cost-effective way to do this project. He further stated that staff suggested taking the exterior drop section and putting it on the inside of the wet well.

Mr. Harnisch stated that we would patch the lower wet well penetration so the sewage would no longer enter and then install a liner from the manhole in the street to the wet well to close off the lower section. He further stated that staff would also attempt to rescue the hose that was stuck in the inlet as a result of the initial blockage.

Mr. Harnisch stated that staff reached out to Tunnel Works, Inc., who is a contractor that our Collections Supervisor has worked with on many projects, to develop a cost for installing the bowl, passing the lower section, and lining the pipe from the manhole in the street to the wet well. He further stated that Tunnel Works, Inc. quoted

\$33,510 for this work, which also included working with both the City and the County for traffic control.

Mr. Harnisch stated that this work will be done at night when flows are lower.

Director Freshley asked for a Motion.

Motion: Director Gaskins made a Motion, seconded by Director Adjarian to authorize the General Manager to issue a contract to Tunnel Works Inc. in the amount of \$33,510 for construction of the Mathis Lift Station Inlet Piping Improvement Project.

Roll Call Vote:

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

Recess

At approximately 8:30 a.m. the Board took a short recess.

Regular Session

At approximately 8:40 a.m. the Board returned to regular session.

Engineering Information Items

Update on AB 1572

Ms. Seitz stated that the Governor signed AB 1572 on October 13<sup>th</sup>, and this bill prohibits the use of potable water to irrigate non-functional turf on certain properties. She further stated that the bill excludes turf irrigated by recycled water.

Ms. Seitz stated that this bill includes HOAs and common interest developments, but excludes multifamily residential properties, cemeteries, and tree health. She further stated that it does not apply to single family residential property.

Ms. Seitz stated that recreational use is defined as an area designated by a property owner or a governmental agency to accommodate human foot traffic for recreation, including sports fields, golf courses, playgrounds, picnic grounds or pet exercise areas.

Ms. Seitz stated that functional turf is defined as a ground cover surface of turf located in a recreational use area or community gathering space, while non-functional turf is defined as any turf that is not functional turf, and includes turf located within streets rights-of-way and parking lots.

Ms. Seitz stated that all public water systems must revise regulations, ordinances or policies governing water service.

Ms. Seitz stated that non-compliance shall be subject to civil liability and penalties imposed by an urban retail water supplier pursuant to their locally adopted ordinance or policy.

#### Making Conservation a California Way of Life Regulation

Mr. Chu provided an overview of regulation history of water conservation and the effects current regulations will have on our District. He further stated that there are more than 400 suppliers that provide water to 95% of California.

Mr. Chu stated that included in the Urban Water Use Objective is residential indoor and outdoor use, commercial landscapes with dedicated irrigation meters (DIMs), and real water losses. He further stated that excluded from the Objective is commercial indoor use, commercial outdoor use without DIMS, other uses, and apparent water losses.

Mr. Chu reviewed the basic formula for calculating objectives based on efficiency standards and supplier-specific data, reviewed the Residential Indoor Budget, Water Loss Budget, Residential Outdoor Budget, Commercial Landscapes with DIM Outdoor Budget, Commercial Performance Measures, Reporting Requirements, and State Board Enforcement's timeline.

Director Adjarian stated that the first public comment period is August 18<sup>th</sup> through October 17<sup>th</sup>, and asked if there will be additional opportunities to provide public comment, and if so when will the State provide a revised schedule. Mr. Chu replied that another workshop is anticipated before summer of 2024.

#### ETWD Operations Report

Mr. Cafferty stated that this report will show the work performed per month, per calendar year, and the targets and benchmarks for the Operations projects.

Mr. Hopkins stated that he gets regular updates on the projects and he will update the report as he receives the data.

Director Freshley stated that she was concerned about the level of savings shown in the Battery Report.

#### Capital Projects Status Report

##### R-6 Reservoir Floating Cover and Liner Replacement Project

Ms. Ford stated that staff have completed filling of the Reservoir on Monday, October 2<sup>nd</sup>. She further stated that the District is still monitoring total trihalomethane (TTHM) and carbon tetrachloride (CCl<sub>4</sub>), which are higher than their regulated maximum contaminant level (MCL). She further stated that staff has informed DDW and they approved our use of the water in the reservoir.

President Havens asked if we are venting. Ms. Ford replied that there are vents on the reservoir but no active mechanism to encourage volatile compounds to exit the reservoir through the vents.

Ms. Ford stated that today and tomorrow the divers are installing the cords for the valve open signal, and Layfield's contract is nearing completion so that work can begin on the paving project.

Director Adjarian asked if the divers are videoing their work as they go. Ms. Ford replied yes.

#### Grit Chamber Rehabilitation Project

Ms. Ford stated that we have finalized the design and the contractor that was on board for the coating project is providing us costing, which District staff will review and decide whether to recommend for award next month.

#### Headworks and Secondary Clarifier No. 1 Rehabilitation Project

Ms. Ford stated that next month we plan to award design of the Headworks and Secondary Clarifier No. 1 Rehabilitation Project to a consultant. She further stated that this is a combination of recommendations from the Headworks Rehabilitation and WRP Optimization Studies done last year to realize some cost savings.

Ms. Ford stated that the existing climber screen cannot handle the slug from the daily Northline pump down due to rapid screen blinding, so staff opens the bypass channel with the dimminutor to handle the excess flow. She further stated that the dimminutor is aging, and staff prefers its replacement with another bar screen and installation of a true, passive overflow channel. The WRP Optimization Study recommended replacing the existing Secondary Clarifier No. 1 in kind and bypassing the Waste Activated Cell (WAC), but District staff needs to weigh the decision to bypass

the WAC with our frequency of truck trips to SOCWA and need for emergency storage at the WRP. The design contract will establish the basis of design for the Headworks and Secondary Clarifier No. 1 Rehabilitation and will include an evaluation of polymer addition to enhance solids thickening at the WRP.

Director Adjarian asked who is submitting proposals. Ms. Ford replied that it is Carollo, Black & Veatch, Dudek, and Arcadis.

#### New Warehouse

Mr. Harnisch stated that the pre-engineered metal building is on order and likely to arrive in December. He further stated that footings have been placed, and slabs will be placed this week.

#### Aliso Creek Lift Station Alternatives Analysis

Mr. Harnisch stated that staff had a kickoff meeting with Tetra Tech and later today we will have our first on-site meeting. He further stated that influent flow monitoring will begin in a few weeks.

#### DAF Unit 2 Retrofit and Rehabilitation

Mr. Harnisch stated that the equipment is on site. He further stated that SS Mechanical is on board and will schedule a pre-construction meeting for construction to begin in early November.

Director Freshley asked if there will be any other engineering consultants involved in this project. Ms. Ford replied that, no, this was an in-house design project.

#### Effluent Transmission Main (ETM) Backflow Prevention Project

Mr. Harnisch stated that this project involves a large shutdown to install a check valve. He further stated that the contractor has completed the work and the pipeline has been in service for a few weeks; however there was some additional work done to

close the project, and staff filed a Notice of Completion (NOC) last week.

#### Effluent Pump Station Rehabilitation Project

Mr. Harnisch stated that the project is complete, and staff filed the NOC.

#### Asset Management

Ms. Ford stated that staff conducted an extensive workshop where WRP staff reviewed the results of the condition assessment and next will determine consequence of failure assignments for each asset to develop a risk score.

Ms. Ford stated that District staff are also working on an evaluation of our Computerized Maintenance Management System and how it will apply to all departments and communicate with our asset management dashboard.

#### System Wide Arc Flash and Coordination Study

Ms. Ford stated that we have submitted a request to SCE for data and are working to schedule site visits with the consultants, some of which will require a shutdown. She further stated that we are scheduling the shutdown of the WRP to coincide with when we receive the ATSS which are expected the end of this month.

#### Lead and Copper Rule Revisions Compliance

Ms. Ford stated that staff is responding to a large data request while MWDOC and Hazen develop the contract agreement and final costing.

#### Tertiary Disinfection Optimization Project

Ms. Ford stated that staff received comments back last week from DDW and staff will initiate the tracer test upon finalization of the protocol.

#### Cathodic Protection Repair on Moulton Parkway

Ms. Ford stated that there is no movement on this project pending traffic control in order to perform a survey.



### Energy Efficiency Analysis

Ms. Ford stated that we are responding to a data request for InPipe Energy to identify potential opportunities for hydroturbines within the potable and/or recycled water systems.

### 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 10:17 a.m.

### Attorney Report

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

### Adjournment

There being no further business to come before the Board, the meeting was adjourned at 10:17 a.m.

Respectfully submitted,

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POLLY WELSCH  
Recording Secretary

APPROVED:

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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



## STAFF REPORT

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**To:** Board of Directors

**Meeting Date:** November 23, 2023

**From:** Hannah Ford, Engineering Manager

**Subject:** Headworks and Secondary Clarifier No. 1 Rehabilitation  
Design Services

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### BACKGROUND

At over 60 years of age, Secondary Clarifier No. 1 shown in Figure 1 and Figure 2 has significantly deteriorated and some of its components have reached the end of their useful life. The District conducted a WRP Optimization Study in 2022 to evaluate the feasibility of eliminating the Waste Activated Cell (WAC) and retrofitting Secondary Clarifier No. 1 to rehabilitate the aging facility and improve process performance. The WRP Optimization Study recommended replacing the Secondary Clarifier No. 1 sludge collector mechanism in kind and re-routing waste activated sludge (WAS) around the WAC, directly to the dissolved air floatation thickener (DAFT) units.



**Figure 1 –Secondary Clarifier No. 1**

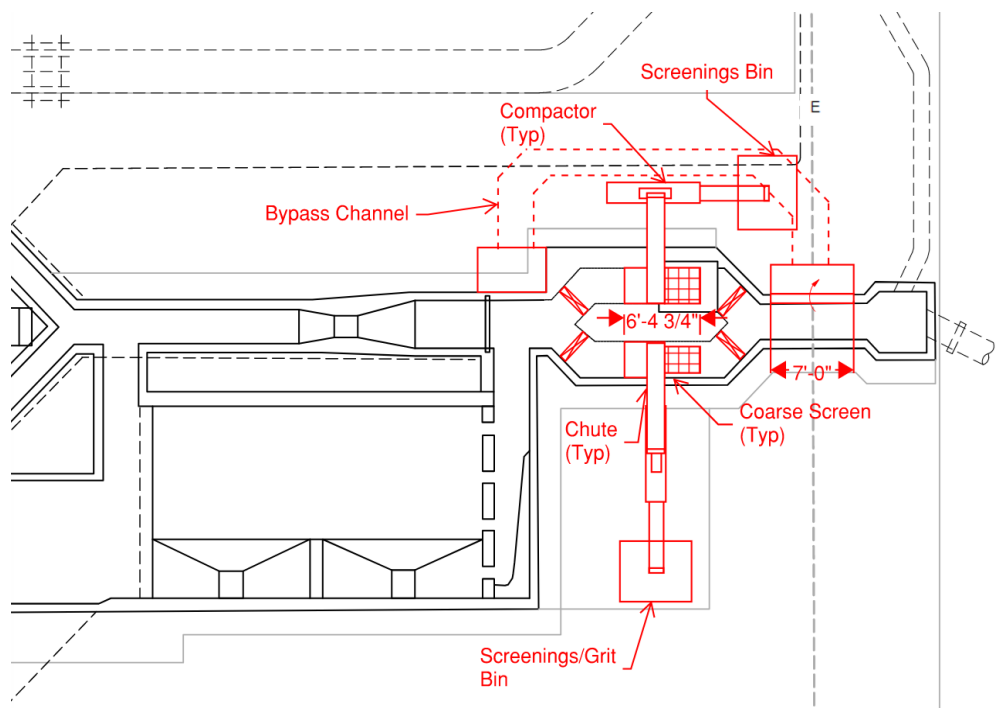


**Figure 2 – Drained Secondary Clarifier**

District staff have since been contemplating the results of the WRP Optimization Study and would like to further consider the implications of abandoning the WAC and/or potentially adding polymer to increase the disposed solids concentration and subsequently reduce the number of truck trips for hauling. Based on further discussions with consultants, District staff have decided to maintain the WAC in place to avoid added costs and risks of re-routing process wastes from the WAC, constructing a new WAS pump station, constructing a new scum pump station, and retrofitting the WAC structure to mitigate the potential uplift impacts

of high groundwater level on an empty WAC tank. District staff will work with the selected consultant to evaluate polymer addition at full scale for potential inclusion in the final design.

In addition, the Headworks at the WRP has suffered from significant deterioration since its construction in the early 1980s. In the coarse screen area, there are two channels, one with a climber screen and one with a dimminutor. Once per day, when the Northline Lift Station wet well is pumped down, the climber screen cannot handle the slug of organic-laden flow due to rapid screen blinding, so staff opens the bypass channel with the dimminutor to handle the excess flow. Relying on the bypass channel every day is not an ideal mode of operation. Further, the dimminutor in the bypass channel is failing and requires replacement, and the parts for the climber screen brake are now obsolete. ETWD conducted a Headworks Rehabilitation Study at the end of 2022, which recommended installing a new climber screen to replace the existing dimminutor, refurbishing the existing climber screen, re-arranging the existing Wash Presses, and constructing a new overflow to bypass the existing coarse screen area, as shown in Figure 3.

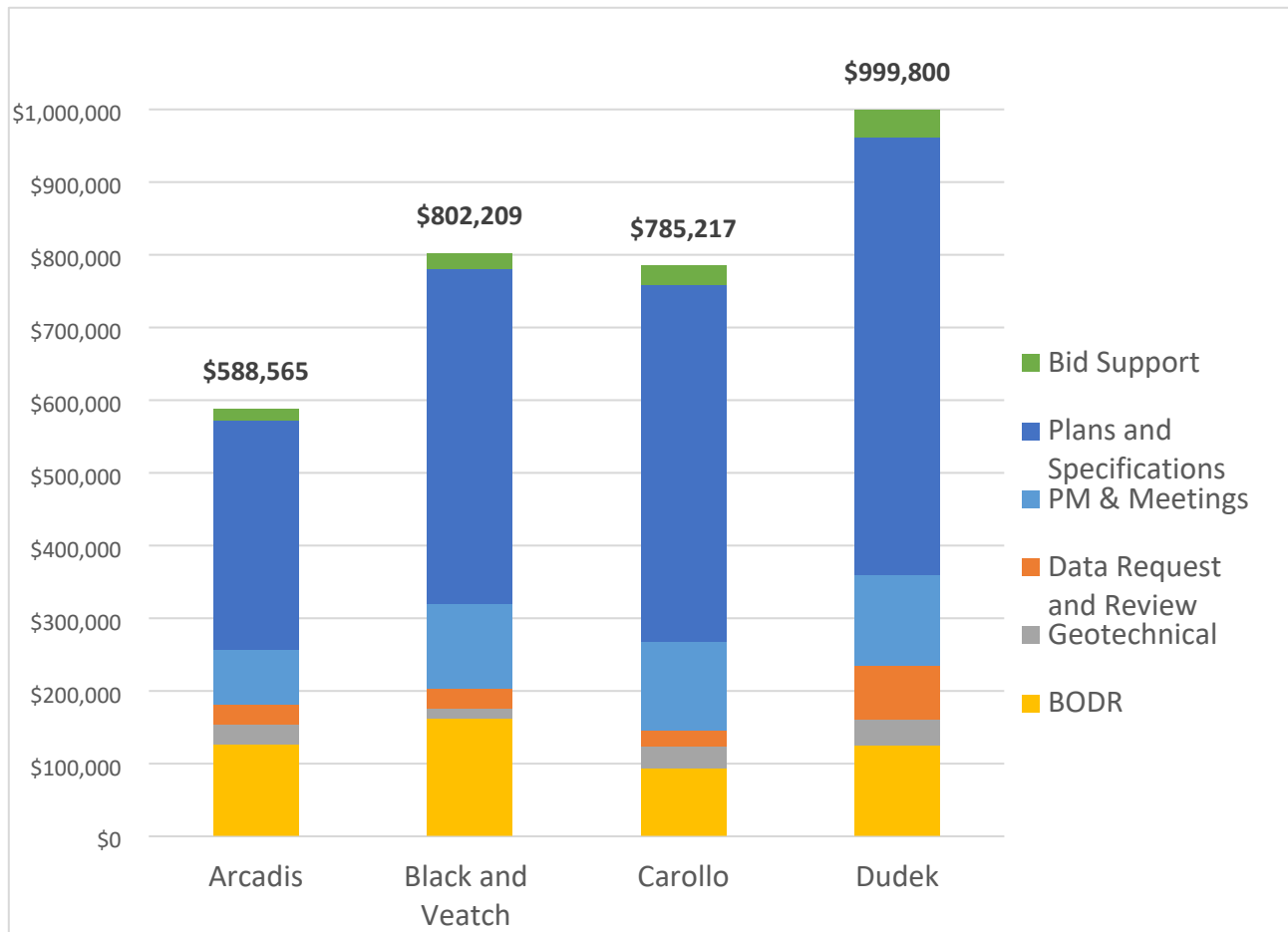


**Figure 3 – Proposed Coarse Screen Area Improvements**

To realize some contract management and cost efficiencies, District staff decided to combine the Coarse Screen Area and Secondary Clarifier No. 1 rehabilitations into one Headworks and Secondary No. 1 Rehabilitation Project. District staff issued a Request for Proposals (RFP) to a short list of five qualified firms for engineering design.

## PROPOSAL EVALUATION

Arcadis, Black and Veatch, Carollo Engineers, Inc. (Carollo), and Dudek attended the preproposal meeting, and all four consultants submitted proposals in early November. Following proposal submission, District staff conducted interviews with all four teams. Figure 4 summarizes the proposed fee. The spread between the low and high fee is approximately 39 percent.



**Figure 4 – Headworks and Secondary Clarifier No. 1 Rehabilitation Design Fee Summary**

After careful review of the proposals and conducting interviews with each consultant, District staff unanimously agreed upon Carollo as the recommended consultant for this work. Although Carollo's cost is almost \$200,000 higher than the lowest cost consultant, District staff found that the Carollo team offered the following advantages:

- Thorough understanding of Work,
- Thoughtful technical approach,
- Significant relevant, recent experience on similar designs,
- Technical project manager who has delivered similar designs with the proposed team,
- Clear adherence with the RFP requirements,

- Demonstrative quality controls,
- Early cost identification for FY 2024/25 budgeting, and
- High value for reasonable cost.

District staff felt that the investment in the increased cost for a quality design will benefit the overall Project and may ultimately result in a lower cost construction. The proposed team includes staff that worked on the District's 1995 WRP Rehabilitation and more recently on the Headworks Rehabilitation Study and Grit Improvement Final Design. In the interview, Carollo stated "our 1995 WRP Rehabilitation Project addressed most of the WRP except the Headworks and Secondary Clarifier No. 1; we're ready to help finish the job." Attachment A contains the recommended consultant's proposal.

## **COST AND FUNDING**

Fiscal year 2023/24 includes \$227,700 for the Coarse Screen Rehabilitation design and \$649,900 for the Secondary Clarifier No. 1 and WAC Rehabilitation design for a total budget of \$877,600. Carollo's design fee is well below budget, as shown in Table 1.

**Table 1 - Headworks and Secondary Clarifier No. 1 Rehabilitation Budget Project Cost**

<b>FY 2023/24 Budget</b>	
Headworks Rehabilitation Design	\$227,700.00
Secondary Clarifier No. 1 and WAC Rehabilitation Design	\$649,900.00
<b>Total</b>	<b>\$877,600.00</b>
<b>Carollo Design Fee</b>	<b>\$785,217.00</b>
<b>Remaining Budget Available</b>	<b>\$92,383.00</b>

An early milestone of this Project is the development of the basis of design, at which point the District will work with the consultant to confirm construction cost and scope of work. After the development of the basis of design, District staff may request additional funds for added design scope, such as seismic upgrades for Secondary Clarifier No. 1 and/or polymer addition within the solids handling system.

## **RECOMMENDATION**

### **Recommended Action:**

Staff recommends that the Board of Directors authorize the General Manager to enter into a contract with Carollo Engineers, Inc. in the amount of \$785,217.00 for design of the Headworks and Secondary Clarifier No. 1 Rehabilitation Project. Staff also 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 SERVICES FOR  
Headworks and  
Secondary Clarifier No. 1  
Rehabilitation Project

PROPOSAL / November 2023





3150 Bristol Street, Suite 500  
Costa Mesa, California 92626  
714-593-5100  
[carollo.com](http://carollo.com)

November 1, 2023

Hannah Ford, Engineering Manager  
El Toro Water District  
2451 Los Alisos Boulevard  
Lake Forest, CA 92630

**Carollo acknowledges  
receipt of Addendum No. 1  
dated October 13, 2023.**

Subject: Proposal to Provide Engineering Services for the Headworks and Secondary Clarifier No. 1  
Rehabilitation Final Design Project (project)

Dear Ms. Ford:

El Toro Water District (District/ETWD) has a long history of reliable, efficient operation. The Water Recycling Plant (WRP) is a prime example. For nearly 30 years since the 1995 Reconstruction project, the WRP has provided reliable, steadfast performance without major upgrades. Recently you identified headworks and Secondary Clarifier No. 1 rehabilitation as a priority for maintaining the WRP's long-standing resiliency, and in the case of the headworks conceptual design and the subsequent grit modifications, you selected Carollo for your needs. On the current Project and similar to the past, you need a consultant that you can trust throughout all phases of the work. We offer:

**An expert team of headworks and clarifier specialists:** Our experts (Mary-Ellen Esquer, Han Kang, and Scott Parker) have a track record of leading or advising similar projects with highly successful outcomes. Leveraging their extensive experience, we will efficiently provide holistic assessments that consider a wide range of real-world factors and yield comprehensive, robust results for the District's considerations.

**A thorough understanding of your project:** We understand your staff's time is precious and the District's resources are finite. For improved efficiency, you also need the consultant to operate at a high degree of efficiency and mastery. We will achieve decisions that stick, develop clear construction documents, and stay within your project budget. We also commit to frequent and responsive communication and will implement our tried and true project and quality management procedures. We will carefully track construction cost throughout the design.

**Continued commitment to ETWD:** We are dedicated to providing exceptional service to the District for the long haul. As you have seen in our meetings and workshops, as well as in our discussions leading up to the RFP, we listen to your needs and concerns and, in turn, provide practical solutions and valuable insights to serve in the best interest of the District. On the current endeavor, we are committed to delivering a project that is in line with your big picture vision and goals.

We look forward to continuing our partnership with you and your team. Should you have any questions, please reach out to me by email, [traasch@carollo.com](mailto:traasch@carollo.com), or by phone, (321) 514-2550. We look forward to discussing this project with you further.

Sincerely,

CAROLLO ENGINEERS, INC.

Teri Raasch, PE  
Project Manager/Principal-in-Charge



# El Toro Water District

## END OF ADDENDUM NO. 1

The contract documents require that this Addendum No. 1 be executed and submitted with the bid.

Date: 10/13/2023

**Dennis P.  
Cafferty**

Digitally signed by Dennis  
P. Cafferty  
Date: 2023.10.13 15:11:38  
-07'00'

Dennis P. Cafferty, P.E.  
General Manager / District Engineer

## BIDDER'S CERTIFICATION

I acknowledge receipt of the foregoing Addendum No. 1 and accept all conditions contained herein.

Dated: November 1, 2023

PROPOSER: Carollo Engineers, Inc.

BY: 

Teri Raasch, PE  
Principal-in-Charge

# Similar Experience

As one of the largest water-focused engineering firms in the country, Carollo is dedicated to providing exceptional services to clients. Our singular focus on water enables us to develop best-in-class expertise in planning and design of treatment facility improvements, manifested in execution of projects similar to yours.

## Firm Overview

Carollo routinely applies sound, proven engineering principles to advance the application of water, wastewater, and recycled water technologies and engineering excellence. As a result, **we have a strong reputation in the industry for providing outstanding “nuts and bolts” designs that result in robust facilities that are cost-effective and easy to operate and maintain.** We currently maintain 51 offices in North America and our staff numbers exceed 1,350 employees, which includes more than 850 registered engineers and specialists.

Throughout our 90-year history, we have earned a reputation for applying sound, proven engineering principles to advance the application of drinking water, wastewater, recycled water, and stormwater technologies and engineering excellence. For ETWD, this means expertise and experience that deliver enhanced performance, increased reliability, minimized risk, and value-added improvements—helping you stay ahead of potential issues.

## Proven Headworks Technical Expertise

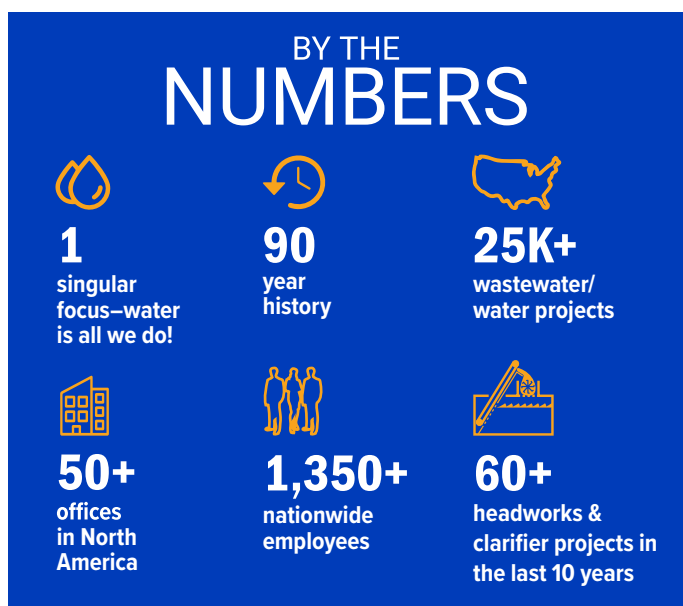
Carollo's headworks experience is unmatched, with more than 200 new or improved facilities, with peak flows ranging from less than 1 mgd to more than 300 mgd. Our overall firm experience rehabilitating substantial headworks facilities is largely held by the same team we are proposing for your project. **This provides ETWD with the following benefits:**

- Customized innovative solutions specific to your needs.
- Valuable lessons learned to increase reliability and reduce project risk.
- An understanding of how to incorporate the latest and most robust technology.
- O&M-focus resulting in improved safety, O&M friendly work environment, and lower long-term costs.
- Complete information provided to ETWD staff that will expedite consensus building and decision making.

## Excellence in Secondary Clarifiers Design

Carollo also has extensive experience in evaluating, optimizing, and retrofitting secondary clarifiers with similar features outlined in your request for proposals (RFP). These features include weir placement, weir and launder cleaning systems, scum removal, optimization of rectangular and circular clarifiers, and process assessment. We also have experience with collector mechanism design, flocculating well design, energy dissipation inlet design, and hydraulic/density current assessments.

Founded on our strong technical expertise, our methods aim at providing tried and true, practical improvements that make tangible differences to the owner. Specifically, we strive to develop engineering solutions that meet O&M requirements, facilitate construction, and adhere to owner's budget expectations.



This experience will be used to assist ETWD in achieving highly reliable, cost-effective, and optimized treatment facilities that efficiently manage a wide range of operating conditions.

Carollo's extensive work on projects of similar scope and challenges will afford you the confidence that you will receive a high-quality, long-lasting design like many of your existing facilities. We are prepared to guide your journey to transform ETWD's headworks and clarification facilities to a system that you can count on for many decades to come.

We have included brief descriptions of six reference projects on the following pages. As shown in our project descriptions, and summarized in the table below, we have highlighted projects that match up with the scope of services identified.

Project/Client	Peak Flow Capacity, mgd	Screening and Screenings Handling	Secondary Clarifiers	RAS /WAS Pumping	MCC Mods/ Replacement	Polymer
<b>El Estero Headworks Screening Replacement</b>	33	●			●	
<b>Headworks Conceptual Design Study &amp; Grit Rehabilitation Project   El Toro Water District, CA</b>	15	●			●	
<b>County of Hawaii, HI - Hilo WWTP Rehabilitation and Replacement Project</b>	13	●		●	●	
<b>Secondary Clarifiers No. 1-3 Rehabilitation   South Tahoe Public Utility District, CA</b>	8	●	●	●	●	
<b>1995 WRP Reconstruction   El Toro Water District, CA</b>	15		●	●	●	
<b>Moreno Valley Regional WRF   Eastern Municipal Water District, CA</b>	33	●	●	●	●	●
Los Osos Water Recycling Facility   San Luis Obispo County, CA	4	●	●	●		●
Secondary Clarifier No. 5 and Denitrification   City of Turlock, CA	40		●	●	●	
Water Pollution Control Plant Rehabilitation Reliability Upgrade   City of San Leandro, CA	28	●	●	●	●	
San Jacinto Valley Regional WRF   Eastern Municipal Water District, CA	30	●	●	●	●	●
Temecula Valley Regional WRF   Eastern Municipal Water District, CA	38	●		●	●	●
Richmond Wastewater Treatment Plant Critical Improvements   Veolia Water, CA	40	●	●		●	
Perris Valley Regional Water Reclamation Facility   Eastern Municipal Water District, CA	44	●	●	●	●	●
Southwest WRF Headworks & Clarifier Rehabilitation   Manatee County, FL	26		●	●	●	
Central Wastewater Treatment Plant Major Maintenance and Rehabilitation Improvements   Dallas Water Utilities, TX	310	●	●	●	●	
South San Francisco/San Bruno Water Quality Control Plant   City of South San Francisco, CA	60		●	●	●	
Secondary Treatment Facilities Expansion   Fairfield-Suisun Sewer District, CA	54		●	●	●	
Water Pollution Control Plant 12-mgd Expansion   City of Chico, CA	30	●	●	●	●	●
Pleasant Grove Wastewater Treatment Plant Expansion   City of Roseville, CA	60		●	●	●	
PAR 942 North Secondary Clarifiers & PAR 1225 South Headworks   Metro Wastewater Reclamation District, CO	110	●	●	●	●	
Fresno-Clovis Regional WRF Organic Upgrades   City of Fresno, CA	88		●	●	●	
Southeast Plant Headworks Facility - San Francisco Public Utilities Commission, CA	250	●			●	
Headworks and Primary Treatment Facility - City of Sunnyvale, CA	60	●			●	●
Plant No. 2 Headworks Replacement - Orange County Sanitation District, CA	340	●			●	
Central Plant Bar Screen Facility & South Secondary Facilities - Clark County Water Reclamation District, NV	260	●	●	●	●	●
Wastewater Treatment Plant Upgrades & Gravity Thickener Modifications - City of Palm Springs, CA	30	●			●	●
Headworks Upgrades - City of Modesto, CA	95	●			●	
WPCF Headworks Bar Screen - City of Hayward, CA	40	●			●	
Plant No. 1 Headworks Rehabilitation and Expansion - Orange County Sanitation District, CA	320	●			●	
Bustamante WWTP Headworks Improvements - City of El Paso, TX	130	●			●	
Primary and Secondary Treatment Improvements - City of Livermore, CA	25	●	●		●	





2012 Project of the Year, ASCE, Santa Barbara/Ventura;  
2013 Outstanding Private Sector Engineering Project Honorable Mention, ASCE, LA

## El Estero Headworks Screening Replacement Project

City of Santa Barbara, CA

The headworks screening replacement project had a number of striking similarities to your proposed coarse screen improvements, achieving several identical process enhancements while overcoming existing constraints in physical space and plant hydraulics. Most notably, keeping the plant in service throughout the construction and minimizing the impact of the shutdowns were of paramount importance to the owner.

### Project Highlights

- **Complex, Innovative Retrofit.** The existing screening system consisted of “Channel Monsters” located in a 35-foot-deep basement—an antiquated method to remove and handle screenings. We converted the facility to a highly reliable, state-of-the-art installation that eliminated the excessive operation and maintenance requirements of the existing system. Through collaboration with a screen manufacturer, we developed an innovative solution that allowed installation of 2 vertical multi-rake screens with 3/8-inch bar spacing in the extremely constricted facility. We also added screenings conveyance, washing/compaction, and loading equipment. The screens were custom designed, each fabricated in five sections to allow getting them into the building through the

existing doors and installing them in the basement through existing floor hatches.

- **Electrical Improvements.** The entire electrical system was replaced with new. The new infrastructure includes a smart motor control center (MCC) supporting both new and existing equipment. To minimize risk and optimize effort, our team installed new MCCs in the same room as the existing MCCs, transferring the load to the new in a predetermined sequence prior to eliminating the old.
- **Construction Sequencing.** Collaborated with staff during design through a series of workshops and developed a detailed construction sequencing plan that provided specific work restrictions, milestones, and schedule constraints for the contractor. The plan was incorporated into the contract documents to guide the contractor in bidding and construction. This included temporary bypass pumping of plant influent and plant drains implemented for the first time in the plant history, and allowed sequential replacement of existing equipment to minimize construction impact on the facility operation. Requirements for efficient work completion were achieved by combining shutdowns.

### Relevance

- Two coarse screens installed in existing channels replacing Auger Monster comminuter screens.
- Screen bypass channel for use during emergency.
- Installation of new motor operated gates for channel isolation.
- Two screenings washer compactors.
- Replacement of an existing headworks MCC.
- Construction sequencing with bypass pumping to maintain plant operation.

### CLIENT REFERENCE

Thomas Welche, Wastewater Treatment Superintendent  
805-568-1002  
twelche@santabarbaraca.gov

### TEAM INVOLVEMENT

Han Kang, Mary-Ellen Esquer, Walid Karam, James Doering

“Carollo’s work resulted in the single greatest impact on reducing the plant’s O&M effort—more than all other projects combined.”

David Lewis,  
WW Treatment Supervisor



## Headworks Conceptual Design Study and Grit Rehabilitation Project

El Toro Water District, CA

As a precursor to the Headworks and Secondary Clarifier No. 1 Rehab Project, this study evaluated a wide range of alternatives for improving the coarse screening, grit removal, and fine screening facilities. The outcome was a conceptual design for each of the three areas. Recommendations for technologies, configurations and layouts, and access and reliability provisions were developed along with costs, for the District to incorporate future upgrades into the capital improvement plan.

For grit removal, rehabilitation recommendations for improving O&M and energy efficiency are being implemented as part of an ongoing construction project at the headworks. They consist of new air lift pumps, diffusers, and refurbishing an existing blower with a new VFD. This project’s innovative approach will provide streamlined construction and reduced implementation cost.

### RELEVANCE

- The study conducted a comprehensive assessment of the existing coarse screen facility. The resulting findings established a conceptual design for improvements that serves as a basis of design for this project.
- The study concluded that the existing climber screen was effective and had a significant asset value fully renewable with refurbishment. The climber also provides a significant advantage with a larger available screen field than a multi-rake with the same bar spacing.
- The study evaluated and incorporated the District’s desire to retain the two washer compactors that were recently installed, significantly reducing scope and associated construction cost.

### CLIENT REFERENCE

Hannah Ford, Engineering Manager  
949-837-7050  
hford@etwd.com

### TEAM INVOLVEMENT

Teri Raasch, Han Kang, Mary-Ellen Esquer, Walid Karam, ProjectLine



## Hilo WWTP Rehabilitation Replacement Project

County of Hawaii, HI

Carollo provided planning and design of plant-wide rehabilitation and replacement in two phases. Phase 1 included a new 13-mgd headworks facility and new anaerobic digesters to replace deteriorating structures. Phase 2 includes primary and secondary clarifier rehabilitation, a new solids handling building, and plant utility upgrades.

### RELEVANCE

- New headworks included influent flow monitoring and sampling, two multi-rake bar screens with 1/4-inch bar spacing, a bypass channel with a manual bar rack, screenings handling (shaftless screw conveyor, washer/compactor, two vortex grit removal basins, grit handling (two grit washers and a loading system), two single-stage bio scrubbers, and improvements to receiving facilities for septage and sludge from other County treatment plants.
- Replacement of three 65-foot diameter secondary clarifier mechanisms, secondary scum pumps, WAS pumps, and concrete repairs and recoating.
- New polymer system to enhance sludge thickening.
- Predesign and design of the new headworks facility were completed within a very accelerated schedule of eight months to enable fast track project implementation to replace the deteriorated headworks.
- Conducted multiple workshops with plant staff to jointly develop detailed construction sequencing plans and constraints to minimize the number of shutdowns required and their durations to minimize impacts on plant operation during construction.

### CLIENT REFERENCE

Mark Grant, Project Coordinator  
808-961-8589  
markj.grant@hawaiiicounty.gov

### TEAM INVOLVEMENT

Teri Raasch, Mary-Ellen Esquer, Walid Karam, James Doering, Tanner Howe





Existing clarifier mechanism with mid-level RAS pipe drawoff.



Replacement clarifier mechanism featuring stainless steel construction and hydraulic suction header RAS removal.

## Secondary Clarifiers No. 1-3 Rehabilitation

South Tahoe Public Utility District, CA

South Tahoe Public Utility District (STPUD) retained Carollo to design a rehabilitation project for their aging secondary treatment process. This project involved rehabilitation of three 100-foot-diameter secondary clarifiers. Similar to your Secondary Clarifier No. 1, two of the three STPUD's clarifiers were built in the 1960s, whereas the third clarifier was from the early 1970s. The purpose of the project was to evaluate and define current structural and equipment conditions and identify needed improvements to achieve the goal of extending the service life of the clarifiers by 50 years.

Carollo conducted both on-site and desktop condition assessments to determine the necessary improvements. Carollo assisted the District with a preconstruction procurement of new clarifier mechanisms to ensure the consistency of equipment through the phased implementation.

Improvements included seismic retrofit of the structure to enhance resiliency; replacement of the clarifier sludge collector mechanisms; relocation of the RAS piping under the clarifier to accommodate the new suction header-style (Towbro) mechanisms, which replaced the old organ-pipe-style mechanisms; new clarifier floor grout; and associated electrical and controls improvements.

Complete mechanism replacement was selected as the most cost effective approach for the retrofit. Fabrication of new mechanisms allowed for Carollo to utilize computational fluid dynamics to optimize baffling and other characteristics to optimize solids settling and unlock additional unit process treatment capabilities within the existing structures.

After the decision was made by the District to fully replace the existing mechanisms, a business case evaluation was conducted to determine the appropriate materials of construction to use. The results of that analysis showed significant cost savings over the remaining life of the clarifiers to utilize stainless steel construction to avoid the current and future costs of installing and maintaining a protective coating system on carbon steel structural components.

The project was split at 90-percent design with the Clarifier No. 3 retrofit going to bid in 2020 and Clarifier Nos. 1 and 2 improvements deferred to separate projects, which were constructed in 2022 and 2023.

Upon completion of the design phase of the clarifier rehabilitation, STPUD again retained Carollo to assist the District with a comprehensive retrofit of the existing RAS pumping system. The preliminary design is ongoing,

evaluating various pumping alternatives and condition assessment to determine the capability of the existing infrastructure to meet the District's useful life goals.

### Relevance

- Cost conscious retrofit of existing aging infrastructure to deliver up to 5 decades of extended service.
- Challenging project sequencing to accommodate ongoing operations and capacity requirements.
- Utilized retrofit opportunity to enhance treatment capabilities through the use of computational fluid dynamics to optimize hydraulic conditions to improve sludge settling characteristics and increase unit process capability.

### CLIENT REFERENCE

Steve Caswell, Principal Engineer  
530-543-6202  
scaswell@stpud.dst.ca.us

### TEAM INVOLVEMENT

Scott Parker



## 1995 Water Recycling Plant Reconstruction

El Toro Water District, CA

Carollo provided design services for a comprehensive reconstruction of the WRP. As one of the largest and most complex CIP projects undertaken at the WRP, a key focus was to revamp secondary treatment, which essentially resulted in the existing facilities in their current configuration. Most notable project elements include three new aeration basins, rehabilitation of existing secondary clarifiers, a new RAS and WAS pump system, new blower facility, and an emergency generator set. These facilities have been in successful operation for nearly 30 years.

To facilitate construction and reduce ETWD's risk, specified detailed construction sequence requirements to bring new facilities online without significantly impacting plant operation. To this end, start-up of new facilities was coordinated with plant staff in advance. As a result, construction was successfully completed that culminated in the current facilities that are efficient to operate and maintain.

### RELEVANCE

- Established the current plant hydraulic profile for the WRP that incorporated new flow equalization to optimize the size and operation of the revamped secondary treatment facilities.
- Provided a comprehensive rehabilitation of Secondary Clarifier Nos. 3 and 4 that successfully renewed their service life. ETWD is seeking a similar rehabilitation of Secondary Clarifier No. 1 in the current project.
- Provided four new RAS Pumps with VFDs that support Secondary Clarifier Nos. 1-4. The pump station was designed to control solids wasting to WAC upstream of DAFs.

### CLIENT REFERENCE

Dennis Cafferty, General Manager  
949-837-7050 x 223  
dcafferty@etwd.com

### TEAM INVOLVEMENT

James Doering, Mary-Ellen Esquer



## Moreno Valley Regional Water Reclamation Facility (MVRWF) Secondary Clarifier and Tertiary Treatment (SCATT) Project

Eastern Municipal Water District, CA

This project was fast-tracked to achieve an accelerated expansion and rehabilitation of existing secondary and tertiary treatment facilities. Project included several facilities similar to your Headworks and Secondary Clarifier No. 1 project. Specifically, they included rehabilitation of two 125-foot diameter circular secondary clarifiers; addition of two new 125-foot diameter secondary clarifiers; addition of three RAS pumps and three WAS pumps; addition of a secondary scum pump station; and addition of two separate polymer facilities.

### RELEVANCE

- Secondary clarifier rehabilitation provided adjustment of the drive and center column alignment, replacement of damaged sludge seals, replacement of existing sludge piping, and addition of stainless-steel effluent strainers. Collectively, they renewed the service life of 25-year-old clarifier mechanisms and components in a cost-effective manner.
- Expanded the secondary clarification and associated sludge and scum handling capacity by 100%. Provided a secondary scum pump station using submersible chopper pumps similar to your project.
- Two polymer facilities each provided three polymer blenders and two storage totes on weight scales.

### CLIENT REFERENCE

Bruce Mitzel, Director of Field Engineering  
951-928-3777 x4476  
mitzelb@emwd.org

### TEAM INVOLVEMENT

Han Kang, James Doering

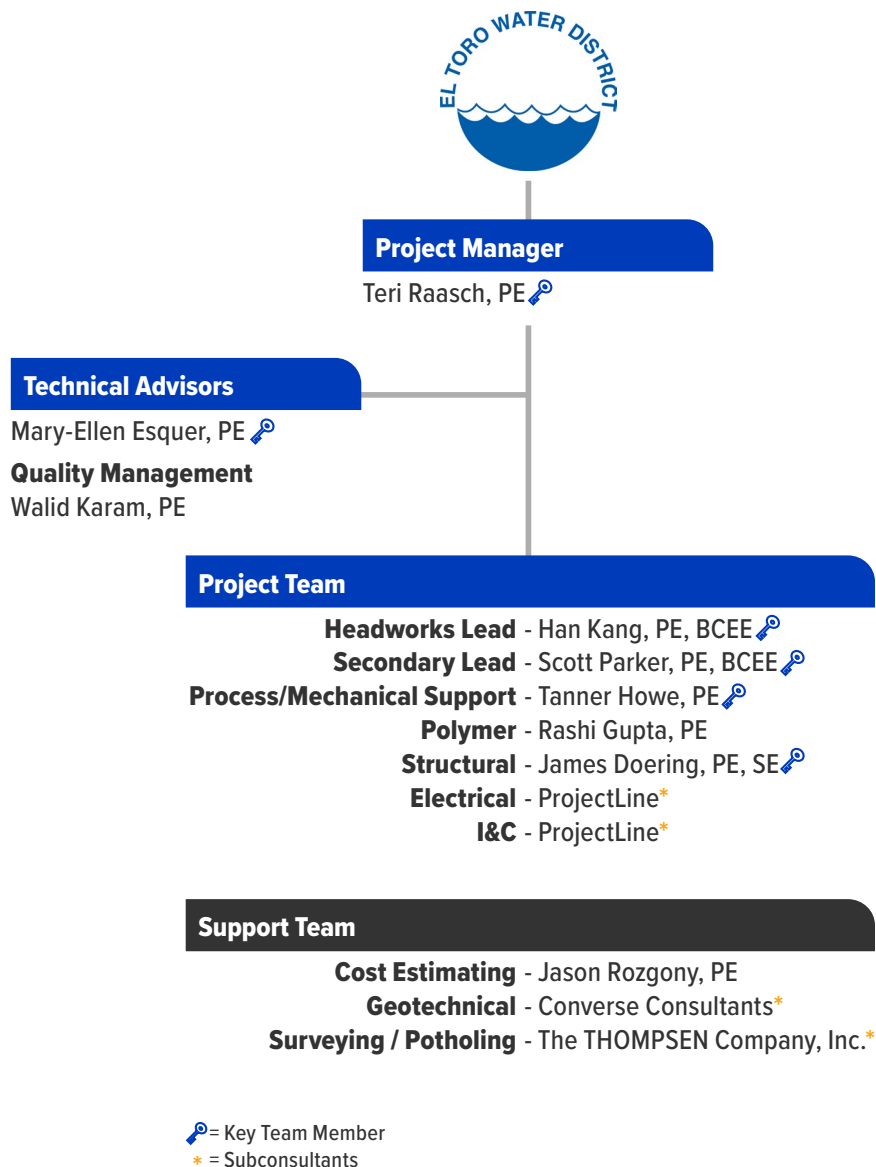
# Project Team

The most important element of any project is the people selected to perform the work. With unparalleled technical expertise on headworks and secondary clarification, our team has direct and relevant experience that will benefit your project. Key benefits will include superior engineering solutions, enhanced collaboration with your staff, and smooth project implementation.

## The Right Team for ETWD

We are a great fit for your project! Our team includes company-wide experts on its primary processes (headworks, clarifiers, and polymer) with industry recognized credentials as well as local design professionals who have proven experience delivering challenging retrofit projects similar to this project. Further, as the designer of the 1995 WRP Reconstruction and the recent headworks study, we bring forth immense institutional knowledge on ETWD's facilities, procedures, and preferences.

The chart to the right illustrates our team organization, depth of resources, and defines specifically the key personnel and roles needed to implement all tasks and assignments throughout the project. Our proposed team will be committed to your project from start to finish, leveraging our history with you and our wealth of experience on similar projects. Abbreviated profiles showcasing our team's qualifications and experience follow. Detailed resumes are provided in the Appendix.







## Teri Raasch, PE

### PROJECT MANAGER

Teri is a project manager with experience leading detailed design of new and retrofit wastewater treatment facilities. She has provided planning, design, and construction services for clients such as the San Francisco Public Utilities Commission, Orange County Sanitation District (OC San), and City of Sunnyvale, California. Teri will provide project oversight and controls to achieve high-quality deliverables within your project schedule. She will be the primary point of contact with the District and will be responsible for making sure your expectations are met.

#### ★ RELEVANT EXPERIENCE:

- Principal-in-charge for the Headworks Conceptual Design Study and the Grit Rehabilitation Project for El Toro Water District, California.
- Principal-in-charge for the Water and Sewer Master Plan Update for El Toro Water District, California.
- Design manager for Hilo Wastewater Treatment Plant Rehabilitation and Replacement Project – Phase 1 for the County of Hawaii.
- Project engineer for the grit system for Southeast Plant's New 250-mgd Headworks, San Francisco Public Utilities Commission, California.



## Han Kang, PE, BCEE

### HEADWORKS LEAD

As a meticulous design manager, Han has 23 years of experience working on a wide range of headworks facilities and contributing to Carollo's delivery of several highly successful headworks projects. They include challenging retrofits such as Santa Barbara at 33 mgd and OC San's Plant 1 at 320 mgd. Both of these projects require significant influent bypass pumping operation and structural rehabilitation to renew facility service life. In addition, Han's experience includes new facilities such as Los Osos Water Recycling Facility at 4 mgd, Sunnyvale at 60 mgd, and OC San's Plant 2 at 340 mgd. Several of his projects have won industry awards and recognition.

#### ★ RELEVANT EXPERIENCE:

- Project manager for the award-winning El Estero Wastewater Treatment Plant Headworks Screenings Replacement Project for the City of Santa Barbara, California.
- Assistant project manager for the Moreno Valley Regional Water Reclamation Facility Secondary Clarifiers and Tertiary Treatment Project for the Eastern Municipal Water District, California.
- Assistant project manager for the Headworks Rehabilitation Project at Plant 1 (P1-105) for Orange County Sanitation District, California.



## Scott Parker, PE, BCEE

### SECONDARY LEAD

As Carollo's expert on secondary clarification, Scott has industry-leading experience having managed over 12 clarifier projects and advised on over 35 clarifier projects. Internally, he also manages development and improvement of Carollo's master specifications for clarifier equipment. He also developed and maintains several clarifier design tools, helping create Carollo's trademarked Clariflux® software, an innovative computer software that provides visual depictions of clarifier performance.

#### ★ RELEVANT EXPERIENCE:

- Project manager for the design and construction of the \$10 million South Tahoe Public Utility District, California, Secondary Clarifier Replacement.
- Project manager for the \$22 million Fairfield-Suisun Sewer District, California, Secondary Treatment Expansion.
- Technical advisor for the City of Sunnyvale, California, \$280 million Secondary Treatment and Dewatering preliminary and final design.
- Principal-in-charge for the City of Chico, California, \$45 million Water Pollution Control Plant Expansion.



## James Doering, PE, SE

### STRUCTURAL LEAD

James is Carollo's Chief Structural Engineer with 28 years of experience who oversees structural design of all projects in Southern California. He has experience in structural analysis, design, seismic retrofit, rehabilitation, review, and condition assessment for a variety of structures including reservoirs, tanks, pump stations, wastewater and water treatment facilities, clarifiers, headworks, and O&M facilities.

#### ★ RELEVANT EXPERIENCE:

- Structural engineer for the 1995 WRP Reconstruction Project for the El Toro Water District, California.
- Structural engineer and value engineering team member for the Moreno Valley Regional Water Reclamation Facility Secondary Clarifiers and Tertiary Treatment (SCATT) Expansion for the Eastern Municipal Water District, California.
- Structural engineer for El Estero Wastewater Treatment Plant Digester Nos. 1 and 2 Rehabilitation for the City of Santa Barbara, California.
- Structural engineer for the Headworks Rehabilitation Project at Plant 1 (P1-105) for Orange County Sanitation District, California.



## Mary-Ellen Esquer, PE

### TECHNICAL ADVISOR

As Carollo's company-wide Chief Technologist for headworks, Mary-Ellen has led the technical design and provided technical review of a myriad of headworks projects ranging in capacity from 5 to 340 mgd. Her headworks expertise includes screening, screenings handling, grit removal, grit handling, and odor control. She brings hands-on experience with more than 50 headworks facilities and has played a key role in the successful completion of some of Carollo's most high-profile headworks design projects throughout the country, which has provided a broad base of knowledge from which to develop and implement sound technical solutions.

#### ★ RELEVANT EXPERIENCE:

- Project engineer for the 1995 WRP Reconstruction Project for the El Toro Water District, California.
- Project engineer for Headworks Rehabilitation at Moreno Valley and Temecula Valley Regional Water Reclamation Facilities for the Eastern Municipal Water District, California.
- Project engineer for the conceptual engineering report and the preliminary and final design of San Francisco Public Utilities Commission, California, Southeast Plant's new 250-mgd Headworks project.



## Tanner Howe, PE

### PROCESS/MECHANICAL SUPPORT

Tanner is a civil/environmental engineer with experience in the design and planning of water and wastewater treatment facilities. He is detail-oriented and has a thorough understanding of wastewater treatment strategies through a combination of engineering design, client services, and construction services. He has provided headworks engineering design and construction services for clients such as the San Francisco Public Utilities Commission, the Irvine Ranch Water District, and the Wastewater Division of the County of Hawaii. Tanner will provide process/mechanical support to Han and Scott, and will be involved in day to day design activities and deliverables.

#### ★ RELEVANT EXPERIENCE:

- Design engineer for headworks and hydraulics lead for the County of Hawaii Hilo Wastewater Treatment Plant Rehabilitation and Replacement Project.
- Construction services engineer for the San Francisco Public Utilities Commission, California, 250-mgd Southeast Water Pollution Control Plant SEP Headworks Project.
- Project Engineer for the Irvine Ranch Water District, California, MWRP Grit Study and Evaluation.



## Key Subconsultants

We have further strengthened the Carollo team by assembling a team of three highly-qualified subconsultants. We have a long working relationship with these subconsultants and they all know our expectations for delivering a quality project on time and within budget.

### ProjectLine Technical Services

is an engineering consulting firm specializing in electrical, instrumentation, and control systems for water, wastewater, and industrial markets. ProjectLine provided design services for your recent Grit Rehabilitation Project.

### Converse Consultants

is an employee-owned geotechnical and geological engineering corporation, with 9 offices and more than 170 employees throughout the United States. The firm's professional and technical staff includes in-house geotechnical engineers, engineering geologists, environmental scientists, deputy inspectors, laboratory and field technicians, drafting/CAD specialists, and other specialized support personnel. Converse has supported Carollo Engineers on over 20 successful design projects throughout Southern California.

### The THOMSEN Company, Inc.

(TCI) is a high-tech surveying and engineering firm with over 21 years of experience. The firm's state-of-the-art Lieca GPS, Robotic, and RTK drone surveying equipment, combined with expert AutoCAD and Carlson "field to finish" techniques, allows TCI to provide clients with the highest level of accuracy and quality control for their important projects. TCI will also provide potholing services, including for one of the two 12-kV SCE feeds to the WRP (i.e., Moulton Parkway feed passing under the existing coarse screen channels).

## Current and Future Workload

Carollo actively recruits staff who share our passion and culture as a water-only engineering firm. As one of the top-ranked firms in ENR's Top 500 that practices exclusively water/wastewater engineering, Carollo remains the employer of choice for such candidates.

This affords us a distinct advantage in matching current and future staff levels with workload in the most efficient and practical manner. We are firmly committed to dedicating both local resources and firm-wide expertise to meet ETWD's needs. Not only does our team have the capacity to take on this Headworks and Secondary Clarifier No. 1 project (as shown by these availability numbers), we are looking forward to working with your staff and leading your project to success.

Carollo maintains a resource projection database that our project managers update on a monthly basis. Through this process we accurately assess workloads and staff projects to meet our commitments.

Teri Raasch  
Project Manager

Han Kang  
Headworks Lead

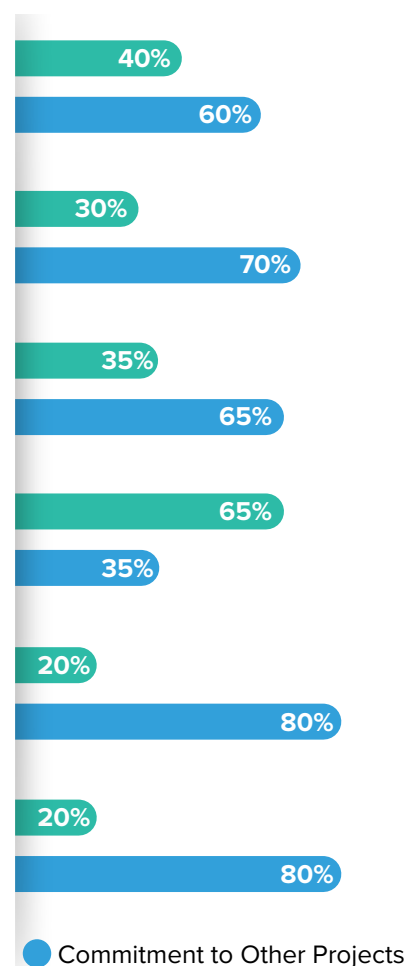
Scott Parker  
Secondary Lead

Tanner Howe  
Process/Mechanical Support

James Doering  
Structural Lead

Mary-Ellen Esquer  
Technical Advisor

● Availability to ETWD



# Project Understanding, Approach, and Scope of Work

## Project Understanding

ETWD's coarse screens system is in need of repair and not meeting ETWD's performance and reliability expectations. This project will increase the screening capacity, provide adequate washing/compacting, and will provide a new coarse screen bypass for increased reliability. Additionally, Secondary Clarifier No. 1's mechanical equipment is at the end of its useful life, and the structure may need repair. As part of this rehabilitation, ETWD is interested in investigating ways to improve surface overflow rate, energy efficiency, thickening, and seismic resiliency.

## Your Goals and Objectives are Clear

Carollo's understanding of this project's goals and objectives is based on our history of service with ETWD, discussions with your staff, our visits to your plant site, and our team's work on headworks and secondary clarifier projects across the country. To successfully complete your project, your consultant must first develop a well-thought-out Basis of Design Report (BODR) that converts your goals, objectives, and preferences into specific design criteria, equipment selections, layouts and controls, then follow through with preparation of high-quality construction-ready bid documents.

### Project Goals

- **Cost-effective solutions** that meet ETWD's long-term performance, O&M, and reliability goals.
- High-performing, reliable, and **O&M-friendly design**.
- Smooth **construction** and start-up.

We understand that "cost-effective" and "high-performing and reliable" do not always go hand-in-hand, but we know you can achieve both. To achieve all of your goals, you need a consultant who:

- Listens carefully to your staff's priorities and preferences.
- Has superior technical experience to quickly provide you with valuable input on advantages and disadvantages of various options.
- Knows and incorporates design details that make a difference, including O&M features that add a lot of value without adding cost.
- A responsive design team that will communicate clearly and remain personally involved throughout construction and start-up.

We acknowledge ETWD's scope of work and Addendum No. 1. We have provided a detailed scope of work in the appendix for your review. We will present our approach for the major scope items on the following pages:

- **Headworks**
- **Secondary Clarifier/WAC Abandonment**
- **Electrical, Instrumentation, and Control Systems Improvements**
- **Cost Management**
- **Project Management**

## Headworks

As part of our Headworks Rehabilitation Study, we partnered with you to develop cost-effective solutions that will address your headworks needs. Though ETWD has elected to complete the headworks rehabilitation design in three separate contracts – coarse screen, grit removal, and fine screens – if your design consultant understands your big picture and the end goals of your entire headworks (and keeps these in mind throughout design), your overall design and construction processes will be smoother and the overall end product on all three contracts will be optimized.

For example, we think it might make sense to defer the headworks MCC replacement until the fine screen project, see E&C writeup for more on this topic. However, if the MCC is replaced now, we will coordinate with the fine screen concepts and not choose a location that is in the way of your future project.

With our involvement in the study, we know the background to all the decisions previously made. We won't need to spend time investigating other alternatives that are popular in the industry which were already discussed. For example, multi-rake screens are very popular, but the frame on that type of screen reduces existing channel area and would not achieve the flow capacity you are looking for.

A common shaftless screw conveyor is also popular for screenings handling, but ETWD staff felt strongly about avoiding a single point of failure, and preferred a dedicated washer/compactor with each screen to eliminate all conveyors. We also know that adding a new channel for the second screen is not cost-effective and would result in very poor flow and solids distribution to the screens to the point that they would not meet your capacity needs.

Instead, we can immediately start designing your coarse screen upgrades. We will start with accurate hydraulic calculations, which are critical for screen selection. Downstream depth is one of the biggest factors in determining bar screen performance, and we've often seen this overlooked. Your future fine screen upgrade project may change the downstream depth at the coarse screens. To make sure screen performance is good now and in the future, we will run hydraulic calculations and size the screens based on both current hydraulics and future hydraulics through the new fine screen area.

We will also prioritize early discussions on temporary bypassing – this is a big construction project for ETWD, and we will help you plan so that it goes smoothly. Our initial concept is shown on below figure. Upstream of the screens, we can use a narrow bulkhead by taking advantage of the channel configuration to support it and connect two temporary pumps (1 duty + 1 standby) so the new passive bypass can be constructed and gates can be replaced. While constructing the new bypass, the existing 12-kV SCE feed that runs below the area will be protected in place. Though not included in the RFP, we suggest using this opportunity to inspect and repair concrete and protective liners in this common channel since it is already isolated. We also suggest investigating the feasibility of adding stop plate

**Our headworks lead, Han Kang, prides himself on providing well-thought-out (and thoroughly specified!) construction sequencing and bypassing plans for his clients.**

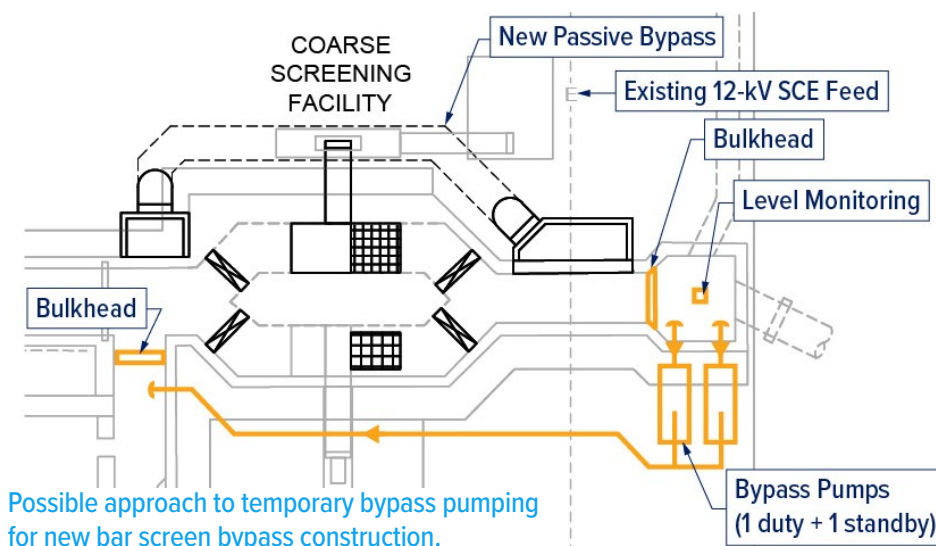


As project manager/engineer for Santa Barbara coarse screen replacement, he designed a very similar full-flow bypassing plan that operated successfully for several months during construction. As project engineer for OC San P1-105 Headworks Rehabilitation, Han also designed a very complicated sequencing and bypassing plan. The project is slated to implement 11 separate bypass pumping operations ranging from 5 mgd to 89 mgd in capacity.

guides so that the coarse screen inlet/outlet gates can be isolated for maintenance in the future.

Though many of the big decisions at coarse screens were determined in the study, that alone doesn't guarantee you a great headworks. For a headworks to be successful, you also need the right detailed design. Our headworks lead, Han Kang, and technical advisor, Mary-Ellen Esquer, are very detail oriented and have a deep understanding of the design details that matter from their experience working on headworks projects across the country. We know what questions to ask the manufacturers, what information to include on the drawings, how to write a tight specification so you get robust equipment, and O&M tips to improve your performance and reduce your headworks headaches.

One example of a detail that we do differently than others is our approach to screen controls. Instead of level sensors in each individual screen channel, we put level sensors in the common channels and control the screens as a system in conjunction with the washer/compactors, which has proven to be much more reliable. We also provide appropriate operator adjustable setpoints to allow fine tuning the system to minimize runtime and reduce equipment wear and maintenance.



Possible approach to temporary bypass pumping for new bar screen bypass construction.



## Secondary Clarifier No. 1 and WAC

As one of the few remaining facilities from the original plant construction, existing Secondary Clarifier No. 1 (SC1) and its peripheral aeration chambers have been in service for over six decades at the WRP. During that period, SC1 has provided reliable, steadfast performance while much of the plant has been transformed into the current configuration. Originally intended to be an aerobic digester, the aeration chambers were retrofitted into the Waste Activated Clarifier (WAC) in early 1990 to provide waste solids stabilization and storage prior to thickening. Their age and condition notwithstanding, they remain important assets that contribute to the overall performance and reliability of the WRP.

On this project, ETWD aims to identify and implement O&M-friendly and cost-effective improvements as part of a comprehensive rehabilitation to renew their service life while optimizing the WAS handling facilities. The recent WRP optimization study included a number of reasonable findings as a limited, initial assessment. However, several of its key analyses did not consider critical factors and will require further evaluations in order to develop comprehensive conclusions. In fact, our team brought several of its shortcomings to ETWD's attention during our discussions with your staff. The figure below illustrates 5 recommendations from the recent WRP optimization study that we propose to revisit on this project. Our thoughts relative to each are presented.

### 1 Study Recommendation: In-kind replacement of existing clarifier mechanism and center column.

Carollo's initial thoughts: Suggest a structural assessment to determine whether compliance with seismic codes is warranted. Seismic codes have significantly changed in the last 60 years, and this could affect long-term resiliency but may require a new concrete foundation.

### 2 Study Recommendation: Abandon WAC in place.

Carollo's initial thoughts: Due to high groundwater levels historically observed at the site, consider adding pressure relief valves to the WAC to mitigate buoyant uplift forces when the water level in the WAC is significantly reduced. Also consider a geotechnical analysis to establish a conservative groundwater elevation as a basis of design.

### 4 Study Recommendation: Abandon WAC in place.

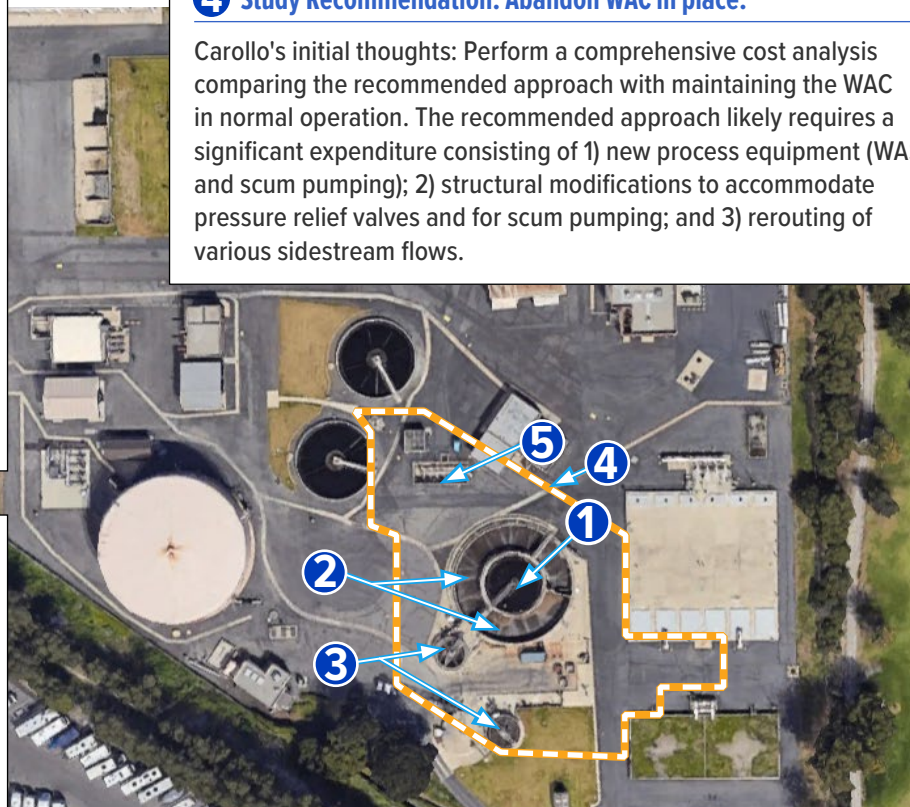
Carollo's initial thoughts: Perform a comprehensive cost analysis comparing the recommended approach with maintaining the WAC in normal operation. The recommended approach likely requires a significant expenditure consisting of 1) new process equipment (WAS and scum pumping); 2) structural modifications to accommodate pressure relief valves and for scum pumping; and 3) rerouting of various sidestream flows.

### 3 Study Recommendation: Abandon WAC in place.

Carollo's initial thoughts: Assess impact of operating without the WAC, particularly on thickened sludge concentrations. Consider a polymer jar test with actual sludge from the plant.

### 5 Study Recommendation: Add a new WAS pump.

Carollo's initial thoughts: Consider adding two new WAS pumps (one duty, one standby) for redundancy. Alternatively, consider using a flow control valve and a flowmeter to route WAS directly to the DAFs, similar to the current approach for solids wasting (to the WAC).



Our understanding of the various issues and challenges pertaining to SC1 and WAC is based on our experience working on similar projects, Carollo's institutional knowledge on the WRP facilities and site, and the relevant technical expertise of our team. Regarding technical expertise, Carollo is well-known for consistently achieving technical excellence in treatment process designs. Our company emphasizes continually developing industry-renowned experts in-house, who bring forth that knowledge and know-how to contribute to subsequent projects of similar scope and challenges. This allows our teams to provide more holistic assessments that consider a wide range of real-world factors as illustrated in the preceding figure.

In the case of your secondary treatment facilities, our secondary clarifier expert, Scott Parker, will guide and validate our technical approach relative to SC1 and WAC. Having worked on more than 35 secondary clarifier projects, he will share his industry-leading experience for the betterment of the project. In addition, we will leverage our familiarity of the site-specific design considerations having designed your 1995 WRP Reconstruction. This project successfully rehabilitated several relevant facilities, such as SC3, SC4, and the RAS Pump Station.

The evaluation for the ultimate fate of WAC may arguably be the biggest question to be answered by your consultant during preliminary design. The conclusion from the recent WRP optimization study was to "abandon it in place." However, as we engaged with your staff, it became apparent that there are several significant implications to the recommended approach, improving operational flexibility and optimization at a potentially significant expenditure.

SC1 Scope Item	Similarity to 1995 Rehabilitation of SC3 and SC4
Entire collector mechanism including center column	✓
Scum troughs and baffles	✓
Weir washer system and density current baffles	✓
Grout topping on concrete floor	✓
Concrete slab reconstruction at or near center column base	✓

The improvements to SC1 are anticipated to be very similar to the SC3 & SC4 rehabilitation Carollo completed under the 1995 WRP Reconstruction project. Our experience from rehabilitating your other clarifiers will facilitate project execution and achieve expedited completion.

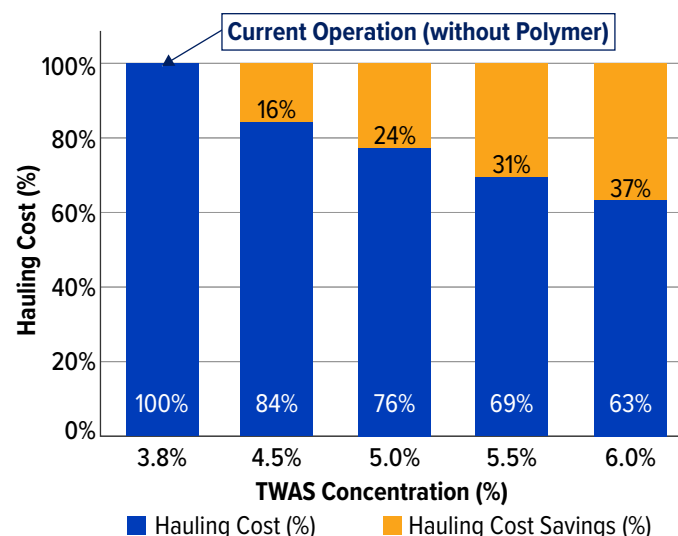
During preliminary design, we will revisit this evaluation and provide a comprehensive analysis on whether to continue with the previous recommendation or alternatively to maintain WAC operation. To this end, we will listen to ETWD's concerns, develop practical solutions that address them, and perform a life-cycle cost analysis once the two approaches are fully developed. Our goal is to enable ETWD to make an informed decision that considers both economic and non-economic factors, including O&M and risk.

## Polymer Selection

ETWD is currently considering adding polymer to improve thickened sludge concentrations from DAFs and to reduce TWAS hauling cost. According to a jar test recently performed with an emulsion polymer, the effectiveness appears promising and warrants further analysis. To this end, we will guide ETWD in the next steps of this evaluation. Due to the availability of multiple polymer manufacturers and a variety of products, as well as unique sludge characteristics, a multi-step assessment is necessary to maximize effectiveness and reduce chemical cost. Often, the most meaningful steps include:

- Testing a limited number of polymers in full scale with varying dosages.
- Checking dilution water pressure and characteristics as chloride and hardness can adversely impact polymer activation.
- Adding multiple injection points in the sludge feed line to determine the best injection location.

Based on our experience, a properly selected polymer product will significantly improve your TWAS concentrations and may achieve 5-6% as seen in SOCWA's DAFs at JB Latham.



Our approach will optimize your DAF operation and minimize TWAS trucking cost through polymer addition.

## In-Depth Look at Structural Assessments

As mentioned, because the rehabilitation of SC1 includes the replacement of the mechanism, it is an ideal time to consider the seismic resiliency of the existing structure foundation to which it will be mounted. Given that the original structure was constructed in 1963, it is likely that the existing foundation is not well proportioned to resist current seismic design loads. Clarifier mechanisms are unique pieces of equipment that cantilever up from a central column foundation. During an earthquake, the sloshing water can load the center column and feedwell baffles much like the wind against the sails of a ship. To adequately resist these loads, the center column not only requires sufficient anchorage to the foundation, the foundation itself needs to have enough ballast to resist overturning and a large enough footprint to minimize soil bearing pressures. During preliminary design, we will evaluate the existing structure to determine its capacity to resist seismic loads and prepare a conceptual seismic mitigation approach with a cost analysis to assist ETWD with determining how best to proceed.

Additionally, we understand that the plant has had damage to an empty clarifier in the past due to high groundwater levels that were near the ground surface. It is important to understand the current and historic groundwater levels so that not only construction work can be properly planned for, but also so that structure modifications, including abandonment of normally full water-bearing structures, is done properly to avoid damage due to groundwater uplift.

Therefore, we will conduct a geotechnical investigation for this Project to assist us with determining the appropriate historic and current groundwater levels to use for design and preparation of the contract

documents. A geotechnical investigation is also needed to identify the seismic parameters unique to the site, such as site soil class, and the allowable soil bearing values for evaluating the existing foundation for SC1.



Center column foundation replacement for a circular clarifier.

## Electrical, Instrumentation, and Control Systems Improvements

Relying on its in-house staff, ETWD has a unique and proactive approach to managing the existing EI&C infrastructure at the WRP. In the course of a CIP project, the staff not only provides valuable technical input on EI&C design elements but also facilitates construction and startup by providing integration services that may include equipment procurement and panel fabrication. This hands-on approach – over time – has resulted in facilities that are O&M friendly and cost-effective to manage at the WRP. Similarly, the scope provided in the RFP demonstrates a high degree of ownership and collaboration.

However, we still believe that there are opportunities to make significant improvements to the scope and implementation, and we will evaluate a number of practical ways to reduce construction cost, simplify construction sequencing, and mitigate risk. The following are a few examples for ETWD's consideration.

- **Master Control Panel for two Coarse Screens:**

The RFP calls out for a consolidated local control panel for two coarse screens. Although not uncommon, this would create a single point of failure for this critical water-in facility.

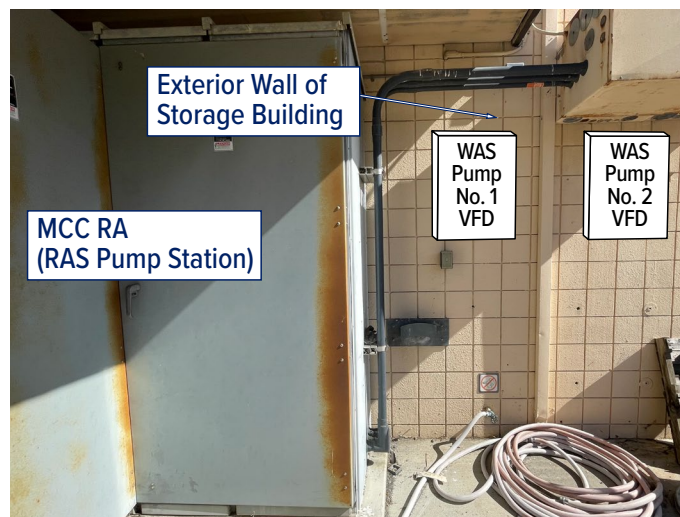
- **Headworks MCC Replacement:** Fundamentally, the load changes anticipated from this project are minor and could be easily incorporated into the existing MCC. Deferring the MCC replacement to the upcoming fine screen replacement project when a large number of loads will be replaced would provide several significant benefits. If the MCC is replaced on the current project, the new MCC will still need to be significantly updated in the future to accommodate the new fine screening equipment. On this project, the deferment would reduce construction cost and avoiding high-risk, load-by-load tie-over from the existing MCC to the new MCC.



Simple modifications to the Headworks MCC will support the proposed coarse screen system improvements. The proposed deferment would increase synergy with the future project when a large number of loads will be replaced.



- **WAS Pump VFDs:** Due to space constraints in the existing MCC and to facilitate sequencing, external, stand-alone VFDs may be suitable for the new WAS pumps (if implemented).



## Construction Cost Management

As one of the largest projects on your CIP, we understand that construction cost control is critical to the success of this project, and is the key to maintaining the schedule and financial viability of your other CIP projects. We will prioritize cost control throughout the project with the following approach.

- In order to support your CIP update, the first cost estimate will be provided in Q1 of 2024. It is imperative that by this time major decision items are reviewed with you in order to substantiate the cost estimate. To this end, we will engage our experts early and collaborate with you to identify and address most impactful decisions.
- Suggest creative cost saving ideas throughout preliminary and final design. We've already included some of these ideas in our proposal, such as deferring the MCC replacement and using a flow control valve for wasting solids directly to DAFs, instead of new WAS pumps.
- Develop thorough alternatives at BODR so you can feel confident you have the information to make the best decisions for you, particularly regarding WAC abandonment and polymer.
- Optimize construction cost by designing well-thought-out, cost-effective, easy to implement engineering solutions.
- Streamline construction by devising a logical sequence of construction that consolidates shutdowns for efficient construction, minimizes process downtime, and facilitates startup and commissioning.

## ACCURATE COST ESTIMATING

Since the world-wide pandemic, construction industries have experienced unprecedented cost escalations. Consequently, the importance of accurate cost estimating cannot be overstated. We follow a fundamentally different approach to cost estimating, compared to most other consultants.

In addition to providing cost elements that use basic quantity takeoffs and unit prices, our dedicated team of experienced estimators also account for construction and sequencing difficulties that adversely impact efficiency and progress. Additionally, our inflation estimates are based on Carollo's customized producer price index which more accurately reflects pricing trends of our industry.

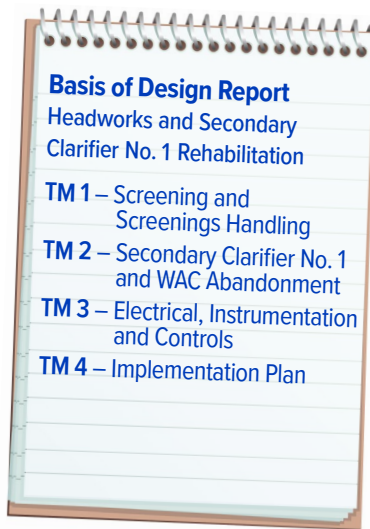
The effectiveness of our overall cost estimating methodology is often manifested in the bids submitted by competing contractors on our design. Please see Jason Rozgony's resume to review a table of his recently completed cost estimates and associated bid amounts to demonstrate our team's ability to provide accurate Engineer's estimates.

- Plan to avoid unknown risks, such as specifying bid allowances to protect against potential change orders associated with unknown conditions.
- Alert you immediately of any District decisions which will meaningfully increase construction cost.

## Project Management

Carollo's goal is to provide ETWD with exceptional client service, and providing high level of service and care always starts with the project manager. For this reason, we hand-picked Teri Raasch as our project manager as she offers both a proactive, caring management style and strong technical background. Equally important, Teri has assembled a team of local experts and discipline leads who have successfully addressed numerous headworks and secondary clarifier retrofit challenges similar to yours.

In simple terms, the essence of Carollo's project management approach is "goals and controls." We develop specific project goals from a clear understanding of your expectations and use applicable metrics to track and evaluate the project team's performance in fulfilling them.



## Planning

Planning is the cornerstone of project excellence. This philosophy is integral to our project management procedures for work quality and efficiency.

Our approach organizes and presents information in a logical manner that maximizes the value of input from your staff. As shown on the Schedule on page 19, we propose to develop the BODR as a series of four technical memoranda (TMs) and submit the draft TMs to ETWD in two groups. We also propose adding two Focus Meetings, which would take place before each draft TM submittal to present the material and receive preliminary feedback. The BODR submittal review meeting would then confirm comment responses and finalize recommendations. Though it is possible to complete BODR with only one meeting as scoped, our experience has shown us that the additional early communication results in the most efficient overall approach, and has benefits for both parties.



## FOUR KEYS Carollo's Approach for Successful Meetings

**Come prepared.** We will submit an agenda at least two days before meetings that clearly identifies objectives. In many cases we will provide important materials in advance, helping attendees become familiar with the subject matter to enhance the value of time spent in discussions.

**Thorough evaluations.** We will present well-thought-out ideas that consider performance, reliability, O&M, cost, constructability, and risk, providing you with necessary information to make informed decisions.

**Include the right people.** As part of planning and agenda development, we will identify each ETWD team member requested to attend. Key members of Carollo's team will also attend based on topic.

**Document the results.** Meeting minutes with detailed decisions and action items will be submitted following each workshop or meeting. We will keep the Decision Log and Action Item Log updated throughout the project. Our experience proves just how valuable this important documentation step is for getting decisions that stick, ultimately helping to maintain schedule. (See below graphic.)

## Decision Log

Item No.	Date	Short Description	Forum	Project Element	Explanation of decision	Notes
1	5/4/2023	Blower Discharge Pressure Sensor	Meetings	Blower	<del>Retain</del> Replace the existing pressure sensor on the blower discharge header.	Revised per 6/29/23 email
2	5/4/2023	Air Supply to Airlift Pumps	Meetings	Blower	Use solenoid valves for controlling air flow to the grit airlift pumps, similar to existing. Use of motor operated valves is not necessary.	
3	6/13/2023	Grit Piping	Meetings	Grit Pumping	The common airlift pump discharge header will be DIP with ceramic epoxy lining. Individual airlift pump discharge piping will be CPVC.	
4	6/13/2023	Grit Pipe Supports	Meetings	Grit Pumping	Pipe supports will be provided on the vertical air lift pump discharge pipes. This will require basin entry when replacing the discharge piping.	
5	6/13/2023	Airlift Pump Discharge	Meetings	Grit Pumping	It is not necessary to install check valves on air lift pump discharges to prevent potential grit transfer from one pump discharge to the other under sequential operational mode.	
6	6/13/2023	VFD Procurement	Meetings	Blower	Allen Bradley VFD will be sole-sourced. It will be provided by the blower manufacturer for single source responsibility.	
7	6/13/2023	VFD Installation	Meetings	Blower	<del>It is acceptable to locate</del> Mount the blower VFD immediately on the east wall of the existing blower enclosure. <del>This will orient the VFD to face east to minimize long-term UV exposure and to facilitate access.</del>	Revised per 8/7/23 Workshop
8	6/13/2023	Remote Display	Meetings	Blower Flowmeter	Provide a remote display for the proposed thermal mass flow meter.	
9	6/13/2023	Division of Work	Meetings	System Integration	The District will self perform system integration including programming, <del>SCADA integration, and panel procurement.</del> (The assignment of panel fabrication is pending decision by the District; refer to action item 3.)	Revised per 8/7/23 Workshop and modified by Decision #11
	8/7/2023	Local HMI	Meetings	I&C	Install HMI in the local control panel for the airlift pumps.	

As was done in our recent Headworks Study and Grit Rehab Design, we will use our detailed decision and action item logs to track important information. Information - thus organized - will greatly facilitate project execution.



This proposed approach will:

- Distribute ETWD staff's review effort over a manageable period of time.
- Reduce ETWD staff's overall review time, since the information would be presented ahead of time in the focus meetings.
- Focus attention on specific technical areas in a logical sequence.
- Allow us to use preliminary findings and ETWD staff comments to guide our effort on subsequent related TMs.

## Communication

Carollo is fully committed to proactively coordinating with you throughout this project. We will provide consistent communication with ETWD's project manager through weekly progress meetings to maintain alignment and manage expectations. At the onset of the project, we will establish clearly defined roles, responsibilities, and reporting requirements. Our focus will be on providing you with a quality product that meets ETWD's expectations, keep tasks on schedule, and complete the work within established budgets.

During our headworks rehabilitation study and grit rehabilitation design, this team has proven our proactive communication approach, preparedness for workshops, and adherence to tight project schedule. Particularly, workshops are critical for project progress. We prepared with thorough evaluations that fostered valuable discussions with plant staff, and ultimately followed through on incorporating all comments received.

## Budget Management

It is important to maintain cost controls throughout the project to keep within budget. Any decisions that are made with a significant cost impact on the project will be communicated to your project manager and documented in a monthly project status and progress report that our project manager, Teri, prepares. Additionally, she will make sure each team member has a clearly defined scope or task and is aware of their assigned budget. Over the duration of the project, Teri will monitor the execution of the work on a bi-weekly basis by tracking expended labor hours by employee through Carollo's BST accounting databases.

## Quality Management

Carollo is committed to consistently providing high-quality work products. Quality management in our project deliverables is one of the ways we have continued to provide our clients with excellent service and one of the key reasons repeat clients make up such a large percentage of our work. Control of project costs starts with the quality of deliverables, which in turn, sets the table for accurate and cost-effective completion of subsequent project activities and phases.

As required by the RFP, we will submit the 100% design submittal which has already completed and incorporated comments from Carollo's internal 90% quality check by an independent review team.



## Quality Assurance/Quality Control Plan

	<b>QUALITY ASSURANCE</b> <ul style="list-style-type: none"> <li>• Conducted as the project progresses</li> <li>• Independent peer reviews to address critical issues</li> <li>• Eliminates fatal flaws</li> <li>• Conducted in early stages to avoid rework</li> </ul>
	<b>QUALITY CONTROL</b> <ul style="list-style-type: none"> <li>• Quality checks prior to submittals</li> <li>• Internal QC workshops prior to major submittals</li> <li>• Independent QC team</li> </ul>
	<b>RESULT</b> <ul style="list-style-type: none"> <li>• Allows team to present highly evolved concepts in project workshops</li> <li>• Provides high-quality deliverables that save your staff time</li> </ul>

**Quality services and deliverables at all project stages for a successful project.**

Estimated Hours

Task	Project Manager	Technical Advisors/ Quality Check	Senior Engineer	Lead Engineer	Professional Engineer	Staff Engineer	Senior CAD Technician	CAD Technician	Support Staff	Carollo Hours	Subconsultants¹			Total Hours
											ProjectLine	Converse Consultants	Thomsen Company	
Task 1 - Project Management and Meetings														
Monthly Progress Reports and Invoicing	100	0	0	0	18	0	0	0	0	118				118
Meetings	71	37	67	0	43	38	0	15	8	279	60			339
Task 1 Subtotal	171	37	67	0	61	38	0	15	8	397	60	0	0	457
Task 2 - Data Request and Review														
Records Review and Data Request	1	0	1	1	4	8	1	0	0	16	12			28
Site Utility Drawing	0	0	0	1	4	6	3	10	0	24				24
Site Investigations and Follow Up Documentation	2	2	4	0	2	6	0	0	0	16	12			28
Non-Destructive Concrete Testing	0	0	1	6	4	0	0	0	1	12				12
Task 2 Subtotal	3	2	6	8	14	20	4	10	1	69	24	0	0	93
Task 3 - Comprehensive Geotechnical Soils Report														
Boring Location Plan (Draft and Final)	0	0	0	1	0	2	0	1	0	4		7		11
Geotechnical Soils Report	10	2	2	10	4	6	0	0	1	36		139		175
Task 3 Subtotal	10	2	2	11	4	8	0	1	1	40	0	146	0	186
Task 4 - Basis of Design Report (BODR)														
Draft TM 1 - Screening and Screenings Handling	2	4	10	8	18	24	2	8	4	80				80
Draft TM 2 - Secondary Clarifier No. 1 and WAC	8	4	20	8	40	50	6	10	4	150				150
Draft TM 3 - Electrical, Instrumentation and Controls	2	4	4	0	0	4	2	4	4	24	76			100
Draft TM 4 - Implementation Plan	2	4	10	0	16	16	4	4	4	60				60
Incorporate Comments and Final BODR	2	4	4	0	20	20	2	8	4	64	36			100
Preliminary Hydraulics	6	2	0	0	8	15	1	8	0	40				40
BODR Cost Estimates	2	1	2	0	16	18	0	0	1	40				40
Task 4 Subtotal	24	23	50	16	118	147	17	42	21	458	112	0	0	570
Task 5 - Plans and Specifications														
Site Survey	4	0	2	2	2	12	8	10	0	40			72	112
60% Drawings and Specifications	18	20	18	64	164	285	64	272	40	945	208			1,153
100% Drawings and Specifications	12	14	12	50	118	210	50	195	40	701	290			991
Final Drawings and Specifications	2	2	2	6	14	26	6	24	8	90	290			380
Design Calculations (60%, 100%, Final)	0	1	0	0	0	3	0	0	0	4				4
Cost Estimate (60%, 100%, Final)	4	4	4	16	44	44	0	0	4	120				120
Construction Schedule (60%, 100%, Final)	3	2	2	0	0	16	0	0	1	24				24
Pre-Purchase Equipment	4	0	2	0	8	12	2	2	2	32				32
Coordination of Front End Specs	8	2	4	0	4	0	0	0	4	22				22
Task 5 Subtotal	55	45	46	138	354	608	130	503	99	1,978	788	0	72	2,838
Task 6 - Bid Support and Conformed Docs														
Pre-Bid Meeting	4	0	0	2	4	0	0	0	0	10	2			12
Bidder Questions and Addenda (2)	8	2	6	4	16	20	2	2	0	60	2			62
Conformed Drawings and Specifications	2	2	0	0	0	2	2	24	8	40	6			46
Task 6 Subtotal	14	4	6	6	20	22	4	26	8	110	10	0	0	120
Total Project Hours	278	114	177	179	571	843	155	597	138	3,052	994	146	72	4,264
Optional Tasks														
Task 5d - WAC Abandonment Final Design	12	24	0	42	102	181	42	199	0	602	525			1,127
Task 5e - Polymer System Final Design	3	6	0	10	24	43	10	47	0	143	200			343
Task 5f - MCC Headworks Replacement	2		2			4				8	316			324
Total	17	30	2	52	126	228	52	246	0	753	1,041			1,794
Optional Deductions														
Task 5 - Plans and Specifications														
Minimize Site Survey to Project Area Only	0	0	0	0	0	0	0	0	0	0			-12	-12
Do Not Pre-Purchase Equipment	-4	0	-2	0	-8	-12	-2	-2	-2	-32				-32
Total	-4	0	-2	0	-8	-12	-2	-2	-2	-32	0	0	0	-44

Note:  
1. For subconsultant hours by classification, see appendix.

# Project Schedule

## Project Schedule

Our preliminary proposal shows the six major tasks and design schedule of 13.5 months. This includes approximately 4 months for BODR and 9.5 months of final design. To expedite the schedule, we propose beginning final design immediately following the BODR submittal review meeting – incorporating comments into Final BODR in parallel with beginning design. Note this schedule shows that we would provide BODR costs to ETWD before end of Q1 2024 for your CIP budgeting purposes.

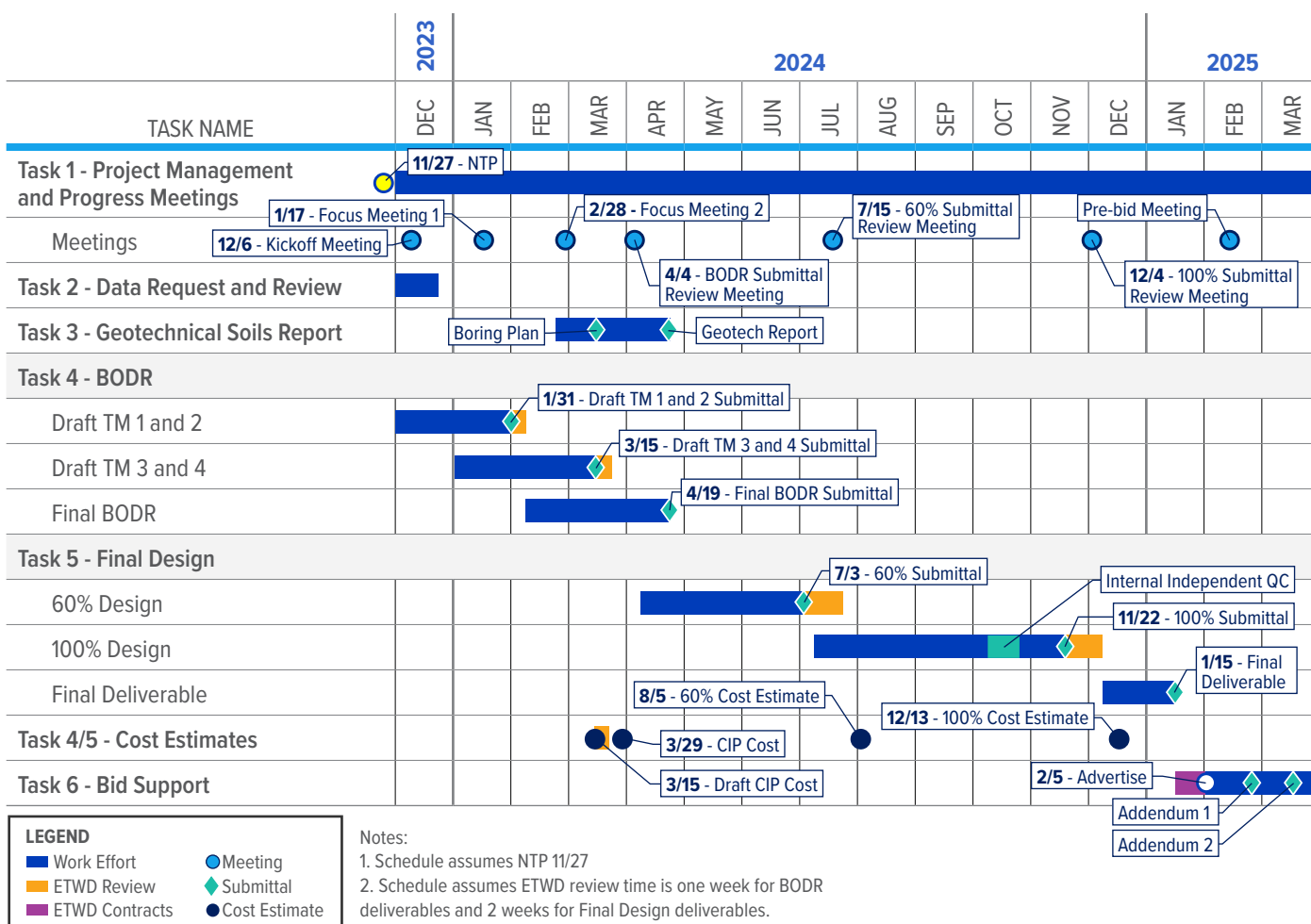
If ETWD wishes to further reduce schedule by approximately 1 month, we could submit a 90% submittal in lieu of a 100% submittal, and Carollo's internal QC could be conducted in parallel with ETWD review.

## Equipment Pre-Purchasing

Due to supply chain interruptions being experienced widely in the industry, equipment lead times have had a large impact on contractors' ability to deliver projects on time. To address this issue company-wide, we have developed, and are maintaining, a database of equipment lead times by vendor and

type of equipment. This enables developing more realistic construction schedules based on selected equipment and identifying time-critical procurement.

Our database indicates that equipment and components for power and control systems generally require the longest lead times and, as such, have critical impact on project delivery. Consequently, such items may need to be pre-purchased and assigned to the contractor in order to expedite procurement. During BODR, we will evaluate potential benefits and risks of early procurement on a case-by-case basis, and make a recommendation to ETWD, as we have successfully done for clients such as the City of Palm Springs and EMWD.



# Insurance/Contract

## Insurance

Carollo will provide ETWD the requested insurance as outlined in the sample contract. Carollo meets the insurance requirements of professional liability coverage to be a minimum of \$2,000,000 and general liability and property damage to be a minimum of \$2,000,000. A certificate of insurance with ETWD as the lien holder will be issued upon award.

## Contract Exceptions

Carollo has reviewed the District's sample contract for Professional Services. Carollo respectfully requests to use the same contract language agreed upon for the recent Water and Sewer Master Plan Update contract (Consulting Agreement #126, W.O. #31-049). A summary of these changes are provided below:

- **Add new section 3.5, Delays:**

CONSULTANT is not responsible for damage or delay in performance caused by events beyond the reasonable control of CONSULTANT. If delays occur beyond the reasonable control of CONSULTANT, an equitable adjustment in CONSULTANT's time of performance and cost of CONSULTANT's personnel and subcontractors may be made. In no event shall the contract amount exceed the budget defined in Task Order No. 1. If a subsequent increase in budget is proposed, the DISTRICT and CONSULTANT will review the matter in good faith and negotiate a new Task Order to reflect amended terms and conditions that are mutually agreed to.

- **Section 4.1:**

Add the following sentence to end of section: "Notwithstanding the foregoing, CONSULTANT shall be entitled to keep one (1) copy of all such furnished data that CONSULTANT used, relied upon and/or incorporated into any deliverables produced hereunder."

- **Section 5.3:**

- » 1st sentence, replace 'that may arise from' with 'to the extent caused by'.
- » Add to end of section, "In no event shall the cost to defend charged to CONSULTANT exceed CONSULTANT's proportionate percentage of fault."

- **Section 7.11, add the following:**

In providing opinions of cost, financial analyses, economic feasibility projections, schedules, and quantity and/or quality estimates for potential projects, CONSULTANT has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; the incoming water quality and/or quantity; the way the DISTRICT's plant(s) and/or associated processes are operated and/or maintained; and other economic and operational factors that may materially affect the ultimate project elements, including, but not limited to, cost or schedule. Therefore, CONSULTANT makes no warranty that the DISTRICT's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from ENGINEER's opinions, analyses, projections, or estimates.

## Addenda

Carollo acknowledges receipt of Addendum No. 1. Our signed acknowledgement is included behind the cover letter.



# Appendix - Scope of Work

This document provides a detailed description of the proposed scope of work for the Headworks and Secondary Clarifier No. 1 Rehabilitation Final Design Project.

## TASK 1 — Project Management and Meetings

### Task 1a — Project Management

Consultant shall communicate and coordinate as needed with ETWD 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:

- ETWD's standard form that includes a summary of expenditures by task showing total budget, billing to date, current billing, 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 progress schedule using a Gantt-type format.

#### DELIVERABLES:

1. Monthly status report.
2. Monthly invoice.

### Task 1b — Meetings

Consultant shall administer the following meetings at a minimum for this project:

- **Project Kick-Off Meeting:** The Consultant shall arrange and conduct a project kick-off meeting at the start of the project. The purpose will be to introduce project participants, establish lines of communications, review the accepted scope of work and the project approach, and discuss all other related information pertaining to ETWD's system. Assume this meeting is in person.
- **Weekly Progress Meetings:** The Consultant's Project Manager shall conduct weekly coordination and consultation meetings with the ETWD Project Manager during the course of the project. Assume these meetings are virtual.

- **Focus Meetings:** Consultant shall conduct additional meetings to provide initial findings and receive preliminary feedback from ETWD prior to submitting the draft Basis of Design Report. A total of two meetings are anticipated. Assume these meetings are in person.
- **Submittal Review Meetings:** Consultant shall conduct a design review meeting after the Basis of Design Report, 60%, and 100% submittals to walk ETWD staff through the submittal prior to receiving ETWD comments. Assume these meetings are in person.

For all meetings, Consultant shall prepare and submit a meeting agenda to ETWD staff at least one business day in advance of the meeting and shall document and submit meeting minutes, highlighting action items and decisions, to ETWD staff within five days of the meeting. At each meeting, Consultant shall present and discuss an updated project schedule, project milestones, and planned activities.

#### DELIVERABLES:

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

#### Assumptions:

- Meeting minutes are not required for weekly progress meetings. Decision Log and Action Item Log will be used to document these discussions.

## TASK 2 — Data Request and Review

### Task 2a — Records Review

This task includes detailed review of the information available on OneDrive at the following links:

- Materials Developed as part of the WRP Optimization Study and Headworks Rehabilitation Study:

<https://1drv.ms/f/s!ApEHYNWW6Z-NjiH7KXiDjDSeKly2?e=dcWPCL>

- As Built for the WRP:

<https://1drv.ms/f/s!ApEHYNWW6Z-NhF54-BOunvoCry8M?e=3mx02j>

After award, Consultant shall develop an additional data request log. ETWD will attempt to locate additional data as requested by the Consultant. Any record

information that is not available will be obtained from Consultant's site investigation(s), as described in Task 2b.

In addition, Consultant shall assess all data and information regarding underground piping and utilities, including but not limited to all active and inactive electrical lines (conduit banks and encasements) as well as telecommunication and fiber-optic lines. Consultant shall prepare a Site Utility Drawing that shows all existing underground piping, electrical, telecommunication, fiber-optic, etc. for ETWD review and comment.

The site utility drawing should only apply to the locations where work related to this Project will take place, not the entire WRP site.

#### DELIVERABLES:

1. Data request log.
2. Site utility drawing.

### Task 2b — Site Investigations

Consultant shall conduct at least one site visit to collect additional data. To the fullest extent possible, ETWD intends to keep the facilities operating during Consultant's onsite investigation. Consultant can conduct as many site investigations as necessary throughout the duration of the design. During at least one of the site visits, Consultant shall conduct non-destructive concrete testing to develop the Secondary Clarifier No. 1 rehabilitation design.

#### DELIVERABLES:

1. Non-destructive concrete test results.

#### Assumptions:

- Field notes or site visit photographs necessary for discussions with ETWD will be shared with ETWD at Consultant's discretion during the meetings described in Task 1b.

### Task 3 — Comprehensive Geotechnical Soils Report

Consultant shall conduct site investigations and prepare a comprehensive geotechnical soils report for the site based upon the current 2022 California Building Code requirements, addressing (at a minimum) geotechnical information required by code and as necessary to construct this Project. Prior to site investigations, Consultant shall submit a plan of proposed boring locations for ETWD review and comment. As part of this effort, Consultant shall confirm groundwater level to inform whether any provisions are

necessary to avoid damage when draining Secondary Clarifier No. 1 during construction. Consultant shall further obtain adequate geotechnical information to support any necessary seismic improvements to the Secondary Clarifier No. 1 structure.

#### DELIVERABLES:

1. Proposed boring location plan.
2. Geotechnical report.

### Task 4 — Basis of Design Report (BODR)

Prepare a BODR that confirms the following project elements. Include design criteria tables for each process area. Develop preliminary site layout, description of constructability constraints, hydraulic profile, construction schedule, identification of long lead items, and cost estimate.

Determine whether pre-purchase is recommended for any of the Project equipment. For fee development purposes, Consultant shall assume development of pre-purchase packages for the Secondary Clarifier Mechanism and Coarse Screens.

Consultant shall submit the BODR for ETWD review, respond to ETWD comments in one consolidated log, submit a revised BODR based on ETWD comments, and backcheck to confirm that all ETWD comments were incorporated.

#### Coarse Screens:

- One new, Vulcan Mensch climber screen with ½-inch bar spacing and discharge chute to relocated Wash Press.
- Refurbishing the existing Vulcan Mensch climber screen and providing ½ inch bar spacing.
- Install at an 80-degree angle and size to accommodate a 15 million gallon per day (mgd) hydraulic capacity with both in operation.
- Demolish the existing diminutor and its associated control panel.
- New inlet and outlet gates with motorized actuators for both channels to automate bar screen channel isolation and placement in service.
- New, removable, slip-free checker plates to cover channel areas and guardrail as needed around bar screens.
- Install a new bypass around the coarse screen area that would passively overflow up to 15 mgd of influent raw sewage in an emergency.
- Repair of existing concrete surfaces and protective liners in existing channels.
- Bypass pumping strategies during construction.

**Screenings Handling:**

- Move and modify chute for existing fine screen area Wash Press to serve as the dedicated Wash Press for the new coarse screen.
- Provide utility water and drainage for relocated Wash Press.
- Accommodate means to discharge captured screenings in case all washer/compactors are out of service.

**Odor Control:**

- Connect headspace over overflow and screenings handling to the existing odor control system.
- Evaluate whether the existing odor control system requires any additional modifications to accommodate the additional air volume. (For costing purposes for the Plans and Specifications task, assume no modifications to the existing Odor Control System will be necessary.)

**Secondary Clarifier No. 1:**

- Remove and replace the existing Secondary Clarifier No. 1 collector mechanism, weir troughs, weir plates, scum baffles, and hand railing.
- Install weir washer system and density current baffles.
- Based on the condition assessment results, repair concrete as needed.
- Perform a structural analysis to determine the need for a new center column foundation to accommodate a new clarifier mechanism.
- Evaluate center column and walls for compliance with current seismic codes.
  - » Develop cost estimate, inclusive of design and construction costs, for ETWD to decide whether to invest in seismic upgrades. (For costing purposes for the Plans and Specifications task, assume no seismic modifications to Secondary Clarifier No. 1 will be necessary.)
- Analyze groundwater uplift forces and determine whether installing a pressure relief system is necessary.
- Evaluate whether rehabilitated Secondary Clarifier No. 1 should maintain the ability to process the DAF Unit No. 2 weir overflow or divert to the EQ basin.

**WAC Abandonment:**

- Determine whether structural modifications would need to be made to the WAC if operated at a lower water level to maintain submergence over the diffusers.

- Develop comparative cost estimate that calculates the life cycle cost of operating the WAC versus abandoning with the following modifications:
  - » Install WAS pump(s) within the existing RAS Pump Station to re-route WAS around the existing WAC. Determine the recommended number of WAS pumps and associated drive type.
  - » Maintain ability to divert flow to the WAC in an emergency.
  - » Determine the most cost-effective approach to re-routing other process wastes that currently discharge to the WAC.
  - » Install a new scum pump station for Secondary Clarifier No. 1 discharge into the DAF Units. Determine the recommended number of scum pumps and associated drive type.
  - » Install a polymer system to enhance thickening through the DAF Units prior to hauling to SOCWA.
- Review the outcomes of the ETWD/Polydyne-led polymer jar testing and develop the basis of design for a new polymer system. Assume at least one coordination call with ETWD and Polydyne staff to discuss results.
- The District is considering the DAF Unit No. 2 vault as a potential location for the polymer system but will ultimately rely on the Consultant's recommendation regarding polymer system placement. For fee development purposes, the Consultant can assume that the polymer system (i.e., small drum and metering pump with containment) will be located in this vault for equipment protection and that adequate power would be provided by a nearby MCC. No additional water would be necessary assuming the polymer is delivered to the WRP as a liquid. District staff would manually fill a small drum adjacent to the metering pump from a larger 55-gallon drum stored elsewhere on site.
- Provide separate costs for the polymer system and other WAC abandonment modifications; ETWD may elect to pursue the polymer system while maintaining the WAC.

**Electrical, Instrumentation, and Controls:**

- Electrical design shall conform to National Fire Protection Association (NFPA) standards.
- Replace the existing control panel for the existing climber screen with one new control panel that controls both the new and the existing climber screen. Modify the existing PLC as required to effectively communicate with the new control panel.
- Power the new climber screen from the existing Headworks MCC.

- Power the new WAS pumps from the existing RAS Pump Station MCC.
  - » If VFDs are recommended for the WAS pumps, determine suitable location for their installation; the existing RAS MCC does not have adequate space for new VFDs.
  - » Specify installation of new hardware (Input/Output cards) in existing PLC to accommodate new equipment and instrumentation.
- Install a new motor start panel for the secondary clarifier mechanism in the Secondary Clarifier No. 1 / DAF No. 2 MCC.
- Power the new scum pumps and weir washing system from Secondary Clarifier No. 1 / DAF No. 2 MCC.
- Specify installation of new hardware (Input/Output cards) in existing DAF 2 PLC to accommodate new scum pumps and weir washing system.
- ETWD will integrate all new equipment, instrumentation, and supervisory control and data acquisition (SCADA) installed as part of the project.
- Specify local controls at each piece of new equipment in addition to SCADA controls and monitoring.
- Provide high level operating philosophies in the BODR.
  - » Collaboratively develop specific control strategies and process and instrumentation diagrams (P&IDs) during the design phase of the project.

Evaluate the effect on the capacity of existing 1.25-MW standby generator to replace existing or add new loads as part the project.

#### Construction Sequencing:

- Determine work constraints for the Contractor to control and minimize the impact to plant operation during construction.
- Specify temporary power, bypass pumping requirements, and shutdown limitations for the Contractor.

#### DELIVERABLES:

1. Draft and final BODR.
2. Consolidated comment log with ETWD comments and Consultant responses.

### Task 5 — Plans and Specifications

Prepare Technical Specifications, Drawings, and Typical Details for construction of the project elements identified in the BODR. ETWD will provide the front-end documents, which the Consultant shall review and

provide edits in tracked changes. If pre-purchasing is recommended as part of the BODR task, cost to develop pre-purchased packages shall be included in this task. Consultant shall electronically submit via e-mail the following design submittals to ETWD at the following completion levels:

- 60% Design.
- 100% Design.
- Final Signed Bid Documents.

Technical specifications will be prepared for all components of the project. After the 60% and 100% design submittal, ETWD will provide comments for the Consultant to incorporate as part of the subsequent design submittal. Assume ETWD does not have a site survey, and the Consultant shall be responsible for obtaining one.

#### Task 5a — 60% Design

Based upon the BODR, the Consultant shall prepare bid documents to a point of 60% completion. The 60% design drawings shall be developed to the following approximate levels of completion:

1. **A title sheet or sheets** with ETWD's approval signature block, a location map, the Project name and number, issue block with dates and revision number, summary of applicable codes and standards, drawing index, sheet number block, space for professional stamp, name, street address, phone, and email address of the Design Engineer and all Subconsultants (100% complete).
2. **General Drawings:**
  - a. List of drawings (90% complete);
  - b. Site plan (100% complete);
  - c. Drawing symbols, numbering & tagging conventions, symbols, and abbreviations (100% complete);
  - d. Design criteria (100% complete);
  - e. Process flow diagram (100% complete); and
  - f. Pipe material schedule (90% complete).
3. **Demolition Drawings:**
  - a. General Notes (60% complete);
  - b. Plans and sections
4. **Civil Drawings:**
  - a. General Notes (60% complete);
  - b. Details (60% complete);
  - c. Yard piping, paving, grading, and stormwater drawings (60% complete); and
  - d. Yard piping/utility profiles (60% complete)



**5. Structural Drawings:**

- a. General notes and structural sections (100% complete); and
- b. Plans and sections (60% complete).

**6. Mechanical Drawings:**

- a. Plans, sections, and details (60% complete).

**7. Electrical Drawings:**

- a. General notes, symbols, abbreviations (90% complete);
- b. Main switchgear single line diagram (90% complete);
- c. Load schedules (60% complete);
- d. Panel schedules (60% complete);
- e. Single line diagram (90% complete); Electrical distribution site plan (60% complete);
- f. Conduit plan (30% complete);
- g. Ground plan (30% complete); and
- h. Lighting and receptacle plan (30% complete);

**8. Instrumentation:**

- a. Legends and symbols (90% complete);
- b. Control system block diagrams/network architecture (90% complete); and
- c. Process and instrumentation diagrams (P&IDs) (90% complete).

**9. Typical Details (60% complete).**

The 60% design specifications shall be developed according to the following:

1. Table of Contents (100%).
2. Identification of Consultant standard specifications intended for use.
3. Major equipment specifications (90% complete).
4. Concrete specifications (90% complete).
5. Piping and valve specifications (90% complete).
6. Control narratives (90% complete).
7. Balance of specifications (60% complete).

Consultant shall submit hydraulic calculations showing, at a minimum, pump and system curves that indicate efficiency and required horsepower. Consultant shall submit a 60% construction cost estimate based on manufacturer provided information and recent construction bid tab data.

**DELIVERABLES:**

1. 60% drawings and specifications in PDF format.
2. 60% typical details in PDF format.
3. 60% hydraulic calculations.
4. 60% cost estimate.
5. Updated construction schedule.
6. Consolidated comment log with ETWD comments and Consultant responses.

**Assumptions:**

- Typical details will be in a separate booklet for 60% submittal.
- 60% cost estimate and updated construction schedule will be delivered 3 weeks after 60% drawings and specifications.

**Task 5b — 100% Design**

Based upon comments received from ETWD on the 60% design and further design progress, the Consultant shall prepare the bid documents to a point of 100% completion. The 100% design shall incorporate the results of final site investigations, final project layout and features, detailed design of project features, detailed drawings and specifications, design calculations (civil, electrical, mechanical, structural), and quality management reviews. All drawings and specifications should be completed to a 100% level at a minimum. Consultant shall submit a 100% construction cost estimate based on manufacturer provided information and recent construction bid tab data.

**DELIVERABLES:**

1. 100% drawings and specifications in PDF format.
2. 100% all discipline calculations, including hydraulics.
3. 100% cost estimate.
4. Updated construction schedule.
5. Consolidated comment log with ETWD comments and Consultant responses.

**Assumptions:**

- 100% cost estimate and updated construction schedule will be delivered 3 weeks after 100% drawings and specifications.

**Task 5c — Final Design**

Based upon comments received from ETWD on the 100% design, the Consultant shall prepare the bid documents to a point of 100% completion. A Professional Engineer licensed to practice in the State

of California shall stamp each drawing. Consultant shall update the calculations or cost estimate if necessary based on the 100% design review.

#### **DELIVERABLES:**

1. Final drawings and specifications in PDF format.
2. Final calculations, cost estimate, and construction schedule - if updated since 100% design.
3. Consolidated comment log with ETWD comments and Consultant responses.

### **Task 5d Optional Task — WAC Abandonment in Plans and Specifications**

Develop a separate, optional cost for developing the 60%/100%/Final Design, including plans, specifications, cost, schedule implications, and design calculations, for a new WAS pump station, new Secondary Clarifier No. 1 scum pump station, process waste re-routing, and any structural modifications required to abandon the WAC. Do not include costs associated with a new polymer system as part of this task; see Task 5e.

#### **DELIVERABLES:**

1. WAC abandonment component of 60%/100%/Final drawings and specifications in PDF format.
2. WAC abandonment component of 60%/100%/Final calculations, cost estimate, and construction schedule.
3. WAC abandonment component of 60%/100%/Final consolidated comment log with ETWD comments and Consultant responses.

#### **Assumptions:**

- If ETWD opts for Task 5d, the plans and specifications for WAC abandonment will be consolidated into those for the main project.

### **Task 5e Optional Task — Polymer System in Plans and Specifications**

Develop a separate, optional cost for developing the 60%/100%/Final Design, including plans, specifications, cost, schedule implications, and design calculations, for a new polymer system to enhance thickening through the DAF Units prior to hauling to SOCWA.

#### **DELIVERABLES:**

1. Polymer system component of 60%/100%/Final drawings and specifications in PDF format.
2. Polymer system component of 60%/100%/Final calculations, cost estimate, and construction schedule.

3. Polymer system component of 60%/100%/Final consolidated comment log with ETWD comments and Consultant responses.

#### **Assumptions:**

- If ETWD opts for Task 5e, the plans and specifications for WAC abandonment will be consolidated into those for the main project.

### **Task 5f Optional Task — Headworks MCC Replacement in Plans and Specifications**

Develop a separate, optional cost for developing the 60%/100%/Final Design, including plans, specifications, cost, schedule implications, and design calculations, for replacing the existing headworks MCC with a new MCC.

#### **DELIVERABLES:**

1. Headworks MCC of 60%/100%/Final drawings and specifications in PDF format.
2. Headworks MCC of 60%/100%/Final calculations, cost estimate, and construction schedule.
3. Headworks of 60%/100%/Final consolidated comment log with ETWD comments and Consultant responses.

#### **Assumptions:**

- If ETWD opts for Task 5f, the plans and specifications for Headworks MCC replacement will be consolidated into those for the main project.

### **Task 6 — Bid Support**

Consultant shall support ETWD during project bidding by attending the mandatory prebid meeting and reviewing and responding to questions from the prospective Contractors. Consultant shall respond to bidder questions by preparing written responses and revised drawings as-needed to address questions during bidding. The District will work with the Consultant to determine the recommended bid period. For the purposes of bidding, assume 8 weeks. Assume two addenda will be prepared in response to contractor questions. Consultant shall prepare and submit a set of conformed drawings and specifications that incorporate the edits made via addenda during bid phase.

#### **DELIVERABLES:**

1. Mandatory prebid meeting attendance.
2. Written responses to bidder questions and as-needed drawing revisions.
3. Conformed drawings and specifications.

# Appendix - Subconsultant Hours

ProjectLine Technical Services, Inc.

23-Oct-23

## Estimated Level of Effort for Engineering Services ETWD Headworks and SC Final Design Engineering and Design Services - Electrical and Controls

Task	Task Description	Design Review Meetings							Total Hrs
		Project Manager	QA/QC	Senior Engineer	Project Engineer	Sr. CAD Tech	CAD Tech	Clerical	
1	<b>Project Management and Meetings</b>								
1b	Project Kickoff Meeting	2			2		2		6
	Focus Meetings	2			2		2		6
	BODR Submittal Review Meeting	4		4	4		4		16
	60% Submittal Review Meeting	4		4	4		4		16
	100% Submittal Review Meeting	4		4	4		4		16
	Task 1 Subtotal								
2	<b>Data Request and Review</b>								
2a	Records review and data request	4		4	4				12
2b	Site investigations	4		4	4				12
	Task 2 Subtotal								
4	<b>BODR</b>								
	Draft BODR Report	24	4	24	24				76
	Final BODR Report	12		12	12				36
	Task 4 Subtotal								
5	<b>Final Design Plans and Specifications</b>								
5a	60% Design	44	4	40	40	40	40		208
5b	100% Design	44	4	48	54	80	60		290
5c	Final Design	44	4	48	54	80	60		290
	Task 5 Subtotal								
6	<b>Bid Support</b>								
	Prebid Meeting	2							2
	Responses to Questions	2							2
	Conformed Drawings	2		2		2			6
	Task 6 Subtotal								
<b>Totals (not including optional tasks)</b>		198	16	194	208	202	176	0	994
5d	<b>Optional Tasks</b>								
	WAC Abandonment, WAS/Scum pumps (Optional Task)	82	3	110	110	110	110		525
5e	Polymer System (Optional Task)	30	2	42	42	42	42		200
	<b>Optional Tasks (Deduct)</b>								
	Defer MCC Replacement (Optional Deduct)	-50	-4	-56	-60	-80	-66		-316

### Assumptions

- Design effort estimated based on RFP scope.
- Background survey drawings will be provided to ProjectLine in CAD for use in design.
- PL will generate electronic documents. Others responsible for reproduction.
- Short circuit, harmonic analysis, coordination and arc flash studies not included, and will be done by Contractor or others.
- Point to point wiring diagrams between electrical devices/ cabinets to be by Contractor and not included above.

**CONVERSE CONSULTANTS**

2021 Rancho Drive, Suite 1  
 Redlands, CA 92373  
 Telephone 909-796-0544  
 Fax 909-796-7675

**Project Name: Headworks and Secondary Clarifier No. 1**  
**East of Moulton Parkway, south of Ridge Route Drive**  
**City of Laguna Hills, Orange County, CA**

Page 1 of 1

Project #: 23-32-143-00(01)

Date: 10-17-2023

**GEOTECHNICAL INVESTIGATION REPORT**

Labor Hours	Staff/Rate PH/Hours Per Task					
	PIC	PM/SP	PP	SSP	SS	DP
Task 1: Existing Document Review	1	0	4	2	0	0
Task 2: Project Set-up	0	2	0	8	0	0
Task 3: Subsurface Exploration	0	0	0	8	0	0
Task 4: Laboratory Testing	See Laboratory Testing Table Below					
Task 5: Geotechnical Design Report	5	2	22	14	2	3
<b>Total Hours</b>	<b>6</b>	<b>4</b>	<b>26</b>	<b>32</b>	<b>2</b>	<b>3</b>

Laboratory Testing Costs	Number of Tests
In Place Moisture and Density	10
Collapse	0
Soils Corrosivity	2
Expansion Index	2
Sand Equivalent	0
R-value	0
Sieve Analysis	4
Laboratory Maximum Density	1
Consolidation	2
Direct Shear (Undisturbed)	2

**\*Explanation**

PIC - Principal in Charge

PM/SP - Project Manager/Senior Professional

PP - Project Professional

SSP - Senior Staff Professional

DP - Drafting Professional

SS - Support Staff



- LAND SURVEYORS
- GPS/GNSS SURVEYING
- CIVIL ENGINEERING
- MUNICIPAL CONSULTANTS
- LAND PLANNING

### Project Hours Summary: El Toro Water District

Task	Hours	Labor Classification
1	8	Office Calculations - Senior Surveyor
2	10	Control Survey - 2 man crew PW rate
3	16	Aerial Survey - 2 man crew PW rate
4	8	Aerial Survey - CAD drafting
5	4	P.H. Locations - 2 man crew PW rate
6	10	U.G. Utility Locate - 3 man crew PW rate
7	8	P.H. Locations - 2 man crew PW rate
8	8	Pothole mapping - Senior Surveyor
<b>Total</b>	<b>72</b>	





## Theresa L. Raasch, PE

**Teri Raasch** is a project manager with experience leading detailed design of new and retrofit wastewater treatment facilities. She has provided planning, design, and construction services for clients such as the San Francisco Public Utilities Commission, Orange County Sanitation District, and City of Sunnyvale, California. Teri will provide project oversight and controls to achieve high quality deliverables within your project schedule. She will be the primary point of contact with the District and will be responsible for making sure your expectations are met.

### Education

BS (Hons) Environmental Engineering, Florida Gulf Coast University, 2012

### Licenses

Civil Engineer, California

### Professional Affiliations

California Water Environment Association

### Relevant Experience

→ Principal-in-charge for the Water and Sewer Master Plan Update for El Toro Water District, California. Carollo evaluated the District's water distribution and sewer collection system. The water system hydraulic model was developed and calibrated in InfoWater Pro. Flow monitoring was conducted for the sewer system and the model developed and calibrated in InfoWorks ICM. Based on system evaluations, recommended improvements and a capital improvement program will be developed.

→ Principal-in-charge for the Headworks Conceptual Design Study and the Grit Rehabilitation Project for El Toro Water District, California. The headworks study developed and analyzed alternatives for the coarse screening and fine screening systems. Recommendations and costs were provided. The study also evaluated rehabilitation options to improve maintenance and energy efficiency in the existing grit system. The grit rehabilitation project implements the study's recommended improvements into an ongoing construction project at the grit facility. Close collaboration with District staff and the contractor allows this expedited design to be consolidated with other grit improvements and streamline construction in this area.

→ Project manager for Hilo Wastewater Treatment Plant Rehabilitation and Replacement Project for the County of Hawaii. This urgent project will address failing infrastructure and restore the plant to its original condition and capacity of 13 mgd in two phases. The project's expedited design includes new headworks facility, digesters, solids handling facilities, and improvements to the primary clarifier, secondary clarifier, and disinfection processes. The Phase 1 design team recently received individual certificates from the

County of Hawaii's Mayor "for your outstanding professionalism, quality of service, and adherence to deadlines."

→ Project engineer for OCSAN's Plant No. 1 Primary Sedimentation Basins 6-31 Reliability Improvements project. She designed upgrades to primary sludge pumping system, primary influent splitter box, and foul air sump condensate. She was primary point of contact for OC San's project engineer.

→ Project engineer for the grit system for Southeast Plant's New 250-mgd Headworks, San Francisco Public Utilities Commission (SFPUC), California. The project replaces two existing headworks facilities with a single new headworks to significantly increase screening and grit removal and to provide plant staff and the surrounding community with the highest level of standards for reliability, aesthetics, odor control, and noise abatement. The project addresses major challenges including very tight site space, high groundwater, poor soils, heavy urban setting, extremely high influent grit loads from this combined sewer system, and protecting SFPUC's major investment in state-of-the art solids treatment and handling facilities. Her responsibilities included design of new grit basins, grit handling, and primary influent distribution structures, scum system, hydraulic profile development and cost estimation. She also oversaw the computational fluid dynamic (CFD) and physical modeling of various hydraulic structures that confirms the innovative solutions which optimize process performance and hydraulics of the new facilities.

→ Project engineer for the grit system for Roberto R. Bustamante Wastewater Treatment Plant Headworks Improvements, El Paso Water, Texas. This project incorporates necessary upgrades of the plant's headworks influent pump station, screenings, grit

## Awards

Florida Gulf Coast  
University Alumni Soaring  
Eagle Award, 2021

Kenneth J. Miller  
Founders' Award 2018-  
Water For People

## Theresa L. Raasch, PE

removal, and associated odor control with an increased capacity of 130 mgd. Her responsibilities included design of major elements of the grit removal and handling facilities and hydraulic profile development

→ Engineer for the Plant 1 Headworks Assessment for Orange County Sanitation District, California. The study addressed various aspects of the existing headworks that were in need of rehabilitation to meet future flow and level-of-service requirements. She completed alternative analyses and life-cycle cost evaluations for the influent monitoring and sampling facilities, screenings management system, grit management system, influent pumping capacity expansion, primary influent flow metering, chemical tank rehabilitations, and associated ventilation and odor control. She also performed bar screen capacity and head loss calculations and hydraulics analyses from the metering and diversion structure at the head of the plant through the influent pump station and to the primary treatment facilities.

→ Lead engineer for the Primary Treatment Facility Headworks for the City of Sunnyvale, California. This project replaces aging headworks and primary sedimentation tanks with 60 mgd capacity. She led the design of a new screening facility, grit removal basins, and a grit and screenings handling and loading facility. She also assisted with design of the new influent pump station, performed hydraulic profile calculations, and developed the engineer's construction cost estimate for those areas.

→ Lead engineer for 120-Inch Diameter Ocean Outfall Condition Assessment and Scoping Study (PS18-09). She led low flow hydraulics evaluation of the diffuser and identified mitigation measures for seawater intrusion and marine biofouling.

→ Design engineer for the Wastewater Treatment Plant Upgrade Project for the City of Palm Springs and Veolia Water West Operating Services, California. The project's tight budget incorporated necessary upgrades of the plant's headworks screenings and grit removal, primary clarifiers, primary sludge pump station, primary influent pump station, digester dome replacement, odor

control, and sludge dewatering. During pre-design, she assisted in developing cost-saving alternatives and configurations for the primary influent pump station, digester dome replacement, odor control, and sludge dewatering facilities.

→ Design engineer for the Solids Handling Improvements project for the 30-mgd Southeast Water Reclamation Plant for the City of Lubbock, Texas. The improvement and optimization project increased the plant's sludge thickening and dewatering capacities. Her responsibilities included design of major elements of the thickening and dewatering facilities, new emulsion polymer systems, cake conveyance, and cake storage and loading facilities. She was also responsible for developing the engineer's construction cost estimate for the entire project totaling \$42.5 million, as well as coordinating the negotiation of price and terms and conditions of several sole-source equipment items.

→ Hydraulics engineer for the J.B. Latham Treatment Plant Facility Plan, South Orange County Wastewater Authority, California. The Facility Plan provided a 20-year planning window for liquid and solids treatment, flow analysis, odor control, energy management, site planning, and regulatory issues. Project duties included flow and plant capacity analysis, development and calibration of hydraulic profile, and report preparation.

→ Hydraulics Engineer for the RP-1 Solids and Liquids Capacity Improvements project. She was responsible for developing hydraulic profile of plant at increased capacity of 80 mgd. She was also responsible for identifying solutions for improving influent plant metering, improving screen capture, achieving primary splitting, and simplifying plant operation.

## Presentations/Publications

→ Lytle, T., Karam, W., Esquer, M.E., Hetherington, M. "So You Have a Grit Problem? Case Studies for Developing Customized and Successful Grit Removal Systems." *WE&T Journal*, Volume 30, Number 8, pp: 44-48, August 2018.



### Education

MS Water and Wastewater Treatment, University of California, Berkeley, 2000

BS Water Quality, University of California, Berkeley, 1998

### Licenses

Civil Engineer, California

### Professional Affiliations

Water Environment Federation

American Academy of Environmental Engineers

## Han G. Kang, PE, BCEE

**Han Kang**, a design manager with 23 years of experience encompassing all phases of wastewater design for upgrade and expansion projects. This experience provides an excellent knowledge base that will help his team evaluate and implement the best engineering solutions while managing risk related to constructability and construction sequencing, culminating in O&M friendly facilities. In recent years, Han has completed several highly successful wastewater treatment plant upgrade projects for major water districts and cities in Southern California. The focus of his wastewater treatment design experience has been complex process mechanical upgrades for liquid treatment, and solids handling processes, to overcome the challenges of rehabilitating existing facilities.

### Relevant Experience

→ Project manager for the award-winning El Estero Wastewater Treatment Plant Headworks Screenings Replacement Project for the City of Santa Barbara, California. Project retrofitted an existing headworks/influent pump station structure and installed new mechanical bar screens, a screenings conveyor, and screenings washer/compactors, as well as a new smart motor control center. In addition, the project replaced all existing cast-iron sluice gates in the headworks that were installed as part of the original facility construction. He developed a detailed construction sequencing plan that includes temporary bypass pumping of plant influent and allows sequential replacement of existing equipment to minimize construction impact on the facility operation.

→ Assistant project manager for the Moreno Valley Regional Water Reclamation Facility Secondary Clarifiers and Tertiary Treatment Project for the Eastern Municipal Water District, California. He performed the overall plant hydraulic calculations and provided oversight of and support for lead design engineers. The new facilities consisted of secondary clarifiers; a flow control valve station; a cloth-media filtration system; a chlorine induction box; and polymer feed facilities. The project retrofitted or expanded existing facilities including the aeration basins, secondary clarifiers, return activated sludge/waste activated sludge (RAS/WAS) pump station, filter influent pump station, flow equalization basins, chlorine contact basins, chlorination system, and tertiary chemical building for aluminum sulfate and polymer.

→ Assistant project manager for the Headworks Rehabilitation Project at Plant 1 (P1-105) for Orange County Sanitation District, California. Serving as an overall technical lead for 320-mgd headworks facilities, he oversaw development of over 30 TMs and over 1,900 completed drawings for a \$222 million CIP Project, which is now in construction. Also performing as the overall lead for commissioning, he spearheaded development of all commissioning related deliverables as well as of the overall project construction sequencing plan. Project included 4 single-stage chemical scrubbers for a 113K scfm capacity with sodium hypochlorite, caustic, and acid storage and feed systems.

→ Project manager for Hyperion 2035 Program (TOS SN53, TD 49) for City of Los Angeles, California. Also serving as an overall technical lead for rehabilitating existing 850-mgd secondary treatment facilities. Proposed facilities include renovating 27 existing activated sludge basins, 3 new BNR basins, 5 new blower buildings, new MLR pumping systems, 5 new membrane trains, 10 RAS pump stations, and demolition of 36 secondary clarifiers. Authored 6 TMs as part of the preliminary implementation plan, including for overall program phasing and packaging. (2022-Current)

→ Project manager for the Moreno Valley Regional Water Reclamation Facility Preliminary Treatment and Acid-Phase Anaerobic Digestion Project for the Eastern Municipal Water District, California. The project included implementation of two-phase digestion with a multi-cell acid phase reactor, a methane-phase digester, digested sludge storage tanks, a boiler facility, and an acid-



## Han G. Kang, PE, BCEE

### Awards

San Luis Obispo, Los Osos Water Recycling Facility

- Project of the Year, California Central Coast Chapter, American Public Works Association, 2016

City of Santa Barbara El Estero Wastewater Treatment Plant Headworks Screening Replacement

- Outstanding Private Sector Civil Engineering Project - Honorable Mention, American Society of Civil Engineers, Los Angeles Section, 2013
- Project of the Year, American Society of Civil Engineers, Santa Barbara/Ventura Branch, 2012

Orange County Sanitation District Plant No. 2 Headworks Replacement Project, P2-66

- Engineering Research Achievement Award, Santa Ana River Basin Section of the California Water Environment Association, 2005
- Engineering Research Achievement Award, California Water Environment Association, 2005

phase digester gas flare. The project also upgraded or expanded existing facilities including headworks, grit basins, influent pump station, two blower buildings, odor control facility, secondary and tertiary effluent pump stations, tertiary effluent meter vault, standby power facility, and a number of electrical buildings. The project renovated or modified three chemical systems: ferric chloride for digestion and sodium hypochlorite and caustic for odor control. In addition, the project made significant upgrades to the digester gas treatment and control systems. Plant-wide power distribution was upgraded from 480 V to 12 kV. The plant-wide data highway system was replaced with a fiber-optic communication network. He coordinated design efforts with a fuel cell cogeneration project on the same site. Evaluated the adequacy of aeration diffuser capacity in an existing step-feed aeration basin and completed preliminary design for expanding the basin.

→ Design Manager for the award-winning Los Osos Water Recycling Facility for San Luis Obispo County, California. Led preliminary design and final design for a brand new \$50 million water recycling facility. Preliminary design included development of a basis-of-design report and a series of technical memoranda that collectively defined the design criteria and facility requirements. The plant included a full nitrification/denitrification oxidation ditch process designed to produce total inorganic nitrogen (TIN) of 10 mg/L. The facility consists of headworks, secondary and tertiary treatment, recycled water storage and pumping system, solids handling, and all necessary utilities and auxiliary systems. Included two 60-foot diameter circular clarifiers and associated pumping facilities.

→ Lead design engineer for a 340-mgd, \$192 million Plant No. 2 Headworks Replacement (P2-66) for Orange County Sanitation District, California. The award-winning project included influent flow diversion and metering facilities, primary influent flow splitter and metering structures, and a sampling system. He designed four chemical feed and storage systems consisting of a 6-pump, 48,000-gallon ferric chloride system;

a 16-pump, 18,000-gallon sodium hypochlorite system; a 16-pump, 10,000-gallon sodium hydroxide system; and a 2-pump, 10,000-gallon acid system. The chemical system design included an automated acid-wash sequence for periodically cleaning eight chemical scrubbers.

→ Secondary process lead for Hyperion 2035 Program for City of Los Angeles, California. Currently serving as an overall technical lead for rehabilitating existing 850-mgd secondary treatment facilities. Proposed facilities include renovating 27 existing activated sludge basins, 3 new BNR basins, 5 new blower buildings, new MLR pumping systems, 5 new membrane trains, 10 RAS pump stations, and demolition of 36 secondary clarifiers.

→ Project manager for Braemar Lift Station Rehabilitation for the City of Santa Barbara, California. Project included preliminary design and final design for rehabilitating an existing sewage lift station. All existing mechanical and electrical equipment will be replaced, which requires temporary bypass pumping of raw sewage during construction. Includes dry flood-proofing the existing facility as part of the rehabilitation.

→ Project manager for the Moreno Valley Regional Water Reclamation Facility Operations Building Expansion and Modifications for the Eastern Municipal Water District, California. He led the detailed design of re-modeling and expanding an existing plant control building. In collaboration with plant staff, he developed a work plan that allowed construction to take place at the building while keeping important services and access available to plant staff throughout construction. As a result, the project provided a number of temporary facilities for use by operations personnel, which consisted of an Operations office trailer, a restroom and shower trailer, and a locker room trailer. The Operations office trailer, in particular, provided an effective and functional workspace with full capabilities for existing supervisory control and data acquisition (SCADA), network, and security systems.



## Scott E. Parker, PE

**Scott Parker**, serves as Carollo's Chief Engineer. As such, he leads the development and updates to all of Carollo's engineering standards, including computer aided design, standard specifications, typical details, and cost estimating. Scott has completed a wide array of projects in planning, design, and construction of wastewater systems.

### Education

MS Environmental Engineering, University of California, Berkeley, 1992

BS Civil Engineering, University of California, Los Angeles, 1991

### Licenses

Civil Engineer, California

Professional Engineer, Hawaii

### Relevant Experience

→ Principal-in-charge/project manager for the design and construction of the \$10 million South Tahoe Public Utility District, California, Headworks Replacement. The project consists of new metering, screening, and grit removal systems, as well as demolition of existing plant infrastructure to include the existing headworks, grit facilities, and an abandoned incineration building.

→ Technical advisor for the City of Hughson, California, Wastewater Treatment Plant Expansion, which increased capacity to 1.9 mgd. The project included fine screens, pump station upgrades, odor control, oxidation ditch, secondary clarifiers, and solids processing. The expansion design involved process and hydraulic modeling and included new influent sewer, headworks, oxidation ditches, secondary clarifiers, return activated sludge/waste activated sludge pump station, solids handling building with gravity belt thickeners and belt presses, percolation ponds, electrical upgrades, and a new SCADA system.

→ Principal-in-charge for the City of Chico, California, \$45 million Water Pollution Control Plant Expansion to 12 mgd, average day average month capacity. New facilities provided include headworks, aeration tanks, aeration blowers, and a secondary clarifier. The project involved expanding the liquid and solids treatment processes and included construction of a new influent sewer, new headworks, aeration tanks, secondary clarifier, anaerobic digester, new centrifuge, cogeneration, and new outfall pipeline and river diffuser, as well as other plant-wide improvements.

→ Principal-in-charge for the \$5 million City of San Jose, California, San Jose/Santa Clara Water Pollution Control Plant Headworks Enhancement Phase 1. The project entails design of several plant infrastructure

improvements to allow for independent operation of the facility's second headworks.

→ Peer review for the Inland Empire Utilities Agency, California, RP-1 Liquids and Solids Recovery. The project involved design for rehabilitation of existing headworks and primary clarifiers, improvements to yard piping, aeration basin modification, and new fine screens, process blowers, solids thickening facility (using rotary drum thickeners), acid-phase digesters, odor control systems, and electrical service feed.

→ Principal-in-charge for the Union Sanitary District, California, Primary Digester No. 3 Rehabilitation and Solids System Capacity Assessment Report. Digester improvements included upgrades to the piping associated with pumped mixing, heating, sludge transfer, and digester gas systems, as well as concrete repairs and foam insulation replacement to address structural and safety deficiencies.

→ Technical advisor for the City of Sunnyvale, California, \$280 million Secondary Treatment and Dewatering preliminary and final design. The project includes expanding the secondary treatment process to a conventional activated sludge (CAS) process, adding dewatering and thickening facilities for sludge handling, and adding sidestream ammonia treatment. The CAS process will remove nitrogen in anticipation of upcoming nutrient regulations in the San Francisco Bay.

→ Principal-in-charge for the Fairfield-Suisun Sewer District, California, Blower Replacement Project, which enhanced the reliability and efficiency of the secondary treatment process aeration system. The project consists of a secondary treatment process evaluation of the activated sludge process, replacement of the existing 600-hp aeration

## Scott E. Parker, PE

blowers with new high-speed turbo blowers, aeration piping repairs, standby power generation, and electrical system upgrades.

→ Design manager for the Sacramento Regional County Sanitation District, California, EchoWater Project Tertiary Treatment Facilities Project (TTF). This \$400 million project will provide filtration and disinfection of secondary effluent to a level equivalent to Title 22 requirements for tertiary disinfected recycled water for unrestricted reuse. TTF includes a 330-mgd filter influent pump station, 217 mgd of granular media filters, backwash equalization and treatment, chemical feed systems, covered disinfection contact basin, and a new area control center.

→ Quality assurance for the City of Bellingham, Washington, Post Point Wastewater Treatment Plant Facilities Plan. Tasks included 30-percent design documents to develop a full set of plant secondary upgrade contract plans and specifications for the recommended Phase 1 improvements without substantial changes. The evaluation included primary and secondary expansion alternatives and incorporated sustainability, energy efficiency, and LEED® concepts for future nutrient removal.

→ Project manager for the \$11 million Fairfield-Suisun Sewer District, California, Primary Treatment Expansion. This expansion increases the primary treatment capacity of the existing plant by approximately one-third, to an annual average dry weather flow of 23.7 mgd. The project includes design of a 95-foot-diameter circular clarifier; a vortex grit removal basin; related sludge, scum, and grit pumping stations; a grit handling facility; and grit basin influent flow channels fitted with Parshall flumes used for both flow measurement and flow splitting.

→ Principal-in-charge/project manager for the \$22 million Fairfield-Suisun Sewer District, California, Secondary Treatment Expansion, which includes conversion of an intermediate clarifier, integration of anoxic selectors into converted aeration basins, new secondary clarifiers, a new RAS pump station, and odor control.

→ Technical advisor for the California Department of Corrections and Rehabilitation California Men's Colony Wastewater Treatment Plant and Trunk Sewer Replacement. The new treatment facility includes a new headworks and influent pump station, aerated grit chamber, two 1.76-MG oxidation ditches with anoxic and aerobic zones for nitrification/denitrification, two 65-foot-diameter secondary clarifiers, continuously backwashed tertiary filters, new chlorine contact basins, chemical feed and storage building, and biosolids dewatering building with two 200-gpm centrifuges.

→ Project manager for the City of Bakersfield, California, 2002 Plant 3 Headworks Upgrade. The project included model development and hydraulic analysis of the preliminary treatment system to evaluate various expansion alternatives. Model results were incorporated into an influent pumping capacity expansion, retrofit of the screenings handling systems, and concrete rehabilitation.

→ Project manager/engineer for design of the City of Chico, California, \$33 million 9-mgd nitrification improvements. The project included headworks modifications, primary clarifiers, anaerobic digesters and control building, centrifuge dewatering building, chlorine contact basins, sodium hypochlorite and sodium bisulfite disinfection, 48-inch outfall pipe, administration building, electrical and instrumentation upgrades, aeration basins, secondary clarifiers, RAS pumping, aeration blowers, and yard piping. Also responsible for development of the hydraulic model and process calculations.

→ Discipline engineer for the peak-flow, full-scale hydraulic testing and analysis of the secondary clarifiers for the City of Santa Rosa, California, Wastewater Treatment Plant.



## James A. Doering, PE, SE

**James Doering**, a registered structural and civil engineer, is Carollo's structural lead engineer in Southern California. He manages structural design and evaluations for large and small projects. He has 30 years of experience in structural analysis, design, seismic retrofit, rehabilitation, review, and assessment for a variety of structures, such as wastewater and water treatment facilities, pump stations, reservoirs, tanks, clarifiers, large pipe supports, retaining walls, operations and maintenance facilities, office buildings, parking structures, post tensioned concrete structures, retail shopping centers, and warehouses.

### Education

MS Civil Engineering,  
University of California,  
Berkeley, 1994

BS Civil Engineering,  
University of California,  
Irvine, 1993

### Licenses

Structural Engineer,  
California, Oregon, Utah,  
Washington

Civil/Structural Engineer,  
South Dakota

Civil Engineer, California,  
Colorado

### Professional Affiliations

American Concrete  
Institute

American Institute of  
Steel Construction

### Relevant Experience

→ Structural engineer for the Wastewater Reclamation Plant for the El Toro Water District, California. The project included the structural design of a 2.5-million-gallon aeration basin, a 0.9-million-gallon equalization basin, and blower building.

→ Structural engineer and value engineering team member for the Moreno Valley Regional Water Reclamation Facility Secondary Clarifiers and Tertiary Treatment (SCATT) Expansion for the Eastern Municipal Water District, California. The project included design of secondary clarifiers, chlorine contact basins, pump stations, splitter boxes, electrical buildings, and support structures.

→ Structural engineer for the Moreno Valley Regional Water Reclamation Facility Preliminary Treatment and Acid-Phase Anaerobic Digestion project for the Eastern Municipal Water District, California. Design included headworks and influent pump station modifications, grit basin, acid-phase digester, methane-phase digester, boiler facility (concrete masonry unit (CMU) building), electrical buildings, and other process-related structures and modifications.

→ Structural engineer for El Estero Wastewater Treatment Plant Digester Nos. 1 and 2 Rehabilitation for the City of Santa Barbara, California. The project included identification of cracks at the interior of the digesters requiring repairs/sealing and preparation of associated details and repair procedures. The interior concrete was also repaired and coated with a polyurethane spray-on liner.

→ Structural engineer for the South Secondary Improvements for the Metro Wastewater Reclamation District, Denver, Colorado. The project included final design of a new 100-mgd secondary treatment complex with a

peak flow capacity of 240 mgd. The complex includes a primary effluent splitter structure, wet wells, pump station, blower building, electrical/controls building, aeration basins, utility galleries, centrate re aeration basins, and a return activated sludge/waste activated sludge (RAS/WAS) pump station. His responsibilities included leading a structural design team in the preparation of construction documents.

→ Structural engineer for the P1-105 Headworks Rehabilitation and Expansion at Plant No. 1 Project for the Orange County Sanitation District, California. Serving as the lead structural engineer for 320-mgd headworks facilities, he oversaw development of over 277 structural drawings for a \$222 million CIP Project, which is now in construction. The scope includes several new buildings and rehabilitation to existing M&D, IPS, bar screen building, grit chambers, and utility tunnels. Concrete repairs were also specified for the M&D influent box and downstream channels. Bypass pumping was designed to accommodate work on existing structures.

→ Lead structural engineer for the San Francisco Public Utilities Commission, California, Southeast Water Pollution Control Plant, SEP 020 Headworks Replacement Project. The project includes a new 250-mgd headworks facility that is about 375 feet long and has integrated electrical, screening, grit chambers, and grit handling processes. The facility was designed with a deep foundation system comprised of 125-ft long drilled concrete piers.

→ Lead structural engineer for the County of San Luis Obispo Los Osos Water Reclamation Facility. The project included a new 3-mgd wastewater treatment plant with headworks, oxidation ditch, secondary clarifiers, equalization pond, digester, solids handling,



## James A. Doering, PE, SE

blower building, electrical building, and administrative/maintenance facilities. Challenges at the site included high seismicity and expansive soils.

→ Structural engineer for engineering services during construction for the \$192 million Headworks Replacement project for the 340-mgd Orange County Sanitation District Wastewater Treatment Plant No. 2 in Huntington Beach, California. The project included facilities for metering, bar screening, screenings handling, grit removal, grit handling, odor control, chemical handling, and power distribution. The project also included an elevated 84-inch welded steel pipe for temporary bypass to facilitate construction.

→ Structural engineer for the Veolia Water West Operating Services/City of Palm Springs, California, Wastewater Treatment Plant Upgrade. The project included a new 22 mgd capacity headworks with Parshall flume and influent pump station, two new 100-ft diameter primary clarifiers with FRP launders, a primary sludge pump station, an elevated sludge degritting facility, odor control, replacement of the existing Digester No. 2 floating steel dome with a new fixed steel dome, and an electrical building.

→ Structural engineer for the Plant 1 Headworks Channel External Repairs for the Orange County Sanitation District, California. Work involved the seal of an external leak from the west headworks effluent channel at an existing expansion joint. The seal included provision of polyurethane resin injection into the existing expansion joint and the repair of a spalled section of concrete where the leak had occurred. Repairs to the spalled concrete included use of a high-early strength concrete mix to minimize channel downtime.

→ Structural engineer for the La Salina Wastewater Treatment Plant Upgrades for the City of Oceanside, California. The project included rehabilitation and upgrades to the following facilities: headworks, primary clarifiers, aeration basin/secondary clarifier, digestion, dissolved air flotation thickener, and administration building.

→ Structural engineer for the Laguna County Sanitation District, California, Water Reclamation Plant Phase 1 Upgrade. This

project replaces the existing primary and secondary treatment processes, expands the plant treatment capacity, and constructs a new administration and laboratory building. New treatment processes and facilities include headworks, grit removal, aeration basins, blower and main electrical building, secondary clarifiers, RAS/WAS pump station, new PG&E electric service, standby diesel engine generator, 480V power distribution system, underground ductbanks, and complete replacement of the existing SCADA software, hardware, and fiber optic network.

→ Structural engineer for the Plant 1 Headworks Channel Internal Repairs for the Orange County Sanitation District, California. Work involved providing new stainless steel waterstops around the interior perimeter of two existing headworks effluent channels to stop leakage between the channels at an existing expansion joint. Repair work also included packing the existing expansion joints with Oakum and polyurethane resin grout to serve as a joint filler.

→ Structural engineer for the Headworks and Primary Treatment Improvements at Willow Lake Water Pollution Control Facility for the City of Salem, Oregon. The project included design of a new 50-foot-deep buried bar screen facility, influent pump station, flowmeter vaults, and pump stations. In addition, the design included elevated supports for a 30-inch diameter steel pipe.

→ Structural engineer and value engineer team member for the San Jacinto Regional Water Reclamation Facility, Title 22 Tertiary Upgrade and Plant 2 Expansion for the Eastern Municipal Water District, California. The project included primary and secondary clarifiers, aeration basins, a blower building, a waste activated sludge (WAS) thickening building with four rotary drum thickeners supported on elevated concrete piers, biofilters, chlorine contact basins, digesters, filter canopies, 10,000-square-foot operations and administration building, electrical buildings, flocculation basins, and other process-related structures.



Education BS Civil Engineering, California State University, Long Beach, 1987 Licenses Civil Engineer, California Professional Affiliations California Water Environment Association Water Environment Federation

## Mary-ellen Esquer, PE

**Mary-ellen Esquer** has more than 35 years of experience in process engineering on water and wastewater treatment projects including planning, design, construction services, start-up, and training. As Carollo's Chief Technologist for headworks, she has led the design of several headworks projects, provides technical review of headworks designs, assists with facility start-ups, and troubleshoots existing facilities.

### Relevant Experience

→ Project engineer for the Water Recycling Plant Reconstruction project for El Toro Water District, California. The project included replacement and upgrade of various components of the existing 6-mgd plant to meet Title 22 reliability requirements. The project included influent equalization basins, influent pump station, aeration basins, standby power engine generator, aeration blowers, flow distribution structures, odor control facilities, modifications to existing secondary clarifiers to improve sludge removal, and replacement of sludge pumps and irrigation pumps. The new activated sludge facilities were designed for future denitrification and operation using selectors. The aeration basins included internal tank baffles, provisions for step feed, and operation using an anoxic zone. An important part of the design involved developing a sequence of construction to allow construction and start-up of the new facilities without compromising plant operations. The project also involved assisting the District with an application for low-interest financing under the State of California's Revolving Loan Fund program.

→ Project design engineer for the conceptual engineering report and final design of Southeast Plant 250-mgd Headworks for San Francisco PUC, California. The project replaces two existing headworks facilities with a single new headworks to significantly increase screening and grit removal. The project addresses major challenges including very tight site space, high groundwater, poor soils, heavy urban setting, and extremely high influent grit loads from the combined sewer system. Headworks facilities include an influent junction structure, screening, screenings handling, grit basins, grit handling, flow splitting/distribution structures, odor control scrubbers, and electrical. Mary-ellen oversaw the design of the new screenings facilities and is assisting with startup and commissioning of various headworks components.

→ Design technical advisor/ screening process lead for the Headworks and Primary Treatment Facility project for the City of Sunnyvale, California, which includes new headworks and primary treatment facilities. Carollo designed the new 60-mgd headworks to meet stringent goals for screening, grit removal, and odor control. Completed alternatives analyses to develop final facility configuration and equipment selection. Detailed construction sequencing and work restrictions to maintain plant operations during construction, tie-ins, and commissioning of the new headworks. Mary-ellen is currently overseeing the startup and commission of the headworks facility.

→ Headworks technical advisor for the Walnut Creek Wastewater Treatment Plant Headworks Improvements, City of Austin, Texas. This project will replace all screenings removal and handling equipment, rehabilitate the aerated grit removal and transport system, expand grit handling, improve odor control, improve building access and safety, and improve flow measurement to downstream primary clarifiers. A condition assessment of headworks structures and mechanical equipment identified needed improvements. Equipment alternatives evaluations and hydraulic analyses were completed to select optimal screenings removal and handling equipment.

→ Headworks process lead and technical advisor for the Headworks Improvements at Roberto Bustamante WWTP, El Paso Water, Texas. Improvements to the 20-year old headworks facility to increase capacity to 130-mgd include a new dual wet well influent pump station, replacement of four existing screens and construction of three new bar screens, new screenings handling system, rehabilitation of an existing aerated grit basin and conversion of an existing preaeration tank to an aerated grit basin, replacement of the grit pumping and dewatering systems; new odor scrubber systems; and

Awards Outstanding Private Sector Civil Engineering Project - Honorable Mention, American Society of Civil Engineers, Los Angeles Section, 2013, City of Santa Barbara El Estero Wastewater Treatment Plant Headworks Screening Replacement Project of the Year, American Society of Civil Engineers, Santa Barbara/Ventura Branch, 2012, City of Santa Barbara El Estero Wastewater Treatment Plant Head-works Screening Replacement Project Engineering Research Achievement Award, Santa Ana River Basin Section of the California Water Environment Association, 2005, Orange County Sanitation District Plant No. 2 Headworks Replacement Project, P2 66 Engineering Research Achievement Award, California Water Environment Association, 2005, Orange County Sanitation District Plant No. 2 Headworks Replacement Project, P2 66

## Mary-Ellen Esquer, PE

electrical and controls upgrades. Completed condition assessment, alternatives evaluation and hydraulic capacity analyses; developed control strategies and specifications for major headworks equipment; developed construction sequencing and commissioning requirements to keep the facilities in operation during construction, testing and start-up.

→ Project engineer for the Plant No. 1 Headworks Assessments for OCSD, California. The study identified rehabilitation and improvement needs of the 25-year-old headworks facility and expansion from 280-mgd to 320-mgd. The study included alternative analysis for replacement of the existing climber bar screens and screenings handling system; improvements to grit removal and grit handling systems; increasing system, expand grit handling, improve odor control, improve building access and safety, and improve flow measurement to downstream primary clarifiers. A condition assessment of headworks structures and mechanical equipment identified needed improvements. Equipment alternatives evaluations and hydraulic analyses were completed to select optimal screenings removal and handling equipment.

→ Screening process lead for preliminary engineering report and final design for the Headworks Rehabilitation and Expansion at Plant No. 1, Orange County Sanitation District, California. The project provides major upgrades to the 30-year-old headworks facilities, and expansion from 280-mgd to 320-mgd. Improvements include structural repairs, retrofit/rehabilitation of four existing and addition of two new climber bar screens, replacement of screenings handling system; improvements to the grit removal and grit handling systems; replacement of influent pumps to increase capacity; replacement of primary influent flow metering, new odor scrubber system; and major electrical and controls upgrades. Completed equipment evaluations and selection, hydraulic capacity analyses for higher flows and smaller bar screen spacing. The project includes design of the temporary bypass facilities, development of detailed work restrictions and construction sequencing plans to keep the existing critical facilities in operation during

construction, and development of detailed testing, start-up, and commissioning plans.

→ Project engineer for the Preliminary Engineering Report and Final Design for Headworks Replacement at Plant No. 2, Orange County Sanitation District, California. The new 340-mgd headworks includes influent flow metering and diversion, bar screens, screenings handling, influent pumping, grit basins, grit handling, primary flow splitting and metering, odor control scrubbers, chemical facilities, and electrical. Equipment evaluation and selection process included workshops, full-scale pilot testing, and site visits. Detailed construction sequencing requirements kept existing facilities in operation during construction, testing, and start-up and provided for critical live piping tie-ins that did not require any bypass pumping.

→ Screening process lead/ technical advisor for the South Headworks and Grease Processing Improvements at the Robert W. Hite Treatment Facility for Metro WWRD, Denver, Colorado. The project includes retrofit and expansion of the existing 145-mgd headworks including the addition of two new screen channels, replacement of existing bar screens for smaller bar spacing, new screenings handling system, new grit basins and grit handling facilities, and a new electrical system. Hydraulic capacity analysis identified deficiencies in the existing system. Design included detailed construction sequencing requirements to keep existing headworks in operation during construction and commissioning.

→ Project engineer for Headworks Rehabilitation at Moreno Valley and Temecula Valley Regional Water Reclamation Facilities for the Eastern Municipal Water District, California. The project included final design, construction services, and start-up assistance to replace existing screens and screenings conveyors and adding new screenings washing/dewatering equipment at the Temecula Valley and Moreno Valley Regional Water Reclamation Facilities. Included an alternatives evaluation and selection process for different bar screen technologies and screenings handling equipment.



## Education

MS Civil and Environmental Engineering, University of California Berkeley, 2020

BS Civil Engineering, Brigham Young University-Idaho, 2019

## Licenses

Professional Engineer (Civil), California

## Professional Associations

Water Environment Federation (WEF) – Professional (CWEA-SARBS)

# Tanner Howe, PE

**Tanner Howe** is a civil/environmental engineer with experience in the design and planning of water and wastewater treatment facilities. He has a thorough technical understanding of water and wastewater treatment strategies through a combination of engineering design, client services, and construction services. He has provided engineering design and construction services for several treatment facilities for clients such as the San Francisco Public Utilities Commission, the Irvine Ranch Water District, and the Wastewater Division of the County of Hawaii.

## Relevant Experience

→ Design engineer and hydraulics lead for the County of Hawaii Hilo Wastewater Treatment Plant Rehabilitation and Replacement Project. This \$100 million project includes the demolition of the existing headworks facility, the design of a new headworks facility, new solids handling facility, and new odor control system. Tanner lead the design of a new septage receiving station with multiple pump stations and a grit removal and handling facility.

→ Construction services engineer for the San Francisco Public Utilities Commission (SFPUC) 250-mgd Southeast Water Pollution Control Plant SEP Headworks Project. This \$550 million project replaces two existing headworks facilities with a single new headworks to significantly increase screening and grit removal and provides plant staff and the surrounding community with the highest level of standards for reliability, aesthetics, odor control, and noise abatement. Responsibilities included review of contractor submittals and RFI's, preparing change order requests, project schedule review, and start-up and commissioning and working with the contractor and owner to resolve field issues.

→ Project Engineer for the Irvine Ranch Water District (IRWD) MWRP Grit Study and Evaluation. The primary focus of this job is to study current grit issues, assess grit quantity, characteristics, and removal efficiency at the headworks, assess grit characteristics at select locations within the solids handling system, develop operational strategies, and identify potential additional system improvements.

→ Hydraulics engineer and designer for the City of South Pasadena Wilson Well Head Treatment System Project. This project involved the expedited design and analysis of

eight GAC adsorption columns to meet regulatory groundwater contamination limits of 1,2,3-TCP. Tanner designed the configuration of the adsorption columns, performed a hydraulics analysis, and oversaw construction activities.

→ Hydraulics engineer and lead designer for the East Pasadena Water Company Mountain Avenue Well Head Treatment Project. This project involved the design of two GAC adsorption columns to meet regulatory water treatment limits of 1,2,3-TCP and 1, 4 dioxane. Tanner analyzed the hydraulics and piping plan of the existing plant and developed a hydraulic profile and base map for the facility.

→ Design engineer for the Chino Basin Desalter Authority Chino II Desalter Groundwater Treatment Improvement Project. This improvement project consisted of evaluating the existing treatment processes in relation to TCE removal, as well as determining and designing the necessary modifications to the system. These improvements included the phasing and design of air stripping towers to replace existing decarbonators to treat flows between 6 and 15 MGD.

→ Design engineer for the San Gabriel Valley Water Company Plant B6 UVFlex Demonstration Project. This project was a pilot demonstration study to test the efficacy of UV/AOP treatment technology to remove 1,4-Dioxane and N- Nitrosodimethylamine. Engineering services included the design of transmission pipelines and installation of a Trojan UVFlex Modular unit with the capacity to treat 3,900 gallons of water per minute.





## Walid T. Karam, PE

**Walid Karam**, a senior project manager with Carollo Engineers, has more than 35 years of experience as a sanitary engineer in areas such as preliminary, primary, secondary, and tertiary treatment; chemical systems; and hydraulics. He has worked extensively on planning and design of pump stations, wastewater treatment plants, and water reclamation facilities.

### Education

MS Sanitary Engineering,  
University of California,  
Berkeley, 1988

BS Civil Engineering,  
American University of  
Beirut, Lebanon, 1987

### Licenses

Civil Engineer, California,  
Oregon

### Certification

Certification, Certified,  
Confined Space Entry,  
Clayton Environmental  
Consultants, Inc., Santa  
Ana, California, 1997

### Professional Affiliations

American Society of Civil  
Engineers (ASCE)

California Water  
Environment Association  
(CWEA)

Water Environment  
Federation

### Relevant Experience

→ Design advisor/quality manager for the El Estero Wastewater Treatment Plant Headworks Screening Replacement Project for the City of Santa Barbara, California. On this award-winning project, he was part of the solution to the complex replacement located in a 35-foot-deep basement. As part of the team, he introduced five-section, 90-degree vertical screens to overcome constraints to the existing structure and extremely compact footprint. The project also involved installing new mechanical bar screens, a screenings conveyor, screenings washer/compactors, a smart motor control center, and replacing all existing cast-iron sluice gates. The new control system provides full automatic control of the new screening system. A detailed construction sequencing plan included temporary bypass pumping of plant influent which allowed sequential replacement of existing equipment which minimized the construction impact on the facility operation.

→ Technical Advisor and Quality Manager for the County of Hawaii, Hawaii, Hilo WWTP Phase 1 Improvements. Managed the design of a new headworks, rehabilitated solids thickening and dewatering facilities, and new digesters for the Hilo WWTP.

→ Design project engineer and construction manager for an upgrade and expansion project at the Camrosa Water District, California, water reclamation plant. The project included evaluating the existing structures and developing a facility layout and design based on the most economical use of existing facilities, combined with the best use of alternative wastewater treatment processes. The upgrade project included preliminary and final design of a bar screen facility; influent pumping station; oxidation ditches; anoxic basins; secondary clarifiers; return activated sludge/waste activated sludge pump stations; tertiary filters; chemical feed

systems; and conversion of the existing chlorine gas disinfection system to sodium hypochlorite.

→ Project/design manager for the conceptual engineering report and the preliminary and final design of San Francisco Public Utilities Commission (SFPUC), California, Southeast Plant's new 250-mgd Headworks project. The project replaces two existing headworks facilities with a single new headworks to significantly increase screening and grit removal and to provide plant staff and the surrounding community with the highest level of standards for reliability, aesthetics, odor control, and noise abatement. This project received an Envision Gold Award in 2019 for its innovation in supporting sustainability. Headworks facilities include an influent junction/metering structure, bar screen facility, screenings handling, grit basins, grit handling, flow splitting/distribution structures, odor control scrubbers, chemical addition, and electrical/control buildings.

→ Design technical advisor on the Water Pollution Control Plant Headworks Primary Replacement Facility for the City of Sunnyvale, California. The state-of-the-art headworks facility was designed to meet very stringent goals for screening, grit removal, and odor control. The design also included a complete retrofit and extension of the plant tunnel system. Additional project details include a fully automated, operation and maintenance (O&M)-friendly, screening and screenings handling facility using multi-rake screens with 3/8-inch bar spacing; shaftless screw conveyors and high-performance screenings washers/compactors; new HeadCell® grit basins and COANDA fine grit washers; a 60-mgd influent pump station; a foul air bioscrubber system; and retrofit/extension of the existing plant tunnel system.

→ Project/design manager for the Plant No. 1 Headworks Assessments for the

## Awards

OCSD Plant No. 2  
Headworks Replacement  
Project, P2-66

- WW Treatment Project of the Year Award, ASCE, Los Angeles, 2014
- Award for Public Works (\$100M+), CMAA, 2014
- Eng. Project of the Year Award, Orange County Engineering Council, 2013
- WW Treatment Project of the Year Award, ASCE, Orange County, 2013
- Eng. Achievement Award, Santa Ana River Basin Section of the CWEA, 2011
- Eng. Research Achievement Awards (Statewide, Santa Ana River Basin Section), CWEA, 2005

City of Santa Barbara El Estero WWTP Headworks Screening Replacement

- Project of the Year, ASCE, Santa Barbara/Ventura Branch, 2012

CCWD Central Plant Bar Screen Facility

- Outstanding Civil Eng. Project Award, Southwest Contractor Magazine, 2002

## Walid T. Karam, PE

Orange County Sanitation District, California. The study identified rehabilitation and improvement needs of the 24-year-old, 320- mgd headworks facility. Process improvements included replacement of the existing climber bar screens and screenings handling system; improvements to grit removal and grit handling systems; increasing influent pumping capacity; improving primary flow metering, odor control; and electrical upgrades. An important part of the study was to modernize the grit removal and handling facilities and identify construction sequencing requirements to keep existing facilities in operation during inspection and construction of needed repairs and modifications.

→ Lead engineer on the Grit and Screenings Handling Study for the Encina Wastewater Authority, California. He provided a condition assessment of the 40.5-mgd plant headworks including screening and grit removal, evaluation of alternative equipment and process technologies, and recommendation of rehabilitation improvements. He developed and evaluated alternatives for improving grit removal and handling within the limits of the existing facilities. The selected alternative included upgrades to the existing aerated grit chambers and complete replacement of the grit pumping and handling system.

→ Design engineer on the Columbia Boulevard WWTP Headworks Replacement for the City of Portland, Oregon. His primary responsibility was focused on the hydraulic design of this project, which involved a new 300-mgd headworks to replace the existing facilities. Project elements included an influent pump station, climber bar screens, screenings washer/compactor for each bar screen, belt conveyor, vortex-type grit basins, SlurryCup™/Grit Snail® grit washer, bin loading facility, packed bed scrubbers for odor control, and chemical facilities.

→ Lead design engineer for the 80-mgd Central Plant South Secondary Treatment Facilities for the Clark County Water Reclamation District, Nevada, resulting in one of the largest biological phosphorus removal plants in the nation. The project included planning and design of an 80-mgd

secondary treatment expansion including eight compartmentalized aeration basins capable of biological phosphorus removal, eight 140-foot diameter secondary clarifiers, an extensive utility tunnel system, an underground return activated sludge/waste activated sludge (RAS/WAS) pump station, two single-stage centrifugal blower buildings, electrical buildings, chemical feed facilities, yard structures, and miscellaneous piping.

→ Lead design engineer for the San Bernardino Municipal Water Department, California, 3ASX Project. The project expands secondary treatment facilities from 33 mgd to 40.5 mgd. The project includes master planning, design, and construction management of retrofit to existing facilities, a high-strength nitrogen sidestream treatment facility, and design of expansion facilities. His responsibilities included design of a 7.5-mgd two-stage, single-sludge, biological nutrient removal activated sludge reactor, including a mechanically mixed anoxic zone, an aeration panel fine-bubble diffuser system, a mixed liquor return pump station, and a secondary scum control system.

→ Project manager for the Preliminary Engineering Report and final design of a \$190 million replacement headworks facility at Orange County Sanitation District, California, Plant No. 2. The replacement headworks included a 340-mgd influent pump station. The pump station was designed with five pumps in service and two pumps as standby. The pump station consisted of split wet well, vertical non clog centrifugal pumps with composite drive shafts, 700-hp medium-voltage vertical motors with variable frequency drives, and a 20-ton overhead bridge crane system. The design also included a physical hydraulic model study of the wet well and pump intake piping to ensure acceptable hydraulic conditions existed at the pumps and a CFD model study of the pump station discharge channel.



## Rashi Gupta, PE

**Rashi Gupta**, a project manager with Carollo Engineers, has specialized in delivering sustainable solutions for biosolids management and wastewater treatment throughout her career. Ms. Gupta is Carollo's National Solids Process Technology Lead, which allows her to remain current on leading technologies and changes within the biosolids management field.

### Education

MS Environmental and Water Resources Engineering, University of Texas, Austin, 2001

BS Civil and Environmental Engineering, University of California, Davis, 1999

### Licenses

Civil Engineer, California

Professional Engineer, Kentucky

### Professional Affiliations

California Water Environment Association (CWEA)

Santa Ana River Basin Section of CWEA (SARBS):

- Past-President, Board of Directors

Southern California Alliance of Publicly Owned Treatment Works

Water Environment Federation

- Member, Residuals and Biosolids Committee
- Past Chair, Solids Separation Sub-Committee
- Member, Bioenergy Sub-Committee

Her responsibilities as project manager and process specialist on solids-related projects across the country have taken her from the initial planning phase through design to start-up after construction. She also leads applied research projects for solids processes to assess the best ways to integrate innovation into facilities. From this experience, Ms. Gupta has become a national expert in all things related to solids – from thickening and dewatering to digestion and subsequent practices to beneficially use biogas and biosolids. A summary of her experience includes:

### Relevant Experience

→ Technical advisor for the El Estero Wastewater FY 2017 Improvements Project for the City of Santa Barbara, California. Assisted team with facility layouts for primary sludge and sludge transfer pumping systems, equipment selection, and evaluations of various options to reduce pipe clogging in sludge lines at the facility. Collaborated with project team and plant staff at workshops to finalize solids system modifications.

→ Subject matter expert/solids system lead for Phases 1 and 2 of the Hilo WWTP Rehabilitation Project for County of Hawaii. Her responsibilities include preliminary and final design of the solids processes for this wholesale upgrade of the plant. Solids system project elements include new thickening, dewatering, cake storage and truck loadings systems in a new solids handling building; three new digesters and control buildings with new boilers, digester mixing and sludge heating recirculation systems, sludge transfer system, hot water pumps; sludge blending; snail removal from sludge streams; and digester gas conditioning.

→ Technical reviewer for the Sanitary District No. 5 of Marin, California, Main Plant Rehabilitation Project. The project included a comprehensive rehabilitation of the headworks, primary sedimentation basins, aeration systems, secondary clarifiers, chlorine contact basin, chemical systems, sludge thickening system and anaerobic digesters. She performed the final design check and review for the sludge thickening modifications, which

consisted of the replacement of existing dissolved flotation thickener with rotary drum thickening, and installation of new WAS and TWAS pumping.

→ Project manager for the JB Latham Treatment Plant Consolidated Headworks Feasibility Study project for the South Orange County Wastewater Authority, California. Managed project which included preliminary sizing, layouts, and cost estimates for a new headworks facility at the plant to assess the feasibility of such a system at this very constrained site.

→ Project engineer for the Plant 3 Upgrades Project for the City of Lubbock, Texas, Southeast Water Reclamation Plant. This project includes replacement of existing secondary clarifiers, new RAS and scum pump stations, and upgrades to the existing aeration piping. Ms. Gupta is responsible for design of the pump stations.

→ Subject matter expert and technical reviewer for the solids processes included in the East County Advanced Water Purification project for the East County Advanced Water Purifications Joint Powers Authority, California. Carollo is serving as the agency's Owner's Advisor and providing technical review of the design-build project which includes greenfield plant with liquid and solids treatment systems for a 16 mgd average dry weather capacity. She provided review and guidance for the solids processing elements included in the project: mechanical thickening, thickened sludge pumping, polymer conditioning, mesophilic digestion with co-

## Awards

Induction into Select Society of Sanitary Sludge Shovelers (5S) by the California Water Environment Association

Spotlight Volunteer Award from the Santa Ana River Basin Section of CWEA

## Other

### Accomplishments

National Science Foundation Fellow - University of Texas, Austin

Regents Scholar - University of California, Davis

Recipient of University of California, Davis M.S. Ghausi Medal for the College of Engineering

## Rashi Gupta, PE

digestion of high strength food waste, digester gas storage/conditioning/flaring, high strength waste receiving, centrifuge dewatering, cake storage, truck loading, and ancillary systems.

→ Technical advisor for the Sludge Thickening and Dewatering Building projects at the 285 mgd Central District WWTP and 112.5 mgd South District WWTP operated by the Miami-Dade Water and Sewer Department, Florida. She worked with the team to develop facility layouts/design concepts and continued through project duration, provided technical reviews and checks for the design of the thickening and dewatering facilities polymer, cake conveyance and truck loading for both treatment plants. Each treatment plant will be provided new thickening and dewatering buildings with four 30-inch bowl dewatering centrifuges, dry polymer make-down, cake pumping systems and truck loading silos. The Central District WWTP will include thickening with eight gravity belt thickeners whereas the South District WWTP will include six 30-inch bowl thickening centrifuges. Each facility will also include new odor control, centrate management, electrical and controls systems.

→ Project manager for the Union Sanitary District's WAS Thickener Replacement Project at the Alvarado Wastewater Treatment Plant in Union City, California. The project includes evaluation of thickening technologies, and preliminary and final design for a retrofitted thickening facility with new polymer, thickened sludge conveyance, HVAC, electrical and other ancillary systems. Ms. Gupta is managing the project.

→ Technical lead for the Biosolids Facility project for the City of Kansas City, Missouri, Blue River Wastewater Treatment Plant. She Worked with the owner's advisor design team to develop a 30% design for the sludge screening, centrifuge thickening and dewatering facilities, polymer system, hydrolyzed sludge and cake conveyance and storage, and digestion improvements as part of an overall incorporation of thermal hydrolysis at the plant. Additional areas under Rashi's purview included polymer, sludge conveyance, and coordination with other disciplines for necessary support facilities.

→ Project engineer for the Solids Thickening Project for the Encina Wastewater Authority in Carlsbad, California. Her responsibilities include the preliminary and final design of the RDT-based solids thickening facilities in an existing dewatering building. She is also leading the design of the polymer and thickened sludge conveyance, and coordinating with other disciplines for necessary support facilities.

→ Project engineer for the City of Lubbock, Texas, Southeast Water Reclamation Plant Solids Handling Improvements Project. Designed staged replacement of three existing gravity belt thickeners, four belt filter presses, and associated dry polymer systems with three new rotary drum thickeners, three 30" dewatering centrifuges, and emulsion polymer feed systems while retaining the plant's ability to thicken and dewater the solids produced during construction. The \$34M project, which provides reliable dewatering capacity of 9,000 lb/hr, also included a new cake storage and truck loading bay, new odor control, rehabilitated sludge storage tanks, and new E&C systems. Her work inside an existing solids handling building included staged replacement of three existing gravity belt thickeners, four belt filter presses, and associated dry polymer systems with three new rotary drum thickeners, three dewatering centrifuges, and emulsion polymer feed systems while retaining the plant's ability to thicken and dewater the solids produced during construction. Improvements to the solids handling system also included replacement of an existing truck-loading system located within the building with an external, drive-through truck-loading bay.

→ Project manager for the Emulsion Polymer System Modifications project at the Orange County Sanitation District's Plant No. 1 in California. This fast-tracked project included the addition of new emulsion polymer storage, mixing, containment, and connections to existing polymer feed units to improve the District's dewatered cake dryness and reduce hauling costs. Ms. Gupta led the design effort and managed the project.





## Education

BS Civil Engineering,  
South Dakota School of  
Mines and Technology,  
1995

## Licenses

Professional Engineer,  
Colorado

## Professional Affiliations

Invited Member of the  
Sage Timberline Industry  
Advisory Board

# Jason Rozgony, PE

**Jason Rozgony**, a full-time cost estimating specialist with Carollo Engineers, has 26 years of experience in the water and wastewater industry, the majority of which has been in preparing construction cost estimates for design-bid-build, design-build, construction management at risk, and hard bid projects. He has been responsible for the development of corporate estimating standards and has managed estimating staff across the United States. Jason has led and prepared complete estimates and discipline-specific estimates for more than 200 design and fixed price construction projects requiring collaboration with design engineers, vendors, and subcontractors from preliminary through final design.

## Relevant Experience

- Primary and Secondary Treatment Improvements, City of Livermore, California, \$30 million.
- Treasure Island Wastewater Treatment Plant, San Francisco Public Utilities Commission, California, \$139 million.
- Headworks and Primary Treatment Facilities, City of Sunnyvale, California, \$90 million.
- Orinda Water Treatment Plant Disinfection and Chemical Systems Improvements, East Bay Municipal Utility District, California, \$220 million.
- Wastewater Treatment Improvements – City of Richmond, California, \$17 million.
- Filtration Building Improvements, City of Las Vegas, Nevada, \$20 million.
- Orinda Water Treatment Plant Expansion – East Bay Municipal Utility District, Oakland, California, \$60 million.
- South Mesquite Regional Wastewater Treatment Plant Solids Handling Improvements, North Texas Municipal Water District, \$25 million.
- Secondary Treatment and Dewatering Facility Improvements, City of Sunnyvale, California, \$210 million.
- Water Quality Improvements – Phase III, City of Odessa, Texas, \$154 million.
- Water Reclamation Facility Improvements, City of Niles, Ohio, \$51 million.
- Lancaster Water Reclamation Plant Expansion – Phase I, County Sanitation Districts of Los Angeles County, California, \$120 million.
- West Seattle and Maple Leaf Reservoirs, Seattle Public Utilities, Washington, \$66 million.
- Peace River Reservoir Expansion, Peace River Manasota Regional Water Supply Authority, Florida, \$45 million.
- Point of the Mountain Water Treatment Plant, Metropolitan Water District of Salt Lake and Sandy, Utah, \$81 million.
- Wemlinger CT Chamber Project, City of Aurora, Colorado, \$19 million.
- Pellet Softening, Disinfection, and Facility Improvements Project, South Adams County Water and Sanitation District, Colorado, \$42 million.
- Avon Wastewater Treatment Facility Nutrient Upgrades, Eagle River Water and Sanitation District, Colorado, \$43 million.
- Blue River Wastewater Treatment Plant Biosolids Upgrades, City of Kansas City Water, Missouri, \$215 million.
- Northwood Water Treatment Plant – Phase II Improvements, City of North Miami Beach, Florida, \$30 million.
- Tertiary Filter Building Expansion, City of Las Vegas, Nevada, \$25 million.
- Digester No. 3 Improvements, City of Sunnyvale, California, \$2 million.
- Northeast Water Purification Plant Expansion, City of Houston, Texas, \$42 million.
- Ft. Polk North and South Wastewater Treatment Plants, American Water, Florida, \$64 million.

## Jason Rozgony, PE

→ Rio Tinto Holden Mine Reclamation and Water Treatment Facility, Washington, \$23 million.

→ Water Reuse Facility, Pueblo of Santa Ana, New Mexico, \$17 million.

→ Central Treatment Plant Upgrade and Expansion, City of Tacoma Department of Public Works, Washington, \$150 million.

→ Southeast Treatment Plant Biosolids Improvements, San Francisco Public Utilities, California, \$1.1 billion.

→ Next Level Treatment, City Spokane, Washington, \$126 million.

→ Water Treatment Facility Expansion, Town of Eagle, Colorado, \$23 million.

→ Berl L. Handcox, Sr. Water Treatment Plant, City of Austin, Texas, \$150 million.

→ Wastewater Pollution Control Center, City of Fremont, Ohio, \$57 million.

→ Hillcrest Reservoirs and Pump Station, Denver Water, Colorado, \$100 million.

→ Phase A Expansion, Upper Blackstone Water Pollution Abatement District, Massachusetts, \$23 million.

→ Thomas P. Smith Water Reclamation Facility Expansion, City of Tallahassee, Florida, \$170 million.

→ Wastewater Treatment Plant Expansion, North Davis Sewer District, Utah, \$90 million.

→ Wastewater Treatment Facility, Trinity River Water Authority, Texas, \$196 million.

→ Lake Texoma Water Treatment Plant Expansion, City of Sherman, Texas, \$24 million.

→ PAR 1225 South Headworks and Grease Processing Improvements, Metro Wastewater Reclamation District, Colorado, \$52 million.

→ Water Storage Improvements, City of Avon Lake, Ohio, \$23 million.

→ Wastewater Treatment Plant Expansion, City of Louisville, Colorado, \$27 million.

## Recently Completed Cost Estimates and Associated Bid Amount

CLIENT/ PROJECT NAME	COST ESTIMATE	BID AMOUNT
IEUA RP-1 Disinfection Improvements	\$8.2M	\$8.6M+
San Bernardino MWD Arrowhead Pump Station	\$1.34M	\$1.54M
EMWD Moreno Valley Dewatering Odor Control	\$2.42M	\$2.35M
EMWD Temecula Valley 18 mgd Upgrades	\$17.6M	\$12.3M*
EMWD Temecula Valley Effluent Storage Expansion	\$12.8M	\$6.5M*
EMWD Perris Valley Plant 3 Expansion	\$178.9M	\$149.3M
Monroe WWTP Phase III	\$9.5M	\$8.6M
EMWD Temecula Valley 16 mgd Expansion	\$26.8M	\$22.5M
EMWD Moreno Valley RWRF Plant 2B Equipping and Flow Conveyance	\$37.2M	\$40.1M+
EMWD Perris Valley Plant 1 Tertiary Conversion	\$2.11M	\$1.65M
* Unusual bidding conditions during start of recession in 2008 + Unusual bidding conditions due to price escalations during 2021/22		

# Hashmi Quazi, PhD, PE, GE

Principal-in-Charge / Project Manager



Dr. Quazi has over 36 years of experience providing geotechnical engineering services and has earned a reputation for providing quality work in an honest and ethical manner, on time and within budget. Dr. Quazi provides quality control, budget oversight, and technical assistance on various types of projects, including storm drains, channels, streets, pipelines and other related projects.

## Relevant Experience

### **Regional Plant 1 Liquid & Solid Capacity Recovery, IEUA,**

*Ontario, CA.* Principal in Charge. Provided technical and budget oversight, resource allocation and contract management during the design phase. The approximately 70 acre Regional Plant 1 is located at East Walnut and South Archibald, Ontario, CA. The project consisted of the RP-1 Liquid Capacity Recovery and Solids Recovery Project which included replacing headworks equipment, replace primary clarifier, expand pump station, convert sludge secondary system with MBR system, modify lagoon no. 3, replace odor control system, replace solids thickening systems and construct 3 new acid digesters.

**Palm Springs Wastewater Treatment Plant Expansion, Palm Springs, CA.** Principal in Charge. Provided budget and technical oversight for the geotechnical investigation. The project involved design and construction of two Headworks, Primary Clarifiers, FOG Treatment Facilities, a Cogeneration System Facility, Odor Control Facility and other structures. Both at-grade and below grade reinforced concrete structures founded on spread footings and mat foundations were planned as part of the project.

**CVWD Water Reclamation Plant No. 4, Thermal Area, CA.** Principal in Charge. Provided technical and budget oversight, resource allocation, and contract management for the geotechnical investigation. The project included secondary effluent equalization basin, filter feed pump station, tertiary process pre-treatment, flocculation basins, tertiary filters, chlorine contact basins, recycled water operational and seasonal storage basins, recycled water pump station with surge protection, chemical storage and feed facilities and new electrical buildings.

**Orange County Sanitation District, P2-90 Trickling Filters Project, Huntington Beach, CA.** QA/QC. Provided quality control oversight for the geotechnical investigation and groundwater pump tests for upgrade of new secondary treatment facility with a rated capacity of 60 MGD for Orange County Sanitation District's Plant No. 2 located in Huntington Beach. The Trickling Filters project consisted of three trickling filters with a diameter of about 150-feet each, six secondary clarifiers with a diameter of about 135-feet each, solid contact tank and sludge re-aeration facility, pump stations, blower building, power building and 108-inch diameter primary effluent conduit.

**Headworks Project, Water Quality Control Plant, Riverside, CA.** Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project consisted of construction of new facilities as an extension to the existing Riverside Wastewater Treatment Plant, located in the City of Riverside, California. The project included a new headworks structure with an approximate footprint area of 60 feet by 150 feet, a 120-foot-long and 60-foot-wide biofilter about 9 feet below proposed final ground surface, a flow distribution box and a power distribution building, about 2,600 linear feet of pipelines, and new access roadways and parking areas leading to and adjacent to the new structures.

## EDUCATION

- Ph.D., Civil Engineering, University of Arizona, 1987
- M.S., Civil Engineering, Arizona State University, 1982
- B.S., Bangladesh Engineering University, 1978

## REGISTRATIONS/CERTIFICATIONS

- California, Civil Engineer, #46651
- California, Geotechnical Engineer, #2517

# Robert Gregorek

Senior Geologist



Mr. Gregorek has over 44 years of overall experience on geologic, environmental and geotechnical aspects of both public and private throughout southern California. His experience includes preliminary geologic/geotechnical investigations; Phase I and Phase II environmental site assessments; construction cost estimating; report writing; geologic field mapping; excavatability/rippability studies, groundwater studies; evaluation of geologic and seismic hazards; review of geologic, environmental and geotechnical reports, as well as consultation and review for governing agencies.

## Relevant Experience

**Palm Springs Wastewater Treatment Plant Expansion, Palm Springs, CA** Senior Geologist. Provided geologic oversight for the design phase of the project. The project involved design and construction of two Headworks, Primary Clarifiers, FOG Treatment Facilities, a Cogeneration System Facility, Odor Control Facility and other structures. Both at-grade and below grade reinforced concrete structures founded on spread footings and mat foundations were planned as part of the project.

**EMWD Purified Water Replenishment – AWTF, San Jacinto, CA.** Senior Geologist. Provided geologic oversight for the geotechnical investigation and fault study. The project will replenish a local aquifer. It consists of the construction of a new microfiltration (MF), high-recovery reverse osmosis (RO) facility, a new finish water pumping stations adjacent to Eastern Municipal Water District existing San Jacinto Valley Regional Water Reclamation Facility (SJVRWRF) and new brine evaporation ponds to be located within a 100-acre parcel just north of the SJVRWRF. Major facilities with the AWTF are the MF system with influent pump station, MF/RO equalization basin, primary RO system, secondary RO brine concentrate treatment system, chemical systems, MF break tank, product water pump station, sitework, tie-ins to existing SJVRWRF, electrical/control building and instrumentation/control/ power systems.

**Sandhill Water Treatment Plant, Rialto, CA.** Senior Geologist. Provided geologic oversight for the design phase of the project. The Plant F14 project was located at 1482 Summit Avenue in Rialto, California. The project included adding more filters to improve the treatment capacity as well as adding GAC contractors to improve the treated water quality. With 2 new filters (Nos. 4 and 5) identical to the existing ones, the actual rated capacity will be increased to 24 MGD.

**EMWD Moreno Valley Regional Water Reclamation Facility Plant 2B, Moreno Valley, CA.** Senior Geologist. Provided geologic oversight for the design phase of the project. The project included the CARRB Facility and Centrate EQ Structure at approximately 69' x 157', the Plant 2 Influent Splitter Box at approximately 14' x 18', the Plant 2B Step Feed Splitter Box at approximately 14' x 18'.

**Anita B. Smith Water Treatment Facility, Jurupa Valley, CA.** Senior Geologist. Provided geologic oversight for the design phase of the project. The project included a 32' x 32' reinforced concrete pad which will support three 12-foot diameter pressure vessels for Granular Activated Carbon Filtration; and influent and effluent, and backwash pipe improvements at the Anita B. Smith Water Treatment Facility in Jurupa Valley, California.

## EDUCATION

- BA, Earth Science, California State University, Fullerton, Graduated 1977
- MS, Program, Engineering Geology, California State University, Los Angeles, 1982

## REGISTRATIONS/CERTIFICATIONS

- California, Professional Geologist, PG 3965
- California, Certified Engineering Geologist, CEG 1257
- OSHA 29 CFR 1910.120(e) 40-hour Hazardous Waste Operations Health and Safety



## ProjectLine

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### REGISTRATION / CERTIFICATION

- Professional Engineer / Mechanical / CA No.M30752, issued 1998, expires 9/30/23
- Professional Engineer / Electrical / CA No. E21884, issued 2017, expires 6/30/24

### EDUCATION

- MS / Environmental Engineering / Northeastern University
- BS / Mechanical Engineering / University of Kansas

### EXPERIENCE

Over 30 years' experience

19 years' experience with ProjectLine

Mr. Getter offers over 30 years of experience performing mechanical, electrical and I&C design and construction-phase engineering tasks on water infrastructure projects. Experience includes wastewater, stormwater and water pumping and treatment facilities. Experience includes conventional and advanced wastewater treatment, treatment for indirect potable reuse, water conveyance facilities, and large rotating equipment. Experience includes design of over \$600 million construction value for infrastructure facilities. Experience with Southern California wastewater facilities includes Hyperion, Tillman and Glendale plants. Hyperion experience includes MBR Pilot Project and concept design report for Advance Water Purification Facilities. ProjectLine was sub to Carollo Engineers for these projects.

### Relevant Project Experience

**Project Engineer, El Toro Water District (ETWD) Headworks Grit Removal System Rehabilitation (2023).** As *subconsultant to Carollo Engineers*, assisted with electrical and controls design for upgrades to ETWD's existing grit removal system. Improvements included rehabilitation of the existing grit system aeration blower, and addition of a VFD and flow meter with upgraded controls to vary blower air flow based on aeration and air-lift pump requirements. The electrical and controls upgrades were part of a larger rehabilitation project for the grit removal system, including concrete repairs, diffuser replacement, piping and valve replacement.

**Project Engineer, Hyperion Advanced Water Purification Facility (HAWPF) and MBR Pilot Plant, Los Angeles, CA, BOE (2020 to 2023).** As *subconsultant to Carollo Engineers*, assisted with preparation of concept designs for influent and waste-return piping, and product water reservoir and pumping station for 5 mgd MBR facility at Hyperion Treatment Plant (HTP). Concept designs were used in progressive design-build specification and procurement process. Also assisted with concept designs for electrical connections to existing site electrical system, and power feeders to new facilities. Also assisted with P&IDs and electrical design for a 1 mgd MBR Pilot Plant at HTP, including 3 MBR trains and 2 RO trains, with related pumping, chemical feed, and process control systems.

**Project Manager, Boston Harbor Project Headworks Design, Massachusetts Water Resources Authority (completed 1998).** Managed detailed design and construction services for \$70 million Headworks for new wastewater treatment plant for Boston Harbor cleanup project. Design included vortex grit removal facilities, with 16 grit chambers, each 24 ft in diameter, with a total hydraulic capacity

of over 800 mgd. Chambers were designed with both air-lift and grit pump systems, screw classifiers, urethane grit piping, and backflushing systems. Also led design and engineering services for primary and secondary treatment facilities, including six construction contracts totaling \$400 million, with pure oxygen activated sludge, stacked clarifiers, odor control facilities and a 180 mgd pumping station.

**Orange County Sanitation District, P1-82 Activated Sludge Plant Rehabilitation (completed 2006).** Assisted with preliminary design for OC San's P1-82 project as subconsultant to HDR. Designs included process modifications to enable operation in nitrification mode, and rehabilitation and replacements for blower and aeration systems, RAS and WAS pumping systems, and secondary clarifiers. Assisted with evaluation of plant hydraulics, RAS and WAS pumping hydraulics, GWRS screening facility hydraulics, splitter box corrosion and gate replacement, and aeration basin baffle modifications.

**Electrical and Controls Engineer, Colorado River Aqueduct (CRA) Transformer Replacements, Metropolitan Water District (ongoing).** Assisted with controls concept design for replacement of main transformers at 5 CRA pumping plants as subconsultant to HDR. Transformers, originally installed in the late 1930s, with plant expansions in early 1950s, are at the end of their service life. Pumping plants each include 2 banks of single-phase transformers to power pumps at 6.9 kV. Each bank includes 3 transformers, with a 7th transformer that can be configured as a spare to backup any of the 6 transformers. Transformers are all 230 kv/6.9 kV, except for the Intake Plant where transformers are 69 kv/6.9 kV. Four of the 5 plants have water/oil shell and tube heat exchangers for cooling transformer oil, and one plant has air-cooled transformers. Replacement transformers to include upgraded instruments, new relay panels, and upgraded transformer annunciator panels in control rooms for improved monitoring and long-term reliability. Transformers are being procured with an RFQ/RFP process.

**Greg Avenue Pump Station (GAPS) and Hydroelectric Plant (HEP), Metropolitan Water District (MWD), completed 2015.** Assisted with pump specifications and design reviews for replacement of two existing 55 cfs, 900 rpm, 3000 HP, VFD-driven horizontal split case (HSC) pumps. Existing pumps reached end of useful life and were replaced in-kind. Pumps, motors and VFDs were specified to meet selected API 610 specifications for added robustness (e.g. materials, bearings, vibration, tolerances, etc.). Assisted MWD in finding vendors able to comply with specifications, issuing the RFQ, and evaluating vendor proposals. One old pump had capability to generate power in reverse-flow mode, however, new pump reverse mode was determined not to be cost-effective.

**Weymouth Oxidation Retrofit Project (ORP), Metropolitan Water District of Southern California (MWD), completed 2012.** Provided engineering design for civil/site and rapid mixing and chemical injection facilities as *subconsultant to Carollo Engineers* for 520 mgd Weymouth ORP upgrades. Civil/site and buried utility designs, included chemical trenches, site utilities, and large pipelines and vaults for ORP contactor influent and rejection piping. Rapid mix facilities included six VFD-driven, 75 HP horizontal centrifugal pumps and facilities for injection of alum, polymer and chlorine. Also assisted with instrumentation and controls design for ORP project, including interfaces between fire and ozone alarm systems and HVAC systems for ozone generation building. Also provided construction phase engineering services.



**RICK THOMSEN, PLS**  
**Project Manager**

**CITY OF RESIDENCE**

Hemet, California

**OFFICE LOCATION**

San Jacinto, California

**YEARS EXPERIENCE**

42

**YEARS WITH FIRM**

24

**REGISTRATIONS/LICENSES/CERTS**

PLS 6413

Exp. 12-31-2024

**SPECIFIC RESPONSIBILITIES TO BE  
PERFORMED ON THIS PROJECT**

Mr. Thomsen shall be responsible for all Client contact, contract negotiations, final quality control and signature of final survey mapping. He will assist the project team with all project aspects to insure proper coordination internally, as well as provide proper follow through with the Client.

**BACKGROUND AND EXPERIENCE**

Rick Thomsen, PLS began his career in December of 1981. He became a partner in Cozad & Thomsen, Inc. where he worked in the Land Surveying and Civil Engineering profession for over 40 years. During his engineering career, Mr. Thomsen has been instrumental in maintaining productivity through evaluation and development of a state-of-the art computerized surveying and engineering system.

His present responsibilities include research and set-up of surveying and engineering projects for in-house and consultant land surveyors. He analyzes and reviews survey data for record maps, topographic maps, legal descriptions, and engineering projects. Boundary closure calculations for tract maps, parcel maps and records of survey have been one of his primary responsibilities. Mr. Thomsen supervises field surveys and construction staking for in-house projects and processes projects through approval and recordation with government agencies. Additionally, he is in charge of reviewing field data to determine completeness and accuracy, scheduling work, checking procedures, and contracting with clients and outside consultants.

Mr. Thomsen's civil engineering experience includes project management for the design of roads, signing and striping plans, water and sewer facilities, grading, storm drains, and flood control facilities. Hydrology and hydraulic analysis studies have included the rational and synthetic unit hydrograph methods based upon the Riverside County Flood Control manual, HEC-2 flood plan studies to comply with FEMA requirements, and soil erosion protection plans to comply with NPDES regulations. Mr. Thomsen has also provided both inspection and construction management for a wide variety of projects.

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COMPANY, INC.

**"Surveying Your**

**TOM THOMSEN, PLS**  
**Principal Surveyor****CITY OF RESIDENCE**

Glendale, Arizona

**OFFICE LOCATION**

San Jacinto, California

**YEARS EXPERIENCE**

34

**YEARS WITH FIRM**

30

**REGISTRATIONS/LICENSES/CERTS**

PLS No. 7200

Expires 12/31/2024

**SPECIFIC RESPONSIBILITIES TO BE  
PERFORMED ON THIS PROJECT**

Mr. Thomsen will oversee all of the fieldwork, quality control, review all calculations, review raw data and process for final data output for the Client.

**BACKGROUND AND EXPERIENCE**

Tom Thomsen, PLS has worked in the Civil Engineering field for over twenty five years. Mr. Thomsen attended Cal-Poly Pomona where he earned his Bachelor of Science degree in Civil Engineering - Survey Option. Mr. Thomsen was chosen as a teaching assistant and taught four survey labs including total station operation. He also produced a survey procedures lab manual which was used for beginning and advanced survey labs at Cal-Poly. Mr. Thomsen is a member of Chi-Epsilon, the Civil Engineering Honor Society.

Mr. Thomsen has served as Project Engineer for public and private sector civil engineering projects. His experience includes topographic surveys, construction surveys, grading and drainage plans, land planing and subdivision development, design of storm drain facilities, hydrology and hydraulic studies, street improvement plans, highway improvement plans, and water and sewer plans. His particular interests in computers has lead to extreme proficiency in the use of the most up-to-date engineering software.

As Computer System Manager, Mr. Thomsen has continued to evaluate the state-of -the-art system and available software and has succeeded in keeping his computer production on the leading edge of surveying and civil engineering design and CAD drafting.

Tom has also now begun to perform aerial photogrammetric surveys with our new RTK survey drone for low altitude, high accuracy Aerial topographic surveys, providing a new level of service to our Clients.

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**BILL RAYMOND,  
PLS, RCE  
Principal –  
Glendora Office****OFFICE LOCATION**

Glendora, California

**YEARS EXPERIENCE**

34

**YEARS WITH FIRM**

30

**REGISTRATIONS/LICENSES/CERTS**

RCE No. 57580

PLS No. 7279

QSD Calif. No. 00434

Certified Professional in  
Erosion and Sediment Control

**SPECIFIC RESPONSIBILITIES TO BE  
PERFORMED ON THIS PROJECT**

Mr. Raymond shall provide over all engineering project oversight and coordinating as well as survey document review prior to delivery to the Client.

**BACKGROUND AND EXPERIENCE**

Bill Raymond has worked in the Civil Engineering field for over thirty years. Mr. Raymond has served as Project Engineer for public and private sector civil engineering projects. His experience includes design and preparation of contract documents (construction drawings and specifications) for various private and public works projects. Preparation of grading plans, including hydrology analysis, storm drain design, WQMP, SWPPP and street improvement design. Construction observation of public works construction projects. Land planning for large tracts of land including complete projects from initial conception to completed project.

Surveying, including aerial topography targeting, topographic surveys, construction staking including pipeline and building layout, slope staking, curb and gutter, and site finish grade staking), and boundary surveying and monumentation. Preparation of legal descriptions and plats for grant deeds and grants of easements, including research of land ownership and past transfers of title. Digital terrain modeling and mapping using AutoCAD, Eagle Point and Carlson software.

Before becoming an engineer, Mr. Raymond worked for over 10 years as a construction superintendent for large commercial and residential developments. He has overseen the construction of a wide variety of projects from subdivisions and shopping centers to governmental H.U.D. projects from group homes to multi-story and multi-unit projects.



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## STAFF REPORT

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**To: Board of Directors**

**Meeting Date: November 20, 2023**

**From: Dennis Cafferty, General Manager**

**Subject: Strategic Plan Status Report**

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The District Strategic Plan was adopted by the Board of Directors at the November 2020 Board meeting. The Strategic Plan consists of 6 major goals intended to be accomplished through 19 strategies and 80 identified objectives. The Strategic Plan also identifies 25 Key Performance Indicators to help gauge the implementation of the Plan.

The Strategic Plan Status Report represents the biannual update of the status of the implementation of the Strategic Plan.



## GOAL A

# Water, Sewer, and Recycled Water Reliability

Provide the physical facilities and supply to meet the needs of the community.

ETWD will plan for and build the necessary facilities to meet the water, wastewater and recycled water needs of the community. The strategies below define the approach the organization will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

### Strategy A.1 Conduct planning to ensure long-term water infrastructure/demands are met.

- |                 |  |
|-----------------|--|
| Objective A.1.1 | Evaluate level and adequacy of emergency water supply reliability<br><b>Completed. Staff will evaluate additional opportunities as they arise.</b>   |
| Objective A.1.2 | Evaluate opportunities to maintain or improve water system operations<br><b>Staff continues to evaluate opportunities as they are identified. Current system improvements that have recently been completed within the Operations Department include:</b> <ul style="list-style-type: none"><li>• The R-3 Mixer System Improvement has improved chlorine residuals in the R-3 Reservoir.</li><li>• Replacement of the aging R-6 Inlet Meter was completed during the outage of the R-6 Reservoir.</li><li>• Pressure Sensors have been installed in two locations in the distribution system providing live pressure data to the maintenance management system. Staff continues to evaluate expanding pressure monitoring in the system as appropriate.</li><li>• System Sampling and Flushing Schedule Efficiency Improvements have been implemented to avoid holiday impacts to the sampling schedule as well as reduce distribution system flushing and the associated impacts on staff resources and water loss.</li><li>• The construction of the JTM Pump Station Project is complete and the new pump station is currently in operation with a beneficial impact on supply reliability and water quality in the northwest portion of the distribution system.</li><li>• Staff continues to work with Moulton Niguel Water District on the proposed South County Pipeline Turnout project.</li><li>• Replaced the Boom Truck</li><li>• Replaced the 18" magnetic meter on the R-6 Reservoir inlet pipeline</li><li>• The replacement of the mixer at the R-4 Reservoir has significantly improved the efficiency and effectiveness of the maintenance of water quality in the R-4 Reservoir.</li></ul> |
| Objective A.1.3 | Complete the 2020 Urban Water Management Plan<br><b>Completed.</b>   |



Objective A.1.4 Continue Moulton Niguel collaboration regarding South County Pipeline turnout to facilitate supply for Baker Water Treatment Plant

- **MNWD is proposing to locate the facility near the existing ETWD/MNWD interconnection from which ETWD currently receives its Baker water supply. MNWD reports that they continue to negotiate with the HOA for the acquisition of the property on which the turnout is proposed to be constructed. MNWD has informed ETWD staff that progress has been made in the acquisition and MNWD anticipates the design effort to commence in 2024.**

Objective A.1.5 Evaluate merits of a well in the Sespe formation  
**Completed. The Board and staff concurred there does not appear to be merits in pursuing the Sespe formation.**

Objective A.1.6 Provide periodic Board reports on water consumption and water use efficiency  
**Reports on water consumption and water use efficiency are provided to the Board monthly in standing Board meeting agenda items.**

## **Strategy A.2 Expand use of recycled water as appropriate**

Objective A.2.1 Evaluate potential recycled water projects to determine cost effective options for a Phase 3 recycled water expansion project  
**An alternatives analysis of Phase III Recycled Water project options was presented to the Board at the November, 2021 Engineering Committee meeting.**

**Staff has budgeted and is seeking grant opportunities for an evaluation of potential Direct Potable Reuse options to determine the most appropriate beneficial use of the District's remaining effluent.**

**Staff submitted a grant application to the U.S. Bureau of Reclamation for the planned DPR Strategic Plan Study. Staff will also evaluate a grant opportunity through the Integrated Climate Adaptation Resiliency Program when released in the next few months.**

Objective A.2.2 Evaluate recycled water supply options to facilitate recycled water distribution system expansion  
**Staff is in the process of making improvements to the operations and control systems at the Tertiary Treatment Plant to maximize recycled water production and minimize the need for supplementary potable water.**

**The Ocean Outfall Pump Station Backflow Prevention Project was completed in August. The new check valve on the Ocean Outfall Pump Station discharge to the Effluent Transmission Main will ensure the District can use 100% of the wastewater effluent as supply to the Tertiary Plant. Staff have identified additional operational changes and procedures to further mitigate the use of potable water in the recycled water system.**

The Tertiary Plant optimization study defined opportunities to maximize efficiency of the disinfection operation as well as potentially increase the amount of operational storage in the Recycled Water Storage Tank that would serve to reduce the need for any potable supplement.

Staff submitted a Technical Memorandum for review by the Division of Drinking Water (DDW) regarding an alternative disinfection methodology. DDW required a Tracer Study to validate the effectiveness of the proposed disinfection method. The Tracer Study protocol was submitted to DDW in September. After responding to minor comments, the Tracer Study protocol was approved by DDW. The Tracer Study is scheduled to be complete by mid-December.

Objective A.2.3

Pursue grant funding and other appropriate funding mechanisms for recycled water projects

Staff work with MWDOC and through the South Orange County Watershed Management Area to monitor for any grant opportunities that would help fund future recycled water projects.

As noted above, staff are pursuing grant opportunities to fund the proposed DPR Feasibility Study.

**Strategy A.3 Advance demand management and achieve State mandated water use efficiency targets**

Objective A.3.1

Continue to promote drought tolerant and water efficient landscapes in the community

ETWD promotes water use efficient landscapes utilizing multiple outlets including the quarterly newsletter, website, bill messages, bill inserts, water wise tips flyer, ETWD's Permanent Water Conservation Requirements flyer, outdoor landscape rebate program, social media, Laguna Woods Village e-blast, Laguna Woods Globe and Laguna Woods Television.

The development of a new website page dedicated to water efficient landscapes will be included with the update and redesign of the ETWD website.

Objective A.3.2

Maintain water use efficiency programs

Staff provides a monthly report to the Board regarding the on-going Water Use Efficiency program.

ETWD participates in the MWDOC Water-Use Efficiency Choice Program that offers the MET/MWDOC regional indoor/outdoor device rebate program, turf removal rebates, landscape design assistance program and MET's online landscape courses. In addition to the regional rebate program, ETWD adds supplemental funding to specific rebates including toilets, clothes washers, turf removal, rain barrels and weather-based irrigation timers.

A strategic goal for ETWD's Water Use Efficiency program is to build a database compiling customer data from both the new customer billing software from Springbrook, and use spatial analysis tools in GIS that will allow the District to analyze the information for the following:

- Query for customer/HOA targeted data for information that assists the District in developing more targeted WUE programs and monitor customer water use behavior.
- Run targeted water consumption queries for additional customer engagement and outreach.
- Recordkeeping to comply with reporting requirements from the DWR such as water loss audit data, leak registry, water waste report, water use report and data related to overall Urban Water Efficiency Standards

**The development of the database is on hold until both the Springbrook Billing System conversion is complete and until staff resources are available. Water Use Efficiency staff are currently busy with the irrigated area measurements necessary to comply with evolving State water use regulations.**

#### Objective A.3.3

Phase implementation of Automated Meter Infrastructure to better manage demands as resources permit

**Consideration of investment in AMI is currently paused as the District focuses financial resources on critical water, wastewater, and recycled water capital infrastructure improvements.**

### **Strategy A.4 Implement the Capital Improvement Program to maintain water, sewer, and recycled water service**

#### Objective A.4.1

Complete updated Water and Sewer Master Plan with an asset management component to better inform future capital planning

**The Master Plan update is complete.**

**District staff included the following projects in the 7-Year capital plan budget as a result of the Master Plan effort:**

- Four water pipe replacement or installation projects to provide adequate fire flow
- Rehabilitation of four water pump stations and two sewer lift stations to improve energy efficiency
- Four sewer pipeline improvement projects to reduce surcharging in the collection system

**Carollo's evaluation of the water quality issues in the northwest portion of the District's distribution system confirms the water quality benefits of the construction of the JTM Pump Station.**

#### Objective A.4.2

Maintain and reinvest in the wastewater treatment and collection system to ensure reliable service

**The continuous and on-going maintenance strategies including hydro cleaning, video inspection, root removal and mitigation and enforcement of the District's Fats Oils and Grease control program continue to successfully mitigate the potential for sewer overflows.**

**Since the adoption of the Strategic Plan the District has invested in a significant number of capital projects, as noted below, to ensure reliable service of the Water Recycling Plant and the sewer collection system. The total cost, including complete projects and those in progress, amounts to approximately \$16 million.**

Project	Status
Oso Lift Station Improvement Project	Complete
Aliso Creek Lift Station Skid Pump	Complete
WRP Main Electrical Power Breaker Upgrade	Breaker Installation is Complete. The installation of the Automatic Transfer Switches is anticipated in January.
WRP Aeration Basin No. 1 Diffusers	Complete
OOPS Emergency Generator Replacement	Complete
WRP Forklift	Complete
Grit Chamber Rehab/Re-Coating	The Design of the Grit Chamber rehabilitation is complete. The construction project is out to bid and is expected to be awarded in December.
Effluent Pump Station Improvement Project	Complete
DAF Unit #2 Rehabilitation Project	Equipment Received. Construction contract issued.
Aliso Creek Lift Station Rehabilitation Project	Engineering Contract issued for Alternatives Analysis
WRP Headworks Wash Press	Complete
Sewer Lift Station PLC Upgrades	Construction in Progress (All WRP PLCs have been upgraded and lift stations are being replaced at a rate of 1 per year)
Sewer Station HMI Replacements	In progress at a rate of 1 lift station per year
WRP Secondary Clarifier and WAC Rehabilitation	Design contract award anticipated in November
WRP Headworks Coarse Screen Rehabilitation Project	Design contract award anticipated in November
WRP Optimization Study	Complete
4920 Lift Station Siphon Stabilization	Complete
Freeway Lift Station Electrical Equipment Replacement	Purchase Order Issued
Northline Lift Station Coating Improvement Project	Construction contract award anticipated in December

Objective A.4.3      Develop strategy for replacing R-6 Reservoir cover and/or liner  
**Construction is complete. The R-6 Reservoir is in full service.**

# KEY PERFORMANCE INDICATORS

1. Annual major Capital Improvement Program actual expenditures against planned

The District budgets for the Capital Improvement Program on an annual basis. These projects, however, are often not tied to nor completed in a single fiscal year. Many of these types of investment in the infrastructure require multiple steps to plan, design and ultimately implement or construct a project. The District uses a “carryover” category to account for project budgets over multiple fiscal years.

The annual capital budget, constrained by annual capital revenue, has been \$2.4 million for many years. Following adoption of the 2023-24 fiscal year budget the District implemented a plan to increase the capital revenue available to fund the Capital Improvement Plan to approximately \$5 million per year over a four-year period.

In the 2022-23 fiscal year the District invested in a variety of capital improvement projects funded by the annual capital budget as well as previous fiscal year funding carried over into the 2022-23 fiscal year. The total capital investment in the 2022-23 fiscal year amounted to approximately \$2.8 million.

The Capital Improvement Plan also includes several projects that are currently in progress for which funding has been carried over to the 2023-24 fiscal year. The investment in the carryover projects amounts to approximately \$2.4 million.

2. Progress to develop and implement an Asset Management Program

The development of a formal Asset Management Program is underway

After the District prepared an inventory of all the assets in the Pump Stations Department, the District’s consultant, Hazen and Sawyer (Hazen) prepared condition assessments of each facility and assigned a condition score representing the likelihood of failure to each asset. Hazen then conducted interviews with District staff to determine the criticality of failure. The combined likelihood and criticality of failure generates a risk score for each asset.

District staff is using the analysis to prioritize projects that address the identified poor condition, high risk assets in the District’s Capital Improvement Plan. Hazen is projecting 50-year needs to develop an average annual investment in Pump Stations assets for long-term budgeting purposes.

The Pump Stations Asset Management plan is complete and has been used to inform the seven-year Capital Improvement Plan in the 2023-24 budget.

Processes developed as part of the Pump Station Asset Management work are being applied to the WRP Asset Management analysis that commenced in July 2023. The condition assessment phase is complete. The development of consequences of failure and associated risk scores is in progress. Staff anticipates the Asset Management Plan project at the WRP will be complete by the first quarter of 2024.

Following completion of the WRP Asset Management Plan staff will prepare for similar asset management planning efforts for the sewer collection system and the water distribution system.

### 3. Sewer overflows and violations

- **There have been no regulatory violations associated with the operation and maintenance of the sewer collection system.**
- **In Calendar Year 2020 there were no sewer overflows in the ETWD maintained collection system.**
- **In Calendar Year 2021 there were two sewer overflows in the ETWD maintained collection system. One was caused by an obstruction in the sewer pipeline resulting from a private lateral lining project with an estimated spill volume of 200 gallons. The second overflow was caused by apparent construction debris in the sewer line resulting in an estimated spill volume of 60 gallons.**
- **In Calendar Year 2022 there was only one unauthorized sewer discharge in the ETWD maintained collection system resulting from the failure of the Northline Lift Station force main.**
- **In Calendar Year 2023, to date, there have been no sewer overflows or unauthorized discharges in the sewer collection system.**

**There was one unauthorized discharge at the WRP that occurred when a section of Techite pipe failed during construction of the Effluent Transmission Main Backflow Prevention Project. The estimated spill volume was 132,800 gallons of which 72,800 gallons were contained on-site.**

## GOAL B

# Water Quality and Environmental Compliance

Ensure ETWD meets or surpasses all water quality and environmental requirements.

The strategies below define the approach the District will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

### Strategy B.1 Achieve 100% compliance with all environmental regulations and standards

Objective B.1.1 Meet all applicable water quality and environmental regulations

**The District typically meets all applicable water quality and environmental regulations.**

**The District received a single regulatory violation in the form of a Consent Order, executed in August of 2023, issued by the County of Orange Certified Unified Program Agency (OC CUPA) Hazardous Materials Surveillance Section (HMSS). The HMSS conducted an inspection of the underground fuel storage tank at the WRP in February of 2022. During the inspection it was identified that certain leak detection equipment on the tank was not located in the proper position. Upon identification of the problem, District staff immediately restored the sensor to its proper position. It wasn't until the 2023 annual inspection that the County noted the previous deficiency in a written inspection report. The Consent Order notes that the District has fully complied with the requirements to restore the leak detection equipment. The District was assessed a penalty of \$2,500 of which \$1,250 was waived due to the District's compliance with the requirements.**

Objective B.1.2 Maintain licensing

**The District is current on all applicable licenses.**

Objective B.1.3 Track regulatory and statutory changes at both the federal and State levels pertaining to the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act and other applicable requirements

**District compliance staff continues to track regulatory and statutory changes for any applicable compliance requirements.**

Objective B.1.4 Operate the laboratory to provide reliable and timely information to support operations

**On-going.**

# KEY PERFORMANCE INDICATORS

1. Completion of required Division of Drinking Water monitoring, sampling and analyses

**The District potable water quality compliance program consists of thousands of annual samples and tests with frequencies that vary from weekly to quarterly to ensure compliance with all water quality requirements. The District continues to maintain full compliance with the Division of Drinking Water requirements.**

2. Maintain compliance with Safe Drinking Water Act

**The District performs thousands of annual tests to verify compliance with the Safe Drinking Water Act water quality compliance requirements. The District water quality maintenance program has successfully avoided any compliance violations.**

3. Complete annual Consumer Confidence Report

- **The 2020 Consumer Confidence Report was distributed in June, 2020 and is currently maintained on the District website.**
- **The 2021 Consumer Confidence Report was distributed in July, 2021 and is currently maintained on the District website.**
- **The 2022 Consumer Confidence Report was distributed in June, 2022 and is currently maintained on the District website.**
- **The 2023 Consumer Confidence Report was distributed in June 2023 and is currently maintained on the District website.**

4. Measure and report budget vs. expenditures

**Staff provides an update of budget and expenditures on a monthly basis at the Finance Committee meeting.**

5. Provide quarterly review of compliance activities and licensing status

**The District annually prepares and submits several dozen different reports documenting compliance status for the water, wastewater and recycled water systems. These reports range in frequency from as often as monthly to triennial and as needed reports. The reports are submitted to various agencies including the Division of Drinking Water, State Water Resources Control Board, Regional Water Quality Control Board, Division of Safety of Dams, Department of Water Resources amongst others.**

**Staff has developed a log to provide a quarterly review of these compliance activities to the Board during regularly scheduled Board meetings. This log is included in the monthly Operations Report.**



## GOAL C

### Finance

Prudently and transparently manage for long-term stability and affordability.

Provision of ETWD services is capital intensive. Managing the financial resources entrusted to ETWD in a prudent manner ultimately reduces the cost of service to the community. The strategies below define the approach the organization will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

#### Strategy C.1 Improve financial risk management.

Objective C.1.1 Evaluate opportunities to improve the relationship between fixed costs and fixed revenues in rate and fee structures

**Staff continues to evaluate the relationship between fixed costs and fixed revenues and presents a description of that relationship during the annual budget process.**

**The relationship between fixed costs and fixed revenues in the 2023-24 fiscal year budget is defined as follows:**

	Revenue	Expense
Fixed	51.4%	54.5%
Variable	48.6%	45.5%

Objective C.1.2 Continue to monitor 401(k) investments

**Monitoring of the District's 401(k) investments is an on-going effort.**

#### Strategy C.2 Ensure that adequate financial capacity exists to maintain District assets.

Objective C.2.1 Evaluate reserve policy

**The District adopted the most recent update to the Cash Reserve Policy in July, 2022. The categories defined in the revised Cash Reserve Policy provide for a more detailed presentation of reserves status to the Board in the monthly financial report.**

Objective C.2.2 Develop and operate within an annual budget

**The District develops an annual budget for each fiscal year and reports performance relative to budget to the Board on a monthly basis throughout the year.**

Objective C.2.3 Evaluate implementation of a 2-year budget and or rate cycle

**The current environment of inflation presents significant challenges for a 2-year budget cycle. Staff recommends the District maintain its current annual budget approach.**

**As part of the 2023-24 Fiscal Year budget process, the District issued a 3-year Proposition 218 Notice defining rate setting through the 2025-26 fiscal year.**

Objective C.2.4 Fund OPEB to reduce liability

**During the 2023-24 Fiscal Year budget development process the Board concurred with Staff's recommendation to defer further discussion of an OPEB trust during the current environment of inflationary impacts on rates and charges.**

### **Strategy C.3 Maintain transparency of financial activities**

Objective C.3.1 Publish and disseminate financial documents

**The Comprehensive Annual Financial Report, Annual Budgets, Cost of Service Studies, and Proposition 218 Notices are all available on the District's website.**

## **KEY PERFORMANCE INDICATORS**

### **1. Meet reserve fund targets**

**Reserve fund targets are defined in the District's Cash Reserve Policy most recently updated in July of 2022. Reserves status is reported to the Board of Directors on a monthly basis at the Finance Committee meeting.**

**Certain reserves are currently underfunded as discussed during the 2023-24 budget process. The long-term financial forecast presented during the Board Budget Workshop includes a plan to replenish the reserves.**

### **2. Actual costs compared to year to date budget**

**Staff provides an update of budget and actual expenditures on a monthly basis at the Finance Committee meeting.**

### **3. Return on investments**

**Staff provides a monthly report to the Board documenting performance of the investment portfolio of the District's reserve funds. In addition, the District's investment advisor, PFM, provides a semi-annual report to the Board.**

### **4. Continue to receive an unqualified audit outcome each year**

**Since the adoption of the Strategic Plan, the District received an unqualified audit outcome each year. In fact, the District has received an unqualified audit outcome for at least the previous five fiscal years. The audit of the 2022-23 fiscal year is complete. The auditors identified no exceptions. The draft audit report, inclusive of the auditor's "unmodified opinion" identifying a clean audit, will be presented to the Board at the November Finance Committee meeting.**

## GOAL D

### Organizational Effectiveness

Maintain a high-quality workforce and systems to foster excellence.

The strategies below define the approach the District will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

#### Strategy D.1 Implement training programs.

Objective D.1.1 Review training programs (evaluate cross-training program, evaluate training approach for future supervisors, seminars, mentorship, supervisor and management training)

**The District rotates employees for cross training in preparation to be on call. This Cross-training program will help ensure that the Operations Department is not solely reliant on certain individuals to perform specific tasks. If someone is out sick, on vacation or takes maternity leave, there will be someone ready to fill their role without interrupting productivity. Providing employees with opportunities to learn new skills, will highlight the investment in their professional development which can make team members feel more valued, self-confident and enthusiastic at work. This can also keep them engaged and focused, which can increase motivation. This will help develop new skills for employees while also preparing the District in the event of an emergency or natural disaster. The cross-training program is important to management as well as the staff themselves. Staff is in the process of developing a written description of the cross-training program.**

**Following the easing of COVID restrictions staff are attending additional seminars to further education and cross training.**

Objective D.1.2 Assess key succession vulnerabilities and develop/implement actions to improve staff transitions

**The evaluation of succession opportunities and challenges is an on-going continuous process.**

**The District has recently successfully replaced the following two high level positions:**

**Chief Financial Officer  
Chief Plant Operator**

Objective D.1.3 Review financial incentives for certifications and/or licenses

**The Board approved changes to the Employee Handbook at the September Board meeting in which the District's incentive program for certifications and education was modified from a one-time lump sum bonus, at the time an employee achieves a certification exceeding their minimum job requirement, to a recurring annual award.**

## **Strategy D.2 Improve administrative systems.**

- Objective D.2.1 Assess and implement opportunities, as appropriate, to streamline procurement system  
**Staff is evaluating potential options for a Purchasing software that could improve efficiency in the District procurement system.**
- Objective D.2.2 Develop Standard Operating Procedures for key District procedures  
**Staff intends to develop SOPs for key administrative and financial procedures after the Springbrook financial system implementation is complete.**
- Objective D.2.3 Work with staff to review and improve performance evaluation process  
**Complete.**

## **Strategy D3 Implement integrated technology and applications across the organization.**

- Objective D.3.1 Develop an Information Technology Master Plan to improve technology and data risk management processes  
**The IT Master Plan effort is currently underway. The project will develop and articulate a vision for the effective use of technology to support the work of ETWD. The consultant, Client First Technology Consulting, will be scheduling interviews and workshops with ETWD staff to begin the data gathering process associated with the assessment of the District's IT programs. Client First is tasked with creating a well-documented plan to guide the IT team and ETWD's operational departments over the next five years in planning, procuring, implementing, and managing current and future technology investments, as well as resources related to operational technology and information technology service delivery. The project is expected to be complete in early 2024.**
- Objective D.3.2 Continue to analyze and evaluate network vulnerabilities  
**In an effort to minimize cybersecurity vulnerabilities, the District has enacted an on-going continuous Cybersecurity defense strategy.**
- Objective D.3.3 Evaluate appropriateness (considering security and efficiencies) associated with providing remote Supervisory Control and Data Acquisition access for on-call responders  
**The ability for on-call responders to remotely access the SCADA system to observe system data is complete for the water/wastewater systems maintained by the Pump Stations Department as well as for the Water Recycling Plant. The remote access system provides a secure client portal that enables operators to view SCADA data and system status remotely.**
- Objective D.3.4 Maintain computer replacement program and management of technology through an asset management approach  
**The current computer replacement program is conducted on an as needed basis. The 2023-24 fiscal year budget includes \$30,000 for the replacement of aged desktop computers, laptops, tablets, computer monitors and printers.**

**Staff is working to develop an asset management approach to facilitate the development of a more detailed plan for future budget years.**

**An asset inventory has been developed that defines unique identifiers, purchase dates and assigned users for phones, iPads, laptop computers and desktop computers. Staff is working to add expected useful life and replacement values to complete the budget planning tool.**

Objective D.3.5 Evaluate implementing a Laboratory Information Management System

**The implementation the Hach Water Information Management System (WIMS) at the Water Recycling Plant is complete. The Hach WIMS system functions as a Laboratory Information Management System that will help the Laboratory staff efficiently manage water and wastewater data.**

Objective D.3.6 Evaluate options to update Supervisory Control and Data Acquisition infrastructure and communications

**Historically, the SCADA telemetry (communication) system transmitted data through AT&T digital phone lines. The telemetry system had become increasingly unreliable, and AT&T notified the District they would no longer support the phone telemetry system after June 2023. District staff completed the installation of cellular transmitters at each remote site as well as independent water and wastewater receivers at the District Field Office. The transition to the cellular telemetry for the entire water/wastewater SCADA system is complete.**

#### **Strategy D.4 Promote an open and professional work environment.**

Objective D.4.1 Continue to provide employees with “bottom-up” communication through all employee meetings (All Employees meetings, etc.)

**The General Manager conducts “All Employee” meetings on a monthly basis.**

Objective D.4.2 Evaluate and implement an appropriate innovation program to encourage, capture, and deploy new ideas/suggestions

**The Human Resources Manager has completed the process of conducting a phased Focus Group program to solicit feedback from employees. The program included meetings with groups of 5-7 employees from different departments. The focus groups included all employees who wanted to participate. The objectives of the program included:**

- Identify and evaluate proactive workplace policies and practices that help attract and retain talented and skilled employees**
- Serve as a tool to gather feedback and to check the pulse of the workforce**
- Involve and engage employees in the solutions**
- Address any immediate concerns, i.e., safety issues, workplace issues, lack of proper tools to complete jobs etc.**

The General Manager and Executive Management team continue to evaluate the issues identified in the process to assess areas of concern, suggestions, and what is working and what is not and any appropriate improvements. A number of changes have been made to the benefit of the District and the employees addressing issues including:

- On Call Stipend
- Vacation Accrual
- Boot Allowance
- Dental Insurance
- Certification Awards
- Uniform and Rain Gear Quality
- Boom Truck Replacement
- Retirement Plan Education
- Employee Tours of Major Facilities
- Timecard System
- Team Building Activities
- Cross Training Programs
- Leadership Training

The District maintains “suggestion boxes” in multiple locations that employees are encouraged to use to provide ideas and suggestions.

The District maintains an “Open Door Policy” that is intended to foster an environment where employees are comfortable providing feedback, suggestions or airing any concerns they might have.

Staff is evaluating an Employee Suggestion / Recognition Program that would recognize and reward employees for cost saving, morale enhancing and innovative, ideas, actions, and suggestions.

**Strategy D.5 Maintain a safe and secure work environment.**

Objective D.5.1 Continue to provide all required and recommended safety training

**On-going.**

Objective D.5.2 Continue to emphasize safety through weekly tailgate and safety meetings

**On-going.**

Objective D.5.3 Continue to conduct live confined space entry and rescue drills

**The District conducts Confined Space Training annually. Training was last conducted in October 2023. The next training is scheduled to be conducted in October 2024.**

Objective D.5.4 Evaluate current chemical spill response training

**The District maintains a spill prevention program for all chemicals utilized in District operations. The District staff participates in annual training regarding hazardous chemicals and materials. The last training was conducted in October 2023. The next training is scheduled for September 2024.**

Objective D.5.5      Develop protocol for dealing with phone and in-person threats

**The District Chief Financial Officer and Customer Service Supervisor have developed and implemented a form for the District's Customer Service Representatives to report and document any unacceptable customer behavior incidents.**

**Strategy D.6    Ensure the District operations are efficient and effective.**

Objective D.6.1      Continue to manage overtime use

**Certain overtime expense results from customer calls or system alarms and is out of staff's control. Staff continues to work to efficiently manage scheduled overtime as a tool for the cost-effective operation of the water, wastewater and recycled water systems.**

Objective D.6.2      Manage staffing to optimize performance

**The District supervisory staff continues to work to optimize performance through cross training programs, utilization of interns and on-going efficiency analyses.**

Objective D.6.3      Continue to review manual processes for automation opportunities

**The District relies on multiple automated systems through extensive use of on-site Programmable Logic Controllers that provide automatic operation of pumps, disinfection, and other processes throughout the water, sewer collection and WRP systems.**

**The WRP staff have completed the implementation of the Hach WIMS database management system. The Hach WIMS system automatically stores WRP process data in a central database for easy monitoring, analysis, reporting, and predictive modeling. The HACH WIMS system retrieves process data and populates it automatically into multiple compliance forms and spreadsheets. The system has over 100 industry-specific formulas and verification engines to perform complex calculations quickly and accurately with a button click. Such built-in equations help provide consistent results based on EPA requirements. The Hach WIMS system will significantly improve the efficiency at the WRP.**

**The implementation of the Springbrook financial system will bring a great deal of automation of current manual processes to the Finance and Accounting Department.**

**The addition of remote monitoring capability of the SCADA systems has positioned the District to evaluate the potential to expand the system to allow remote adjustments to system setpoints and controls.**

Objective D.6.4      Continue to proactively budget and manage expenses to maintain efficient operations

**On-going.**

Objective D.6.5      Pursue and document awards and recognition

**Staff continues to pursue awards and recognition where opportunities are available. Staff reports awards and recognition to the Board as they are received.**

**The District, in late 2022, was awarded the Award of Excellence from the Orange County Public Relations Society of America**

(PRSA) in the Collateral Materials External Audiences Category for the District's Water Views Newsletter.

Following receipt of the local PRSA award, staff entered the national PRSA Bronze Anvil Tactical Award competition in the Newsletter category. In June 2023 ETWD was honored to receive the PRSA Bronze Anvil Award.

The District subsequently applied for the 2023 CAPIO EPIC Awards program in the Newsletter or Magazine category. The District did not receive an award in this extremely competitive category.

**Strategy D.7 Implement the Strategic Plan.**

Objective D.7.1 Track and report progress to the Board

Staff provides bi-annual updates regarding implementation of the Strategic Plan.



# KEY PERFORMANCE INDICATORS

1. Number and types of certified and licensed staff

**The following table identifies the number and types of certifications and degrees that have been achieved by ETWD staff.**

<b>Certifications / Degrees</b>	<b># Staff</b>
D-1 Water Distribution Certification	1
D-2 Water Distribution Certification	12
D-3 Water Distribution Certification	3
D-4 Water Distribution Certification	6
D-5 Water Distribution Certification	4
T-2 Water Distribution Certification	23
AWWA Cross Connections Specialist Certification	1
Orange County Certified Backflow Tester	2
Grade III Wastewater Treatment Plant Operator	4
Grade V Wastewater Treatment Plant Operator	2
Grade II Collections System Maintenance Certificate	2
Grade III Collections System Maintenance Certificate	1
Grade IV Collections System Maintenance Certificate	2
Grade II Laboratory Technician	1
SCC Water Distribution Certificate	3
SCC Wastewater Operator Certificate	1
Professional Engineer License	3
UCI Human Resources Management Certificate	1
Certified Public Accountant	1
Associates Degree	6
Bachelors Degree	12
Masters Degree	4

2. On-time completion of annual performance evaluations

**The District has completed 100% of the scheduled employee evaluations on time for each of the past four years.**

3. El Toro Water District staff use of education reimbursement program (\$/employee)

**In calendar years 2020 through 2023 (to date) ten District staff have benefitted from the District education reimbursement program. The total reimbursements amount to approximately \$23,000.**

4. Measure staff turnover (% annual turnover)

**The following data defined staff turnover for the last three calendar years.**

	<b>Separated Employees</b>	<b>Retirements</b>	<b>Total</b>	<b>%</b>
<b>2020</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>8.5%</b>
<b>2021</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3.4%</b>
<b>2022</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>6.8%</b>
<b>2023 (To Date)</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>8.3%</b>

5. Track staff training hours (annual hours/employee)

**District operators spend between 40 and 100 hours per year training on a variety of required and recommended safety and operations training. In total, District staff spends over 2,000 hours per year in training activities.**

**A log of quarterly training activities has been added to the new monthly Operations Report in the Engineering Committee Board Package.**

## GOAL E

### Relationships

Communicate and collaborate with customers, stakeholders, neighbors, and peer agencies in the region to further the water and wastewater interests of our community.

This goal establishes a commitment on the part of ETWD to align with the values of the customers and the community in fulfilling the organization’s mission. ETWD will collaborate with our stakeholders, neighbors and peer agencies. The strategies below define the approach the organization will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

#### Strategy E.1 Provide “best in class” customer service.

Objective E.1.1 Standardize customer service procedures across ETWD

**On-going**

Objective E.1.2 Consider phased implementation of Automated Meter Infrastructure

**As noted in Objective A.3.3 consideration of an AMI project is currently paused while the District evaluates appropriate allocation of capital resources and capital project priorities.**

#### Strategy E.2 Proactively communicate with and engage the community on water, sewer and recycled waters matters of importance to the region positioning ETWD as a leading resource and reliable authority on water issues.

Objective E.2.1 Increase public understanding of water issues (e.g. water quality, emergency preparedness, value of water, regulatory challenges, etc.)

**Staff is working to re-develop the ETWD website and develop new pages and content dedicated to water use efficiency, emergency preparedness and water education – value of water & regulatory challenges. Staff are working to develop a Request for Proposals to solicit professional services for the website redesign. Staff anticipates commencing the redesign effort in January 2024.**

**Staff has developed a list of topics for a variety of informative videos to use on social media, the website, CAG, etc. Staff are working on costs and schedule to develop, produce and publish the videos. Staff anticipates publishing the first of a series of several videos in early 2024.**

**The District continues to host quarterly Community Advisory Group meetings to further the District’s customers’ understanding of issues and challenges successfully managed by ETWD.**

**District staff are, once again, collaborating with Laguna Woods Television to coordinate monthly appearances by ETWD Board Members on the This Day television program to provide important information on current water and wastewater issues.**

**Staff coordinated with MWDOC to make a presentation and provide a tour of the R-6 Reservoir to the Orange County Grand Jury as well as MWDOC staff, MET staff and MET Directors.**

**Staff coordinated with MWDOC to provide a tour of the Water Recycling Plant as part of the Girl Scouts Patch Program.**

Objective E.2.2

Develop engagement tools to receive feedback from stakeholders (e.g., Customer Service Survey)

**Staff has discussed survey options, procedures and costs with two companies that provide customer engagement surveys. Each proposes a bi-annual survey in which the District develops questions or topics about which it would like input from customers and the survey vendor then conducts the customer engagement through email, text or phone. The costs range from \$10,000 to \$28,000 with an anticipated response from 200 – 400 customers. The Board did not believe the value was commensurate with the expected cost. Staff are currently evaluating alternative lower cost approaches to soliciting feedback from the District's customers.**

Objective E.2.3

Continue to participate in community events

**The District's Public Affairs Manager coordinates the District's participation in a significant variety of community events throughout the year. The District's participation includes some combination of attendance, staffing a booth, providing the ETWD water trailer, tours and speaking engagements. The following is a detailed list of the events staff participated in during the 2023 calendar year.**

<b>Date</b>	<b>Event</b>	<b>Speaker</b>
<b>01/23/2023</b>	<b>SOCEC Panel Discussion</b>	<b>Dennis Cafferty</b>
<b>03/07/2023</b>	<b>Concerned Citizens of Laguna Woods</b>	<b>Mike Gaskins</b>
<b>03/20/2023</b>	<b>Children's Water Education Festival</b>	<b>Booth</b>
<b>03/22/2023</b>	<b>Lake Forest Chamber / City of Lake Forest Meet the Mayor / State of the City Event</b>	<b>Sponsor</b>
<b>04/15/2023</b>	<b>City of Lake Forest Southwest LF Improvement Project</b>	<b>Booth</b>
<b>04/22/2023</b>	<b>City of Mission Viejo Earth Day / Arbor Day</b>	<b>Booth</b>
<b>04/20/2023</b>	<b>Concerned Citizens of Laguna Woods Earth Day</b>	<b>Dennis Cafferty</b>
<b>04/27/2023</b>	<b>Third Mutual Water Conservation Committee</b>	<b>Kay Havens</b>
<b>07/12/2023</b>	<b>Prop 218 Notice Community Meeting</b>	<b>Dennis Cafferty</b>
<b>08/01/2023</b>	<b>Mission Viejo National Night Out</b>	<b>Booth</b>
<b>08/22/2023</b>	<b>Golden Rain Foundation Landscape Committee</b>	<b>Dennis Cafferty</b>
<b>08/29/2023</b>	<b>Orange County Grand Jury Water Supply/Infrastructure Inspection Trip</b>	<b>Dennis Cafferty</b>
<b>09/20/2023</b>	<b>Laguna Woods Village College Club</b>	<b>Sherri Seitz Vu Chu</b>
<b>09/26/2023</b>	<b>Gate 11 Fall Meeting - LWV Third Mutual</b>	<b>Booth</b>

<b>10/18/2023</b>	<b>City of Lake Forest Leadership Academy</b>	<b>Dennis Cafferty</b>
<b>10/21/2023</b>	<b>South Orange County Disaster Preparedness Expo</b>	<b>Booth</b>
<b>10/26/2023</b>	<b>H2O for HOAs</b>	<b>Booth</b>
<b>11/04/2023</b>	<b>MWDOC / ETWD Girl Scout Patch Clinic and Tour</b>	<b>Tour</b>
<b>11/09/2023</b>	<b>Lake Forest Chamber – Legislative Luncheon</b>	<b>Sponsor</b>
<b>11/12/2023</b>	<b>City of Mission Viejo Teen Wellness Fair</b>	<b>Sherri Seitz</b>
		<b>Vu Chu</b>
<b>11/18/2023</b>	<b>El Yourself 5K - City of LF/LF Chamber of Commerce</b>	<b>Booth</b>

Objective E.2.4	<p>Maintain conservation programs (e.g., public and school educational programs, participation at public events, ETWD web site, newsletter, social media, and self-guided demonstration garden tour, etc.)</p> <p><b>A detailed description of the program is included in Objective A.3.2.</b></p>
Objective E.2.5	<p>Continue engagement in South Orange County Wastewater Authority (SOCWA) matters</p> <p><b>The District maintains active participation in SOCWA matters. Director Freshley is the District’s primary representative on the SOCWA Board. Director Gaskins and Dennis Cafferty, as alternate Board members, also regularly attend the SOCWA Board meetings. District staff meets with the District’s SOCWA Board members each month to review the upcoming SOCWA Board agenda. Dennis Cafferty is the District’s representative on the SOCWA Finance Committee while Hannah Ford represents the District on the SOCWA Engineering Committee.</b></p>
Objective E.2.6	<p>Educate customers to protect source sewer water quality</p> <p><b>Currently ETWD educates its customers regarding protecting source sewer water quality by avoiding flushing wipes and keeping FOG out of the drain pipes through the website, newsletter, CAG meetings, social media and community events.</b></p>
Objective E.2.7	<p>Refresh the website (including featuring Key Performance Indicators &amp; awards)</p> <p><b>Staff is working to re-develop the ETWD website and develop new pages and content dedicated to water use efficiency, emergency preparedness and water education – value of water &amp; regulatory challenges. Staff is working to develop a Request for Proposals to solicit professional services for the website redesign. Staff anticipates commencing the redesign effort early in January 2024.</b></p>
Objective E.2.8	<p>Engage in Local Agency Formation Commission (LAFCO) proceedings as required</p> <p><b>Staff actively participates in the LAFCO Municipal Service Review (MSR) process. The District is included in MSRs for two separate LAFCO regions.</b></p> <p><b>Staff engaged extensively with LAFCO and the LAFCO consultant in the production of the MSR for the Southwest Region. The Southwest Region MSR was approved by LAFCO in August and is posted on the LAFCO website.</b></p> <p><b>The Southeast Region MSR is scheduled to be performed in the 2023-24 fiscal year.</b></p>

Objective E.2.9 Continue to engage customers through the quarterly Community Advisory Group meetings

**The District continues to schedule and conduct CAG meetings on a quarterly basis.**

**Strategy E.3 Work with local, regional, State and federal agencies, industry associations, and organizations to influence water policy for the benefit of our service area customers.**

Objective E.3.1 Engage in local, state and federal activities to further the interests of ETWD and its customers

**With the hiring of the District's Water Use Efficiency Analyst, Sherri Seitz, as the District's Public Affairs Manager, will devote additional time to evaluating and updating the General Manager and Board regarding local, state and federal activities and potential legislation.**

Objective E.3.2 Maintain strong working relationships with local agencies (water agencies, special districts, city, and local governments)

**The District continues to maintain strong working relationships with neighboring agencies, the cities served by the District as well as key customers within the District service area. These relationships include the District Board Members, the General Manager as well as staff at all levels as the District works to collaborate with a variety of other entities to maximize the service provided to the District's customers.**

Objective E.3.3 Continue coordination with local, state, and federal elected officials and their staffs on legislative and policy issues

**With the hiring of the District's Water Use Efficiency Analyst, Sherri Seitz, as the District's Public Affairs Manager, will devote additional time to evaluating and updating the General Manager and Board regarding local, state, and federal activities and potential legislation.**

**In May 2023 the General Manager participated in a roundtable of Special Districts at the office of Assemblywoman Diane Dixon.**

**The District has engaged on several legislative and policy issues with individual position letters or joint agency coalition letters. These letters have addressed the following issues:**

**Making Water Conservation a California Way of Life  
ACWA Coalition Letter to State Water Resources Control Board  
March 30, 2023  
October 17, 2023**

**Senate Bill 34 / Senate Bill 229 - Surplus Lands Act  
CSDA Coalition Letters to the California State Senate and  
Senate Committee on Governance and Finance  
Oppose Unless Amended  
April 13, 2023**

**CSDA Coalition Letters to Senate Committee on Appropriations  
Oppose Unless Amended  
April 25, 2023**

**CSDA Coalition Letters – California State Assembly  
Committee on Local Government  
Oppose Unless Amended  
June 6, 2023**

**CSDA Coalition Letters to Assembly Local Government  
Committee and Assembly Housing and Community  
Development Committee  
Oppose Unless Amended  
June 22, 2023**

**CSDA Coalition Letters to Assembly Appropriations Committee  
Oppose Unless Amended  
July 31, 2023**

**It should be noted that CSDA removed the opposition to  
both Senate Bills in August after both bills were amended  
to eliminate the impact on local agency cellular site leases.**

**Proposed Advanced Clean Fleets Rule  
ACWA – General Managers Comment Coalition Letter to the  
California Air Resources Board  
April 20, 2023**

**Assembly Bill 557 (Hart) - Emergency Remote Meeting  
Procedures under the Ralph M. Brown Act  
El Toro Water District Support Letter to the California State  
Assembly  
September 6, 2023**

# KEY PERFORMANCE INDICATORS

## 1. Complaint log statistics

A log of all Customer Service activity is provided to the Board on a monthly basis. Incorporated into this customer service activity report are several categories that could be considered complaints, including water quality, sewer odor, water pressure checks, and high water use readings. Staff modified the customer service activity report to specifically reflect complaints.

**In calendar year 2023, year to date, the District has logged only 5 complaints. These include two bill related complaints and three non-bill related complaints.**

## 2. Number of ETWD scheduled and unscheduled emergency shut-offs

Shutoffs of water service to customers typically results from the need to isolate the water distribution system during water main line repairs, service leak repairs, water valve replacements or meter replacements. The District strives to ensure these repairs and the associated service interruptions are schedule with a minimum 48-hour notice to customers whenever possible. The following data describes the number of scheduled and unscheduled shutoffs for the last three calendar years.

	2020	2021	2022	2023 (To Date)
Scheduled	43	50	41	52
Unscheduled	1	2	1	2

## 3. Public awareness and opinion of ETWD

Staff is considering options for a customer survey regarding public awareness and opinion of ETWD as described in Objective E.2.2.

## 4. Number of Community Advisory Group participants

Live CAG meetings, suspended during the pandemic, resumed in December 2021. Eight CAG meetings have been held since that time with the following numbers of registrations.

December 9, 2021	24 Public Registrations
June 2, 2022	26 Public Registrations
August 31, 2022	26 Public Registrations
November 10, 2022	20 Public Registrations
February 9, 2023	30 Public Registrations
May 17, 2023	25 Public Registrations
August 10, 2023	29 Public Registrations
November 16, 2023	26 Public Registrations



## GOAL F

### Operations

Provide safe, cost-effective, and reliable operations while protecting the environment.

ETWD will provide reliable service while conducting operations with a focus on safety and cost-effectiveness. The District's operations will be sensitive to the environment and in compliance with environmental requirements. The strategies below define the approach the District will take to achieve the goal. Objectives are the measurable actions that track progress towards execution of the strategy.

#### Strategy F.1 Implement improved planning tools.

- |                 |   |
|-----------------|---|
| Objective F.1.1 | Develop and implement an ETWD-wide asset management program with end user/operations level asset management tools to enhance performance<br><br><b>The asset management plan for the water and wastewater pump stations is complete</b><br><br><b>The asset management plan for the WRP is in progress.</b><br><br><b>Subsequent asset management studies are planned for the water distribution system and the sewer collection system.</b>  |
| Objective F.1.2 | Assess current maintenance intervals on infrastructure and implement industry best practice as appropriate<br><br><b>Staff has been in the process of performing a detailed analysis of the preventive pump and motor maintenance program service intervals based on manufacturer's recommendations. Staff implemented changes to the service frequencies to find the balance between appropriate preventive maintenance and the cost of the program. Staff continue to evaluate the program and will continue to make updates and revisions as pumps are replaced.</b><br><br><b>Staff anticipates that the on-going asset management plan will further assist in the assessment of appropriate maintenance intervals on infrastructure and equipment.</b> |
| Objective F.1.3 | Continue to maintain as-built drawings<br><br><b>On-going.</b>  |

#### Strategy F.2 Operate and maintain facilities.

- |                 |   |
|-----------------|---|
| Objective F.2.1 | Maintain all facilities and appurtenances in a consistent fashion to achieve operational efficiency and functionality<br><br><b>On-going.</b> |
|-----------------|---|

Objective F.2.2

Periodically exercise / replace water system valves as appropriate

**The District operates an annual valve exercising program to maintain 5,606 valves in the potable water distribution system. The objective of the valve maintenance program is to operate the 627 valves in arterial streets annually while operating the remaining distribution system valves bi-annually. The total valve exercise program objective is 3,116 valves on an annual basis. The following reflects valve exercising production over the last three fiscal years:**

<b>2020-21</b>	<b>2,414 valves exercised</b>
<b>2021-22</b>	<b>2,931 valves exercised</b>
<b>2022-23</b>	<b>1,416 valves exercised</b>
<b>2023-24 (To Date)</b>	<b>1,092 valves exercised</b>

**In addition, the Operations Department repairs and replaces valves as necessary. The following reflects the repairs and replacement of potable water valves over the last two years:**

	<b>Valves Repaired</b>	<b>Valves Replaced</b>
<b>2021-22</b>	<b>11</b>	<b>14</b>
<b>2022-23</b>	<b>0</b>	<b>16</b>
<b>2023-24 (To date)</b>	<b>2</b>	<b>8</b>

Objective F.2.3

Continue to operate within the parameters of the Sewer System Management Plan

**On-going.**

Objective F.2.4

Conduct an evaluation of system security

**A contract has been issued to install a state-of-the-art security system, including a security camera, at the R-6 Reservoir.**

**Staff is evaluating security camera projects at other District locations, including the WRP and the Main Office campus. A security camera project is included in the 2023/24 capital budget.**

Objective F.2.5

Manage system to minimize water losses

**Service line leaks present a primary challenge in the effort to minimize water losses in the water distribution system. The District Operations Department swiftly responds to service leaks as they are identified.**

**The District also operates a proactive on-going Leak Detection Program.**

**Acoustical leak detection has been completed for each single-family residential service connection in the ETWD system to identify leaks that may not have otherwise been obvious. District staff have conducted leak detection surveys on 6,600 service lines since May of 2020. Only seven leaks were identified with six of those on the customer side of the meter. The customers were notified of the potential leaks and the District staff repaired the one leak on the ETWD side of the meter.**

**District staff also worked with MWDOC, who received grant funding to assist with leak detection. MWDOC performed a survey**

of approximately 2,150 services in the northwest portion of the ETWD service area. The MWDOC survey identified ten potential leaks. Two of the leaks were on the ETWD side of the meter and were repaired. Three of the locations were determined to not be a leak. The customers were notified of the remaining potential leaks on their side of the meter. The District understands at least three were subsequently repaired.

- Objective F.2.6 Complete the annual Water Loss Audit
- The annual Water Loss Audit is due by January 1 of each year. Staff conducted meetings with E-Source, the District's Water Loss Audit Report consultant, to assess and analyze the data and complete the process of preparing the Water Loss Audit Report for the 2022 calendar year. Staff also met with MWDOC staff who provide the required validation step for the audit. The analysis, preparation and validation step for the annual Water Loss Audit for calendar year 2022 is complete. The District submitted the Water Loss Audit to the State on November 15, 2023.
- Objective F.2.7 Assess use of automatic system flushing devices
- The commencement of operations of the JTM Pump Station has had a positive impact on water quality in the northwest portion of the District's potable water distribution system. Scheduled flushing has been eliminated, reducing flushing requirements from once or more per week to less than once per month. In addition, flushing durations, when necessary, have been reduced from several hours to approximately 30 minutes. The improvement in water quality was sustained through the more challenging summer period. Staff have therefore determined that automatic flushing devices are not necessary at this time.
- Objective F.2.8 Evaluate building maintenance program and contract
- Currently the District manages building maintenance needs through an efficient combination of outsourced support and in-house maintenance.
- Objective F.2.9 Evaluate opportunity to repurpose the filtration plant site
- The demolition of the Filter Plant is complete.
- The construction of the warehouse/storage facility is in progress. The construction of the building is expected to be complete in February. The long-lead time electrical switchboard panel is expected to extend total project completion to approximately the end of 2024.
- Objective F.2.10 Implement preventative maintenance program on the recycled water system
- All of the 277 recycled water valves were exercised in the 2019-20 fiscal year and again in the 2021-22 fiscal year. The valves are scheduled to be exercised again in 2024.
- Objective F.2.11 Evaluate alternative solutions for root intrusion and fats, oil, and grease control
- On-going.
- Objective F.2.12 Consider efficient and sustainable wastewater solids handling options

A previous alternatives analysis concluded that the current trucking alternative remained the most cost-effective solids handling option based on a 20-year life cycle cost analysis.

Following completion of the Aeration Basin Diffuser Project staff implemented operational changes at the WRP that were intended to reduce solids production with a corresponding reduction in truck loads and solids costs at SOCWA. On July 26 staff placed Aeration Basin No. 1 in service. The simultaneous operation of all three aeration basins was intended to increase the solids retention time and reduce the amount of solids exported to SOCWA. Since that time the amount of solids hauled to SOCWA has decreased by approximately 13%.

During design of the Clarifier 1 rehabilitation staff will direct the design engineer to evaluate the option to add polymer that would result in a thicker sludge and a corresponding further reduction of truck trips to the SOCWA Joint Regional Plant.

**Strategy F.3 Plan and prepare for emergencies.**

- |                 |   |
|-----------------|---|
| Objective F.3.1 | Update the Emergency Response Plan<br><b>Complete.</b>  |
| Objective F.3.2 | Evaluate materials needs for emergency response<br><b>Staff recently replaced the emergency supplies storage bin at the Main Office campus as well as certain of the District's emergency response supplies.</b>  |
| Objective F.3.3 | Coordinate emergency response planning efforts with the regional water agencies, county, and cities<br><b>On-going.</b>   |
| Objective F.3.4 | Conduct periodic emergency preparedness planning and training for all staff<br><b>The District conducted an extensive table-top emergency exercise, focused on a District-wide power interruption in October of 2022.</b><br><b>Staff is coordinating with WEROC to plan an upcoming emergency exercise.</b><br><b>The District Public Affairs Manager, Chief Financial Officer and Accounting Supervisor attended the WEROC Recovery Training Series (Part I) which focused on the financial impacts, reporting and recovery from potential emergency scenarios.</b> |
| Objective F.3.5 | Continue to implement the network, cybersecurity, and threat response plan<br><b>On-going.</b>  |
| Objective F.3.6 | Evaluate need for additional diesel tank(s) and portable generator(s)<br><b>An additional diesel storage facility is contemplated in the District's Capital Improvement Program budget in the 2028-29 fiscal year. Following the emergency power interruption exercise, Staff is evaluating a variety of backup power contingency options.</b>  |

**Strategy F.4 Actively manage natural resource use consistent with environmental, social and governance (ESG) criteria.**

Objective F.4.1	Conduct energy assessment to identify opportunities to reduce energy use  <b>A detailed analysis of energy efficiency opportunities is on-going.</b>
Objective F.4.2	Optimize facility operations to most efficiently use power, supplies, chemicals, and labor  <b>A detailed analysis of energy efficiency opportunities is on-going.</b>
Objective F.4.3	Evaluate opportunities for use of solar energy and other renewable energy sources  <b>An evaluation of opportunities for the use of solar energy was completed as a component of the energy efficiency evaluation. Terre Verde’s analysis of the District’s solar opportunities indicates there is not sufficient energy production potential to justify the expected cost.</b>  <b>Staff recently met with InPipe Energy and is in the process of evaluating the potential for installing turbines at certain locations in the water or recycled water systems.</b>
Objective F.4.4	Assess opportunities for electric fleet vehicles  <b>The California Air Resources Board (CARB) has enacted new regulations that would phase in requirements to purchase zero emission vehicles rather than the traditional gasoline or diesel fueled vehicles as vehicles are replaced. Staff are evaluating the requirements and assessing the District’s vehicle replacement needs for both large and small equipment.</b>

# KEY PERFORMANCE INDICATORS

## 1. Compliance with applicable regulations

**The District continues to comply with all applicable regulations. The occurrence of any regulatory violations is extremely rare for the District.**

**The District received a single regulatory violation in the form of a Consent Order, executed in August of 2023, issued by the County of Orange Certified Unified Program Agency (OC CUPA) Hazardous Materials Surveillance Section (HMSS). The HMSS conducted an inspection of the underground fuel storage tank at the WRP in February of 2022. During the inspection it was identified that certain leak detection equipment on the tank was not located in the proper position. Upon identification of the problem, District staff immediately restored the sensor to its proper position. It wasn't until the 2023 annual inspection that the County noted the previous deficiency in a written inspection report. The Consent Order notes that the District has fully complied with the requirements to restore the leak detection equipment. The District was assessed a penalty of \$2,500 of which \$1,250 was waived due to the District's compliance with the requirements.**

## 2. Compliance with state requirements to improve urban water use efficiency

**Staff is tracking the proposed Water Loss Performance Standards regulation as well as others to ensure compliance and assess the impact on ETWD resources. The addition of a Water Use Efficiency Analyst has been invaluable in this effort.**

## 3. Monthly monitoring of production and consumption compared to historic months

**On-going.**

## 4. Water losses as defined in the annual Water Loss Audit

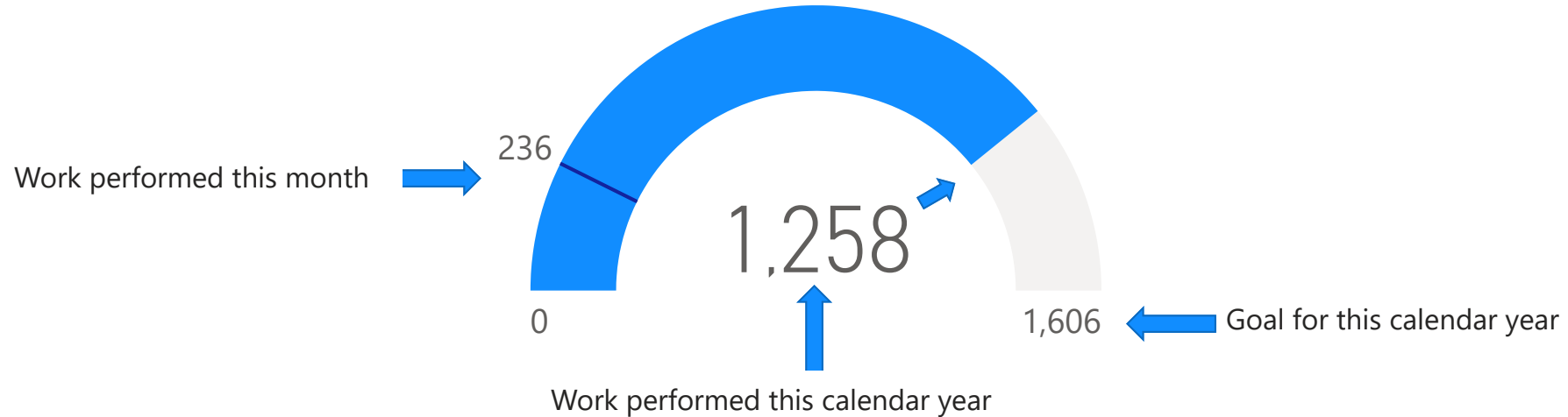
**The standard, set by the State, for the District's annual water loss audit is 24.3 gallons per connection per day. The 2022 calendar year water loss audit analysis identifies the District's water loss as 24.1 gallons per connection per day, which complies with the standard.**



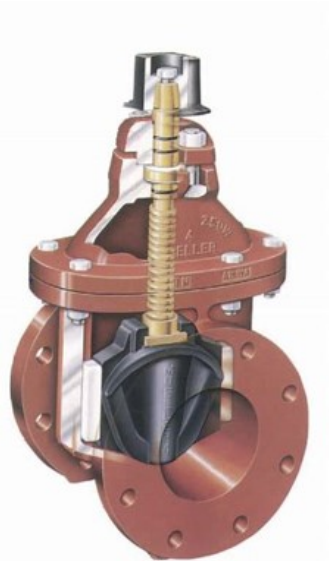
# Operations Report

October 2023

How to read the graphics in this report:

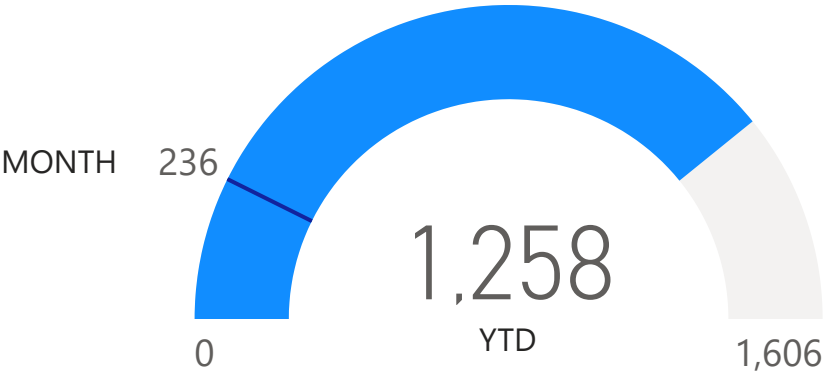


# Valves



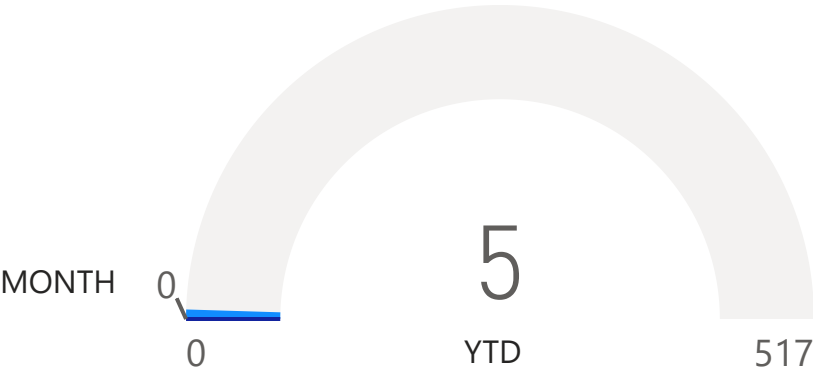
## Distribution Valves Operated

Mainline



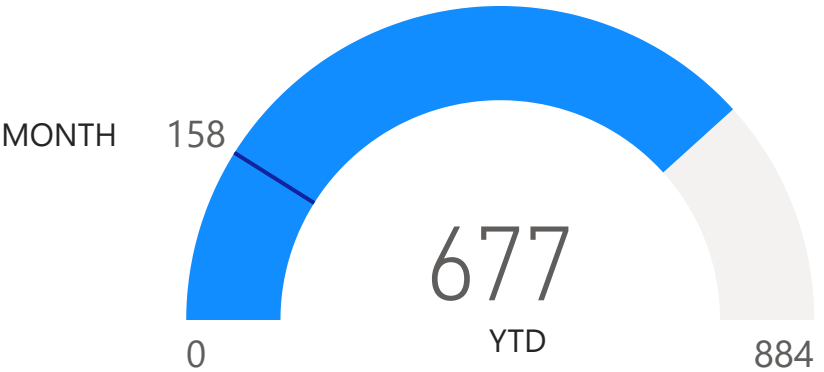
## Arterial Valves Operated

Mainline



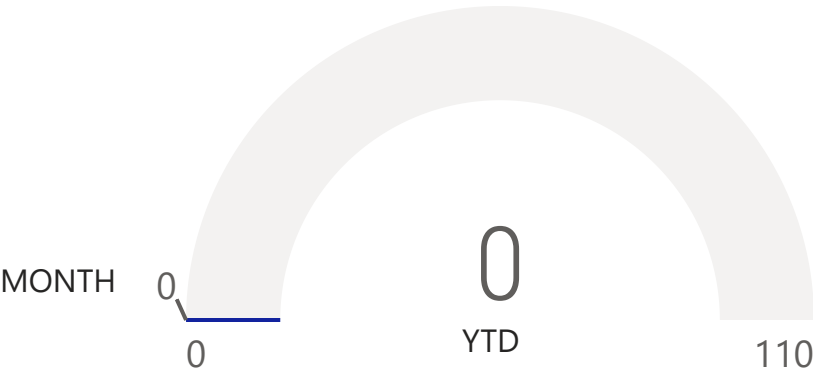
## Distribution Valves Operated

Fire Hydrant



## Arterial Valves Operated

Fire Hydrant



Asset	Month	YTD
Potable Valves Repaired	1	10
Potable Valves Replaced	0	20
Valve Cans Adjusted/Replaced	5	43
Valve Cans Cleaned	1	422
<b>Total</b>	<b>7</b>	<b>495</b>

- Note:
- 1. The distribution valve operation program strives to operate all distribution valves (mainline and fire) every two years. Goals shown on this page represent that for the calendar year (i.e., total number of distribution valves divided by two).
  - 2. The arterial valve operation program strives to operate all arterial valves (mainline and fire) every year.

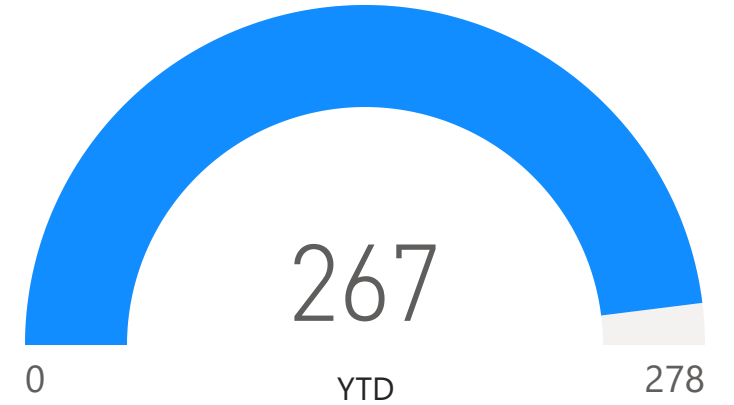


# Cross Connection Program

Backflow Assemblies Tested



Recycled Water Inspections



# Other Facility Maintenance

Generator Inspections



Underground Service Alerts Marked

111  
Month

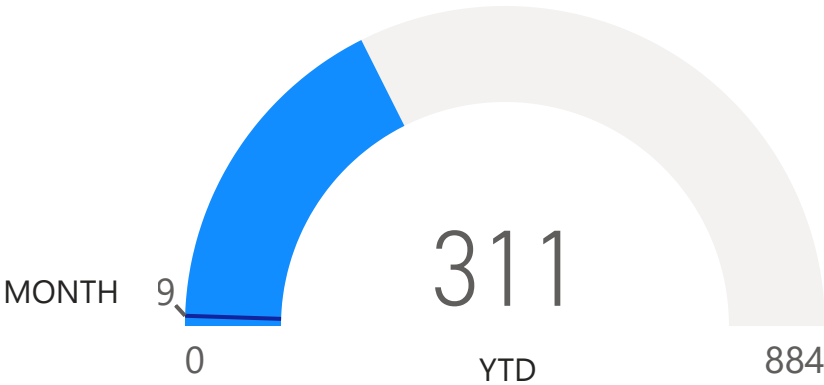
Underground Service Alerts Marked

1,402  
YTD

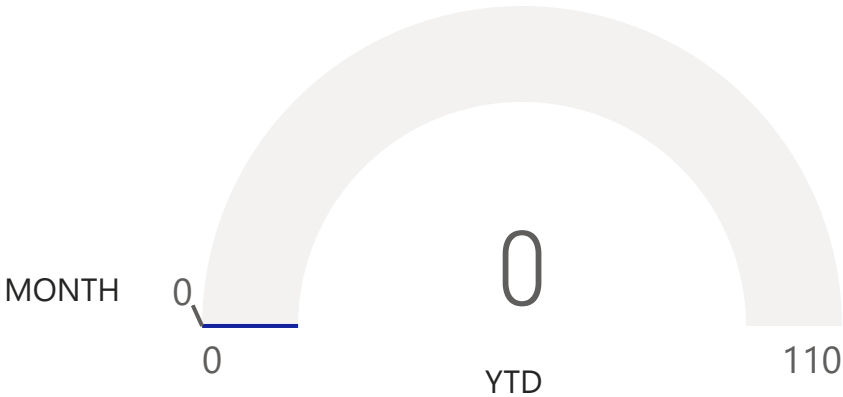
# Fire Hydrants



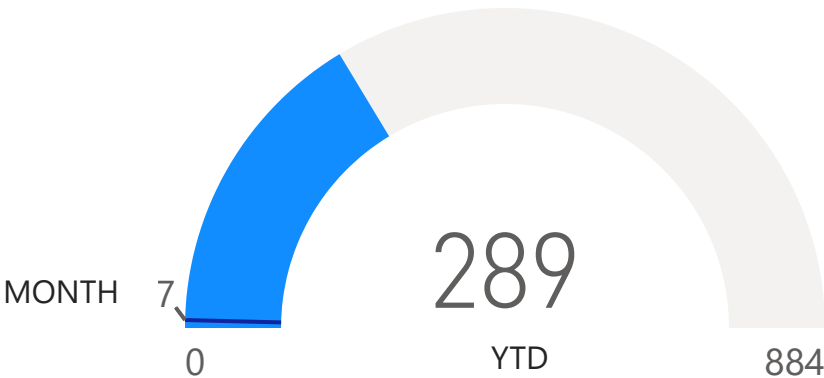
Distribution Hydrants Maintained



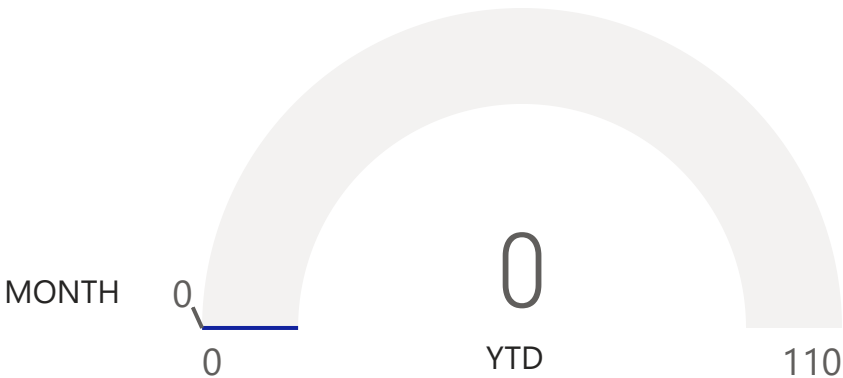
Arterial Hydrants Maintained



Distribution Hydrants Painted



Arterial Hydrants Painted



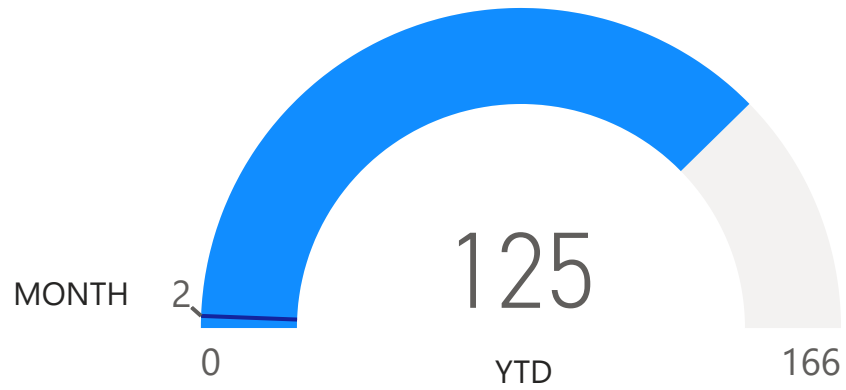
Asset	Month	YTD
Hydrants Repaired	1	9
Hydrants Replaced	2	16
<b>Total</b>	<b>3</b>	<b>25</b>

Note:

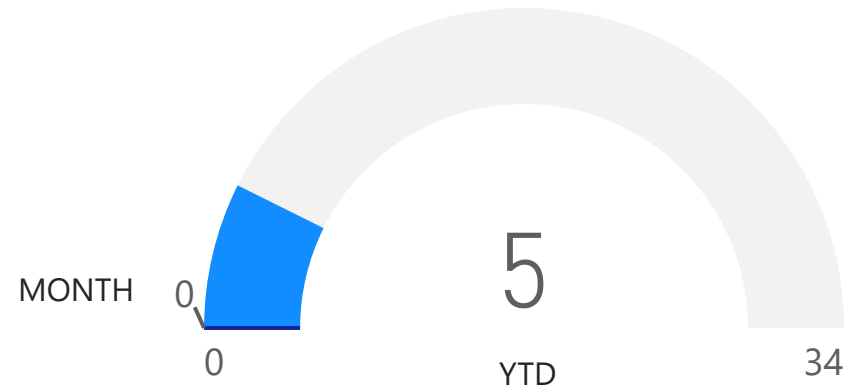
- 1. The distribution hydrant program strives to maintain and paint all distribution hydrants every two years. Goals shown on this page represent that for the calendar year (i.e., total number of distribution hydrants divided by two).
- 2. The arterial hydrant program strives to maintain and paint all arterial hydrants every year.

# Water Appurtenances

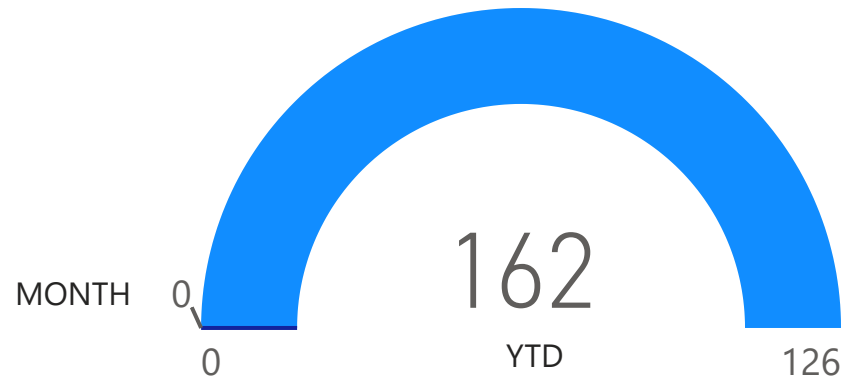
Air Vacs Maintained



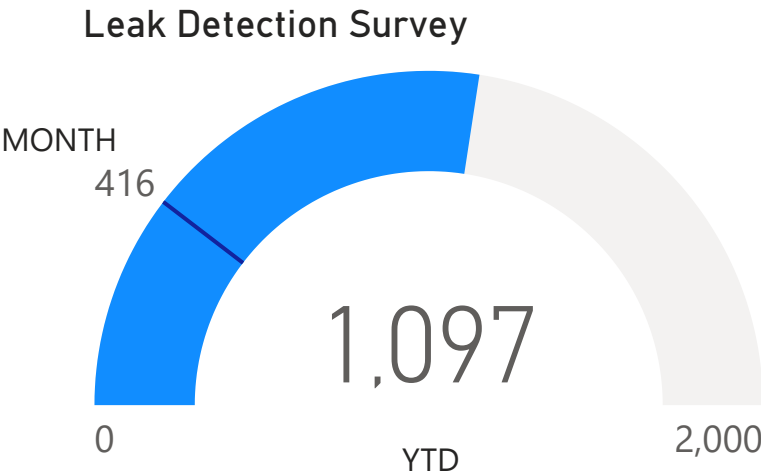
PRVs Maintained



Blow Offs Flushed



# Water Distribution System



Asset	Month	YTD
Main Line Repairs	0	4
Service Line Repairs	0	7
Service Line Replacement	4	34
Water Pump Motor Services	0	4
Water Pump Services	0	2
Water Reservoir and Pump Station Inspections	92	873
<b>Total</b>	<b>96</b>	<b>924</b>



System Flushing  
gallons

**49K**  
Month

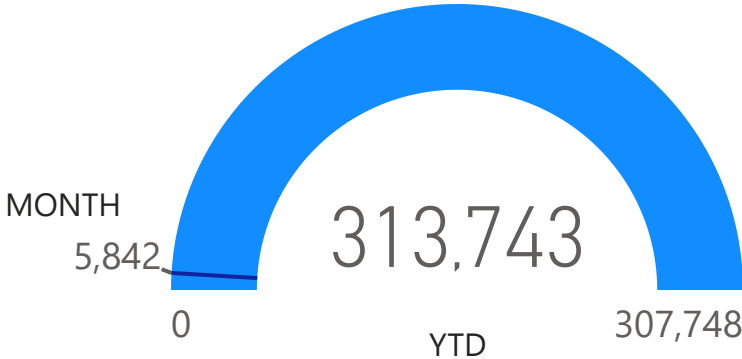


System Flushing  
gallons

**1M**  
YTD

# Collection System

Line Cleaning  
feet of pipe



TV Inspection  
feet of pipe

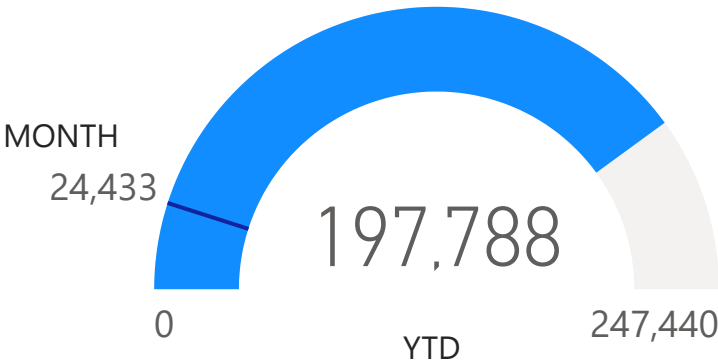


FOG Inspections



Asset	Month	YTD
Industrial Waste Inspections	19	170
Lift Station Inspections	82	804
Manhole Repairs	0	0
Odor Complaints	1	3
Root Cutting	0	0
Root Foaming	4,792	4,792
Sewer Mainline Repairs	0	0
Sewer Pump/Motor Maintenance	4	9
Sewer Service Line Repairs	0	1
Wet Well Cleaning	5	50
Total	4,903	5,829

Hotspots  
feet of pipe



Manhole Inspections



Note:

1. The line cleaning objective is a two year cycle to clean the entire system. The current cycle began on 7/1/2022.
2. The TV inspection objective is a five year cycle to inspect the entire system. The current cycle began on 1/25/2021.

**EL TORO WATER DISTRICT  
UNAUTHORIZED DISCHARGE SUMMARY  
YEAR OF 2023**

DATE	PUBLIC / PRIVATE	SPILL TYPE	LOCATION	REASON	IMMEDIATE CORRECTIVE MEASURES	POST-INCIDENT PREVENTIVE MEASURES	RWQCB	DISCHARGED TO	SPILL VOLUME (PUBLIC) Gallons		SPILL VOLUME (PRIVATE) Gallons		REGULATORY NOTIFICATION AND RESPONSE
									CONTAINED	SPILLED	CONTAINED	SPILLED	
January			No Spill										
February			No Spill										
March			No Spill										
April			No Spill										
May			No Spill										
June			No Spill										
July			No Spill										
August	Public	Secondary Treatment	WRP	Construction Project at WRP OOPS Pump station.	Spill was stopped at the pump station, the spill gate was closed, emergency pumps, and Vactor trucks were utilized to pump out the remaining spill within the plant.	Clean up area and replaced waddles and sand bags Pipe was repaired by contractor.	Region 8 and 9	First holding area of Veeh Reservoir/Veeh Reservoir	72,800 gallons	60,000 gallons	N/A	N/A	SOCWA, Office of Emergency Services, OCHD, OC Spill Response, RWQCB REG. 8, RWQCB REG. 9
September			No Spill										
October			No Spill										
LEGEND									72800	60000	0	0	
S.D.C = San Diego Creek		RES. = Residential		R.S. = Rocks									
S.D. = Storm Drain		C. = Commercial		C.W.D. = Calcium Water Deposits									
A.C. = Aliso Creek		S.B. = Siphon		B.P. = Broken Pipe									
G.B. = Grease Blockage		P.F. = Power Failure		U.W. = Untreated Water									
S. = Sticks		P. = Paper		R. = Roots									



## Water Recycling Plant (WRP) Flow Data

Location	October 2023			Year to Date		
	Average Daily Flow (MGD)	Total Volume (MG)	Total Volume (AF)	Average Daily Flow (MGD)	Total Volume (MG)	Total Volume (AF)
Influent	3.30	102	314	3.54	1,076	3,301
Influent Peak	7.78	-	-	11.7	-	-
Ocean Discharge	2.11	65.5	201	2.52	766	2,350
RW Distribution System	1.01	31.3	96.0	0.86	263	807
RW Golf Course	0.24	7.46	22.9	0.23	70.9	218
RW WRP Use	0.06	1.86	5.72	0.08	25.1	77.1
Total Recycled Water	1.31	40.6	125	1.18	359	1102
Potable Supplement	-	0.98	3.02	-	11.1	34.1

# Compliance Activities Log



## Annual Reports

2022 Annual Fluoride Report	SWRCB Division of Drinking Water	January 10, 2023
2022 Annual Report for Disinfection Residual Compliance (CL2)	SWRCB Division of Drinking Water	January 10, 2023
2022 Annual Hazardous Materials Update	State of California (Cal-EPA)	March 1, 2023
Drinking Water System Flushing Report (2023)	SWRCB Division of Drinking Water	March 1, 2023
Annual R-6 Cover Report	SWRCB Division of Drinking Water	March 30, 2023
2022 Volumetric Annual Report (Wastewater / Recycled Water)	State Water Resources Control Board (SWRCB)	April 1, 2023
2022 Emissions Data Under the Regulation for the Reporting of Criteria Pollutants and Toxic Air Contaminants	South Coast Air Quality Management District	April 18, 2023
Electronic Annual Report (Water System Comprehensive Report)	State Water Resources Control Board (SWRCB)	May 11, 2023
Annual Water Supply and Demand Assessment	California Department of Water Resources (DWR)	June 30, 2023
2022 Storm Water Report	SWRCB Division of Drinking Water	July 15, 2023
Water Loss Audit	California Department of Water Resources (DWR)	November 15, 2023

## Bi-Annual Reports

Self-Monitoring Report for Recycled Water	Regional Water Quality Control Board - Region 8	January 22, July 26, 2023
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## Quarterly Reports

### Fourth Quarter Reports Due in January 2023

Fourth Quarter Stage 2 TTHM HAA5 Report for Disinfection Byproducts Compliance	SWRCB Division of Drinking Water	January 5, 2023
Fourth Quarter Report for Disinfectant Residuals Compliance	SWRCB Division of Drinking Water	January 6, 2023
Fourth Quarter Recycled Water Usage Report added to Self-Monitoring Report for Recycled Water for the month of December	Regional Water Quality Control Board - Region 8	January 26, 2023

### First Quarter 2023 Reports Due in April 2023

First Quarter Report for Disinfectant Residuals Compliance	SWRCB Division of Drinking Water	April 6, 2023
First Quarter TTHM Report for Disinfection Byproducts Compliance	SWRCB Division of Drinking Water	April 27, 2023
First Quarter Recycled Water Usage Report added to Self-Monitoring Report for Recycled Water for the month of December	Regional Water Quality Control Board - Region 8	April 27, 2023

### Second Quarter 2023 Reports Due in July 2023

Second Quarter Report for Disinfectant Residuals Compliance	SWRCB Division of Drinking Water	July 7, 2023
Second Quarter TTHM Report for Disinfection Byproducts Compliance	SWRCB Division of Drinking Water	July 7, 2023
Second Quarter Recycled Water Usage Report added to Self-Monitoring Report for Recycled Water for the month of December	Regional Water Quality Control Board - Region 8	July 27, 2023

### Third Quarter 2023 Reports Due in October 2023

Third Quarter Report for Disinfectant Residuals Compliance	SWRCB Division of Drinking Water	October 10, 2023
Third Quarter Stage 2 TTHM HAA5	SWRCB Division of Drinking Water	October 10, 2023
ThirdQuarter Recycled Water Usage Report added to Self-Monitoring Report for Recycled Water for the month of December	Regional Water Quality Control Board - Region 8	October 27, 2023



## Monthly Reports

### January Monthly Reports 2023

NPDES Discharge Monitoring Report (December)	SOCWA - Regional Water Quality Control Board - Region 9	January 6, 2023
Summary of Monitoring for Surface Water Treatment Regulations (December)	SWRCB Division of Drinking Water	January 6, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (December)	SWRCB Division of Drinking Water	January 6, 2023
Self-Monitoring Report for Recycled Water (December)	Regional Water Quality Control Board - Region 8	January 26, 2023
Self-Monitoring Report for Planned Discharges (December)	Regional Water Quality Control Board - Region 8	January 26, 2023
Urban Water Supplier Monthly Reports (Drought and Conservation Reporting for December 2022)	State Water Resources Control Board (SWRCB)	January 26, 2023

### February Monthly Reports 2023

NPDES Discharge Monitoring Report (January)	SOCWA - Regional Water Quality Control Board - Region 9	February 8, 2023
Summary of Monitoring for Surface Water Treatment Regulations (January)	SWRCB Division of Drinking Water	February 8, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (January)	SWRCB Division of Drinking Water	February 8, 2023
Self-Monitoring Report for Recycled Water (January)	Regional Water Quality Control Board - Region 8	February 27, 2023
Self-Monitoring Report for Planned Discharges (January)	Regional Water Quality Control Board - Region 8	February 27, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for January)	State Water Resources Control Board (SWRCB)	February 28, 2023

### March Monthly Reports 2023

NPDES Discharge Monitoring Report (February)	SOCWA - Regional Water Quality Control Board - Region 9	March 8, 2023
Summary of Monitoring for Surface Water Treatment Regulations (February)	SWRCB Division of Drinking Water	March 9, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (February)	SWRCB Division of Drinking Water	March 9, 2023
Self-Monitoring Report for Recycled Water (February)	Regional Water Quality Control Board - Region 8	March 30, 2023
Self-Monitoring Report for Planned Discharges (February)	Regional Water Quality Control Board - Region 8	March 30, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for February)	State Water Resources Control Board (SWRCB)	March 28, 2023

### April Monthly Reports 2023

Summary of Monitoring for Surface Water Treatment Regulations (March)	SWRCB Division of Drinking Water	April 6, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (March)	SWRCB Division of Drinking Water	April 6, 2023
NPDES Discharge Monitoring Report (March)	SOCWA - Regional Water Quality Control Board - Region 9	April 10, 2023
Self-Monitoring Report for Recycled Water (March)	Regional Water Quality Control Board - Region 8	April 27, 2023
Self-Monitoring Report for Planned Discharges (March)	Regional Water Quality Control Board - Region 8	April 27, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for March)	State Water Resources Control Board (SWRCB)	April 28, 2023

### May Monthly Reports 2023

NPDES Discharge Monitoring Report (April)	SOCWA - Regional Water Quality Control Board - Region 9	May 9, 2023
Summary of Monitoring for Surface Water Treatment Regulations (April)	SWRCB Division of Drinking Water	May 9, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (April)	SWRCB Division of Drinking Water	May 9, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for April)	State Water Resources Control Board (SWRCB)	May 26, 2023
Self-Monitoring Report for Recycled Water (April)	Regional Water Quality Control Board - Region 8	May 29, 2023
Self-Monitoring Report for Planned Discharges (April)	Regional Water Quality Control Board - Region 8	May 29, 2023

## June Monthly Reports 2023

NPDES Discharge Monitoring Report (May)	SOCWA - Regional Water Quality Control Board - Region 9	June 6, 2023
Summary of Monitoring for Surface Water Treatment Regulations (May)	SWRCB Division of Drinking Water	June 9, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (May)	SWRCB Division of Drinking Water	June 9, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for May)	State Water Resources Control Board (SWRCB)	June 23, 2023
Self-Monitoring Report for Recycled Water (May)	Regional Water Quality Control Board - Region 8	June 29, 2023
Self-Monitoring Report for Planned Discharges (May)	Regional Water Quality Control Board - Region 8	June 29, 2023

## July Monthly Reports 2023

NPDES Discharge Monitoring Report (June)	SOCWA - Regional Water Quality Control Board - Region 9	July 7, 2023
Summary of Monitoring for Surface Water Treatment Regulations (June)	SWRCB Division of Drinking Water	July 7, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (June)	SWRCB Division of Drinking Water	July 7, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for June)	State Water Resources Control Board (SWRCB)	July 26, 2023
Self-Monitoring Report for Recycled Water (June)	Regional Water Quality Control Board - Region 8	July 27, 2023
Self-Monitoring Report for Planned Discharges (June)	Regional Water Quality Control Board - Region 8	July 27, 2023

## August Monthly Reports 2023

Summary of Monitoring for Surface Water Treatment Regulations (July)	SWRCB Division of Drinking Water	August 8, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (July)	SWRCB Division of Drinking Water	August 8, 2023
NPDES Discharge Monitoring Report (July)	SOCWA - Regional Water Quality Control Board - Region 9	August 9, 2023
Self-Monitoring Report for Recycled Water (July)	Regional Water Quality Control Board - Region 8	August 28, 2023
Self-Monitoring Report for Planned Discharges (July)	Regional Water Quality Control Board - Region 8	August 28, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for July)	State Water Resources Control Board (SWRCB)	August 31, 2023

## September Monthly Reports 2023

NPDES Discharge Monitoring Report (August)	SOCWA - Regional Water Quality Control Board - Region 9	September 6, 2023
Summary of Monitoring for Surface Water Treatment Regulations (August)	SWRCB Division of Drinking Water	September 7, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (August)	SWRCB Division of Drinking Water	September 7, 2023
Self-Monitoring Report for Recycled Water (August)	Regional Water Quality Control Board - Region 8	September 28, 2023
Self-Monitoring Report for Planned Discharges (August)	Regional Water Quality Control Board - Region 8	September 28, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for August)	State Water Resources Control Board (SWRCB)	September 29, 2023

## October Monthly Reports 2023

NPDES Discharge Monitoring Report (September)	SOCWA - Regional Water Quality Control Board - Region 9	October 10, 2023
Summary of Monitoring for Surface Water Treatment Regulations (September)	SWRCB Division of Drinking Water	October 10, 2023
Summary of Revised Total Coliform Rule Distribution System Monitoring (September)	SWRCB Division of Drinking Water	October 10, 2023
Self-Monitoring Report for Recycled Water (September)	Regional Water Quality Control Board - Region 8	October 27, 2023
Self-Monitoring Report for Planned Discharges (September)	Regional Water Quality Control Board - Region 8	October 27, 2023
SAFER Clearinghouse (Urban Water Supplier Monthly Report for September)	State Water Resources Control Board (SWRCB)	October 27, 2023

# Staff Training Log



## First Quarter

Training Topic	Duration	Frequency	Modality	Participants
Safety Tailgate Meeting	30 Minutes	Weekly	In Person	Field Staff
Arc Flash Training	8 Hours	5 Years	In person Consultant	Electrical, Pump Stations, On-Call Staff and the Plant
Bloodborne Pathogens	1 Hour	Annual	Online	All Employees
Hearing	1 Hour	Annual	Online	All Employees

## Second Quarter

Training Topic	Duration	Frequency	Modality	Participants
Safety Tailgate Meeting	30 Minutes	Weekly	In Person	Field Staff
Arc Flash Training	8 Hours	5 Years	In person Consultant	Make Up Training for 2 Employees

## Third Quarter

Training Topic	Duration	Frequency	Modality	Participants
Safety Tailgate Meeting	30 Minutes	Weekly	In Person	Field Staff
Electrical Hazards	1 Hour	Annual	Online	All Employees
Heat Illness Plan	1 Hour	Annual	Online	All Employees
HAZWOPER	8 Hours	Every Year	In person Consultant	Electrical, Pump Stations, On-Call Staff and the Plant.

## WRP BATTERY STORAGE SYSTEM

### MONTHLY REPORT

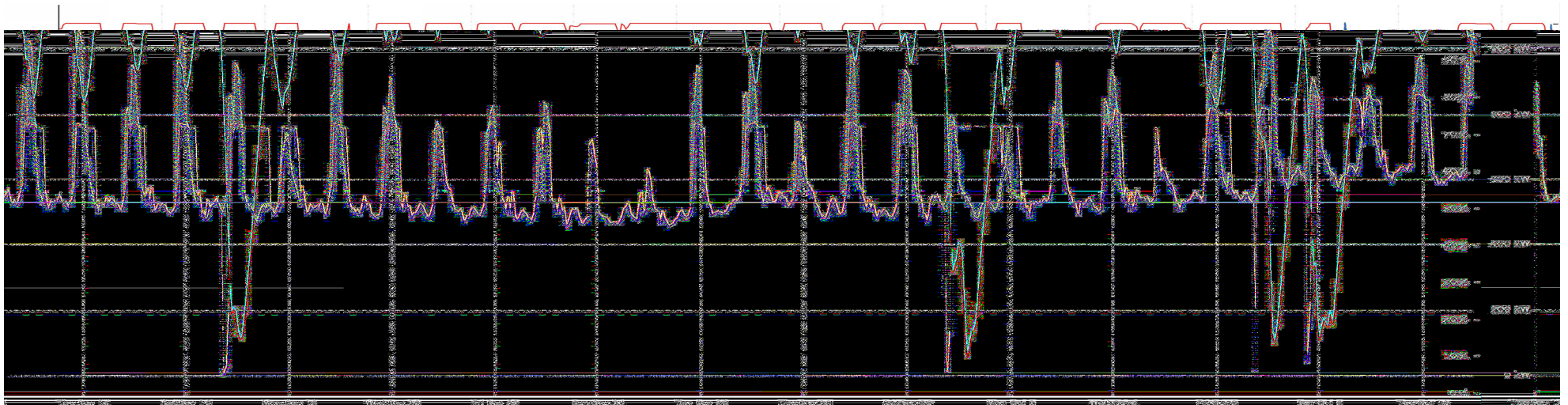
October 2023

Year 5



BILLING PERIOD		BILL SAVINGS		NET SAVINGS
08/11/23 - 09/12/23	\$	1,749.86	\$	159.86
09/12/23 - 10/11/23	\$	16,350.56	\$	14,760.56

**TOTAL**      \$      **18,100.42**    \$      **14,920.42**



## Sewerage Treatment Plant



23542 Moulton Pkwy, Laguna Woods, CA 92637

### Savings Report - 2023-10

Sep 12, 2023 - Oct 11, 2023

SCE TOU 8 Option D (< 2kV)

Demand Charges	Before Storage		After Storage		Savings	
Maximum Demand Charges	1,085kW	\$23,423.48	866kW	\$18,705.58	219kW	\$4,717.90
Summer On-Peak	984kW	\$26,767.14	590kW	\$16,068.24	393kW	\$10,698.89
Winter Mid-Peak (Weekdays)	969kW	\$3,536.88	780kW	\$2,848.34	189kW	\$688.53
Sub-total		\$53,727.49		\$37,622.17		\$16,105.33

Energy Charges	Before Storage		After Storage		Savings	
Summer Mid-Peak	13,471kWh	\$2,255.96	7,837kWh	\$1,312.50	5,634kWh	\$943.46
Summer Off-Peak	205,259kWh	\$25,852.31	213,545kWh	\$26,896.05	(8,287)kWh	\$(1,043.74)
Summer On-Peak	39,830kWh	\$7,207.64	36,841kWh	\$6,666.78	2,989kWh	\$540.86
Winter Mid-Peak	30,914kWh	\$4,329.83	27,372kWh	\$3,833.72	3,542kWh	\$496.11
Winter Off-Peak	73,151kWh	\$10,209.01	74,173kWh	\$10,351.53	(1,021)kWh	\$(142.51)
Winter Super Off-Peak	44,424kWh	\$4,039.91	50,460kWh	\$4,588.85	(6,036)kWh	\$(548.95)
Sub-total		\$53,894.67		\$53,649.44		\$245.23

Other Monthly Charges	Before Storage		After Storage		Savings	
Customer and Other		\$354.30		\$354.30		\$0.00
Sub-total		\$354.30		\$354.30		\$0.00

Total	Before Storage		After Storage		Savings	
		\$107,976.46		\$91,625.90		\$16,350.56

Note: The above data is calculated by Genability using utility meter data. If there were any gaps in the utility data, they were filled with Stem meter data. Your actual utility bill may look different from the data displayed above due to either issues in the utility data we were provided or in the Stem meter data collected. Some discrepancies are normal and to be expected. For this reason, Stem completes a thorough review of all data and reconciles discrepancies by comparing the Genability calculations of the energy storage system cost savings and total bill values with your utility bills. If you have an outstanding performance guarantee term, any discrepancies identified are adjusted for differences and reflected in your true up term statement.

**EL TORO WATER DISTRICT  
MONTHLY POTABLE WATER QUALITY REPORT**

The quality and safety of drinking water in the U.S. is regulated by the federal government through the U.S. Environmental Protection agency (USEPA). In California, those standards are enforced by the California Department of Public Health (CDPH). Water Quality parameters must meet both primary and secondary water quality standards as established by the CDPH.

**PRIMARY STANDARDS** - are intended to protect public health against substances in the water that may be harmful to humans if consumed for long periods of time.

**SECONDARY STANDARDS** - are to ensure esthetic qualities of water such as taste, odor or clarity. Rather than its healthfulness, these standards govern substances that may influence consumer acceptance of water.

Given that 100% of ETWD's potable water resource is fully treated and delivered by Metropolitan Water District of southern California (MWDSC) through an enclosed and protected conveyance system, the majority of the State and federal primary and secondary source water quality monitoring requirements are performed by MWDSC. The District's physical responsibility for water quality monitoring is associated with the distribution system. To monitor the distribution system water quality the District utilizes both in house and outside lab services. Routine distribution analysis conforming to CDPH requirements is conducted for the following constituents:

- 1) **Microbiological** - The number of microbiological samples and the frequency of analysis during the month is based on the population and/or service connections served. Utilizing a population of 50,000, the CDPH requires that 20 "representative" samples be collected and analyzed for coliform bacteria. The objective is to maintain water quality that is absent of coliform bacteria which is a general indicator for the existence of fecal coliform.
- 2) **Chlorine Residual** - The chlorine residual monitoring is performed in conjunction with the microbiological monitoring. The CDPH requirement for treated surface water mandates that the distribution system maintain a "detectable" residual. The number of and frequency of sampling is determined utilizing the same formula applied to microbiological requirements. At a minimum, we are obligated to collect and analyze for chlorine residual each time we collect the representative microbiological samples. Per EPA Disinfectants & Disinfection Byproduct Rule (D/DBP), which was effective January 2002, requires quarterly reporting for all sampling.
- 3) **TTHM & HAA5 Stage 2 DBPR Compliance** The U.S. Environmental Protection Agency (EPA) published the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) on January 4, 2006. The Stage 2 DBPR builds on existing regulations by requiring water systems to meet disinfection byproduct (DBP)\* maximum contaminant levels (MCLs) at each monitoring site in the distribution system to better protect public health. The Stage 2 DBP rule is intended to reduce potential cancer and reproductive and developmental health risks from disinfection byproducts (DBPs) in drinking water, which form when disinfectants are used to control microbial pathogens. This final rule strengthens public health protection for customers of systems that deliver disinfected water by requiring such systems to meet maximum contaminant levels as an average at each compliance monitoring location (instead of as a system-wide average as in previous rules) for two groups of DBPs, trihalomethanes (TTHM) and five haloacetic acids (HAA5). The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related potential health risks and provide more equitable public health protection. The Stage 2 DBPR is being released simultaneously with the Long Term 2 Enhanced Surface Water Treatment Rule to address concerns about risk tradeoffs between pathogens and DBPs.

The mandatory requirement under the Stage 2 DBP rule, known as an Initial Distribution System Evaluation (IDSE) was completed by ETWD in 2008 and a Stage 2 monitoring plan has been approved by CDPH. Full Stage 2 compliance begins in 2012. The IDSE identified the locations with high disinfection byproduct concentrations. These locations will then be used by the District as the 8 sampling sites for Stage 2 DBP rule compliance monitoring. Compliance with the maximum contaminant levels for two groups of disinfection byproducts (TTHM and HAA5) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system. The Stage 2 DBP rule also requires each system to determine if they have exceeded an operational evaluation level, which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a report to the state that identifies actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.

- 4) **Physical Quality** - Physical Quality analysis is associated with the esthetic qualities of the finished water. Primarily, we are performing analysis for taste, odor and Turbidity (Clarity). In accordance with CDPH requirements, the District collects a minimum of 15 samples per month.
- 5) **Nitrites** - Although the chloramine disinfection process has been effective in controlling TTHM levels, it requires increased monitoring and adjustment as a result of its susceptibility to the Nitrification process. Nitrification is a biological process caused by naturally occurring ammonia oxidizing bacteria. Nitrification in chloraminated drinking water can have various adverse impacts on water quality, the most serious of which is the loss of total chlorine residual which is required by the CDPH and the subsequent potential to increase bacteria-logical activity within the finished or treated water system. MWD has developed an effective nitrification monitoring and prevention program which ETWD staff have adopted and incorporated into the District's daily water quality monitoring and action plan. The number and frequency of this type of monitoring is not currently regulated by CDPH. Staff monitor the level of nitrites in source water, reservoirs and the distribution system daily and weekly in conjunction with the microbiological and chlorine sampling program. A nitrite level of between 0.015 and 0.030 would signal an alert. > 0.030 would require action such as the addition of chlorine to produce a chloramine residual.

EL TORO WATER DISTRICT MONTHLY POTABLE WATER QUALITY ANALYSIS					
MONTH:		October		YEAR : 2023	
CONSTITUENT ANALYSIS		INSIDE LAB		OUTSIDE LAB	
	MCL	NO.	RESULTS	NO.	RESULTS
1 Microbiological	Pres/Absence	134	Absence		Average
2 Chlorine (ppm) In Field	Detectable Resid	220	Average = 1.82 ppm		
3 TTHM (ppb) (Stage 2)	80 ppb				ppm
3 HAA5 (ppb) (Stage 2)	60 ppb				ppm
4 Physical Quality:			RANGE		
Turbidity (ppm)	5 NTU	20	0.00 to 0.05 Res.		
Odor	3 Units	20	ND<1		
Color	15 Units	20	ND<5		
Temperature	No standard	20	74°F To 83°F		
5 Nitrite (Alert/Action level) ppm	0.015 to 0.030 ppm	175	0.001 to 0.277		

To ensure water quality compliance, the District annually performs approximately 8,750 water quality analytical evaluations of the samples collected from the distribution system.

**Abbreviations:**

<b>RES</b>	<b>Indicates that the nitrification was isolated to a reservoir and treated</b>
<b>ND</b>	<b>None detected</b>
<b>Pres/Absence</b>	<b>Presence (P) or Absence (A) related to a positive or negative bacteriological result</b>
<b>MCL</b>	<b>Maximum Contaminant Level</b>
<b>NTU</b>	<b>Nephelometric Turbidity Units, a measure of the suspended material in the water</b>
<b>ppm</b>	<b>Parts per million</b>
<b>ppb</b>	<b>Parts per billion</b>
<b>Total Coliform</b>	<b>No more than 5% of the monthly samples may be total coliform-positive</b>
<b>N/A</b>	<b>Not available</b>



# MICROBIOLOGICAL MONITORING

October 2023

## PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

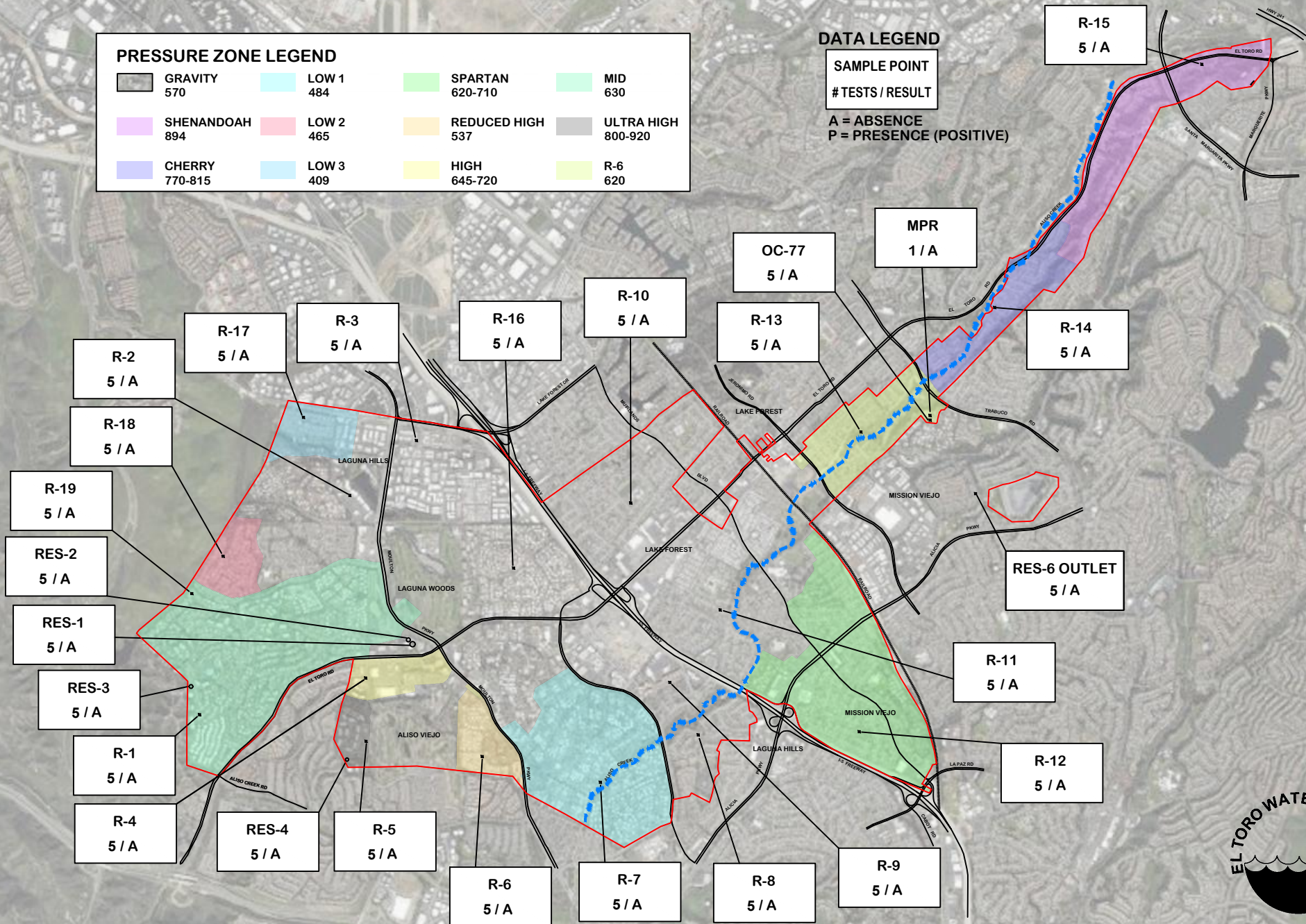
## DATA LEGEND

### SAMPLE POINT

# TESTS / RESULT

A = ABSENCE

P = PRESENCE (POSITIVE)





# CHLORINE RESIDUAL MONITORING

## October 2023

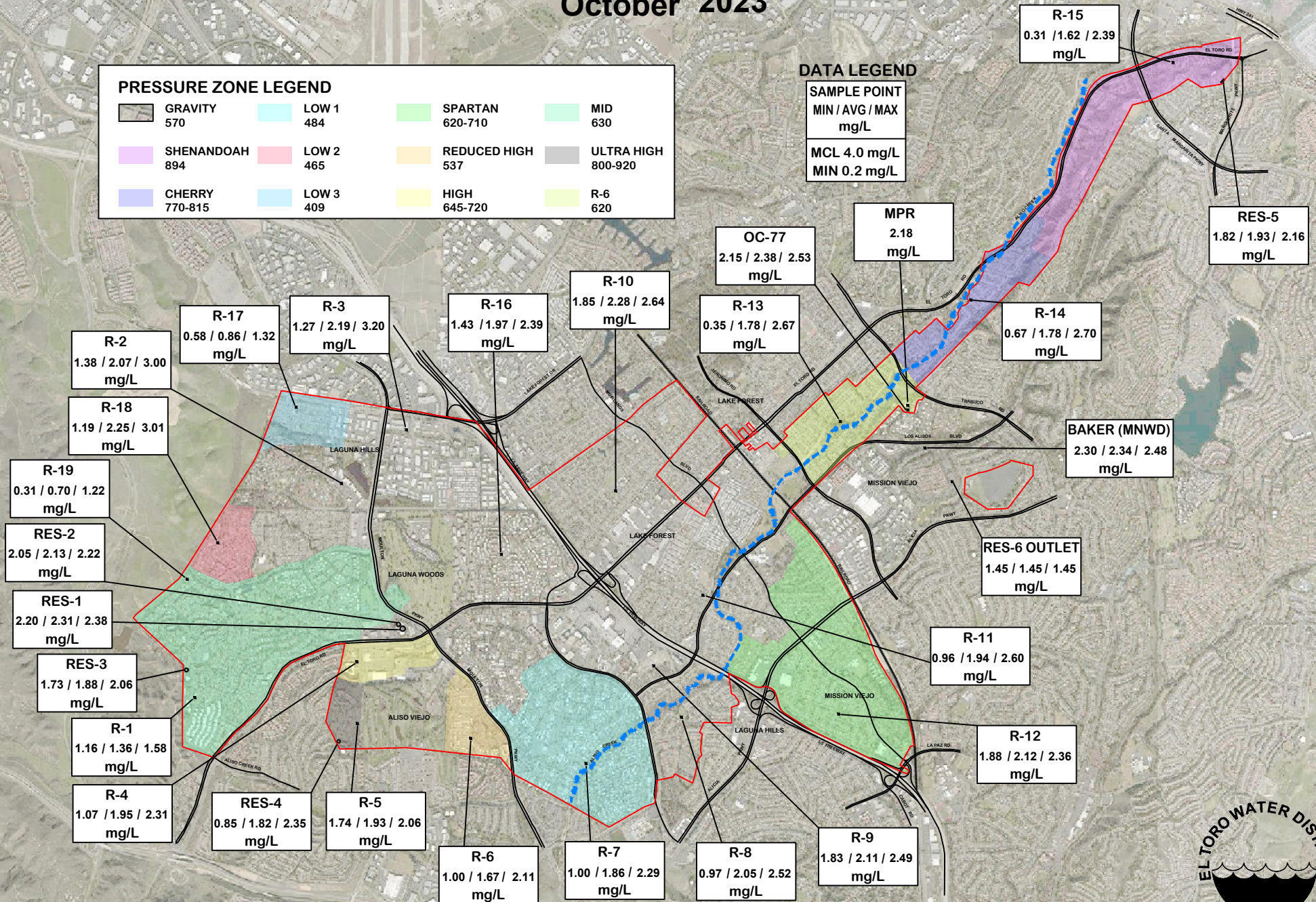
### PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

### DATA LEGEND

SAMPLE POINT  
MIN / AVG / MAX  
mg/L

MCL 4.0 mg/L  
MIN 0.2 mg/L





# FLUORIDE MONITORING

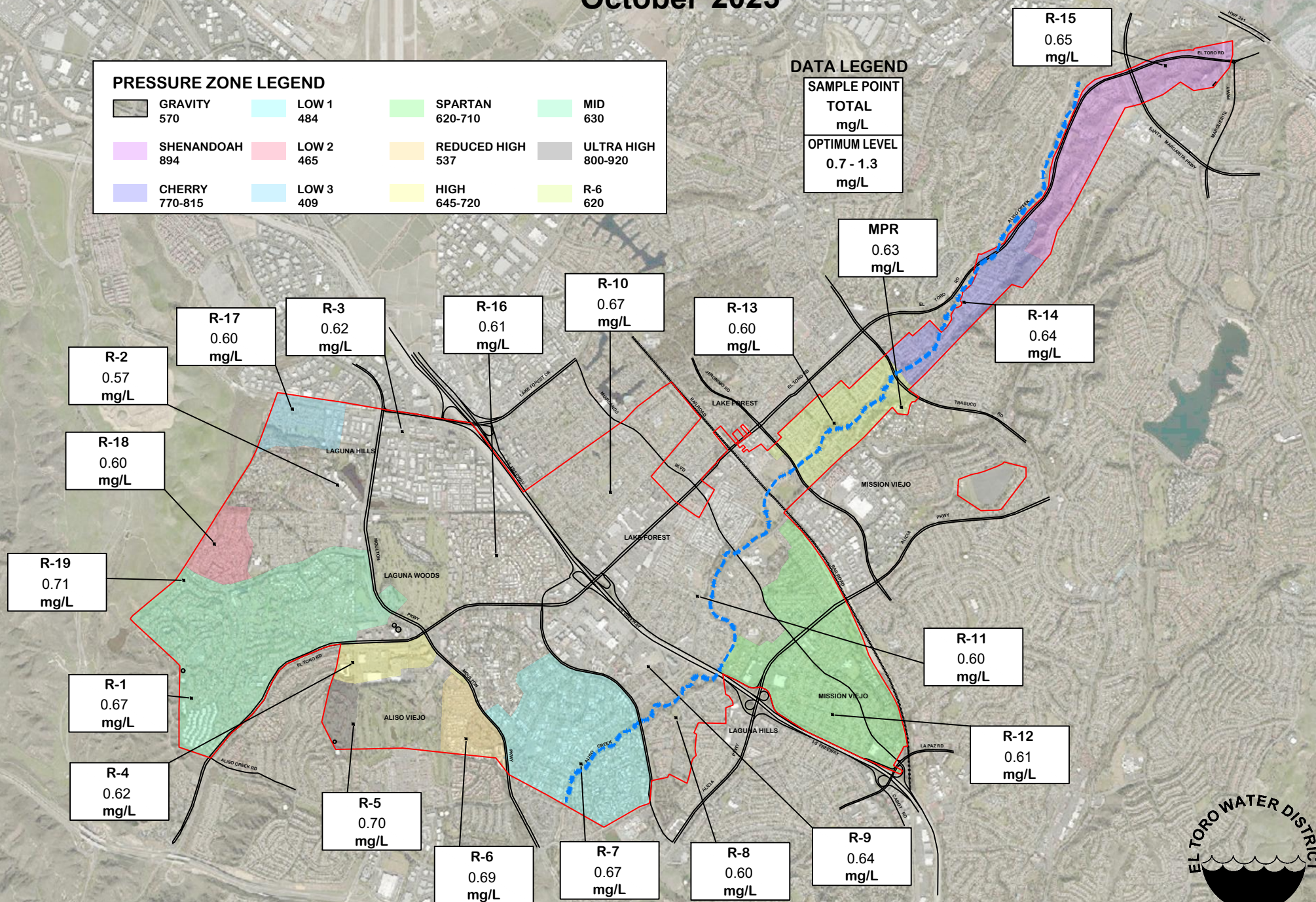
October 2023

## PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

## DATA LEGEND

SAMPLE POINT
TOTAL mg/L
OPTIMUM LEVEL 0.7 - 1.3 mg/L





# NITRITE MONITORING

October 2023

## PRESSURE ZONE LEGEND

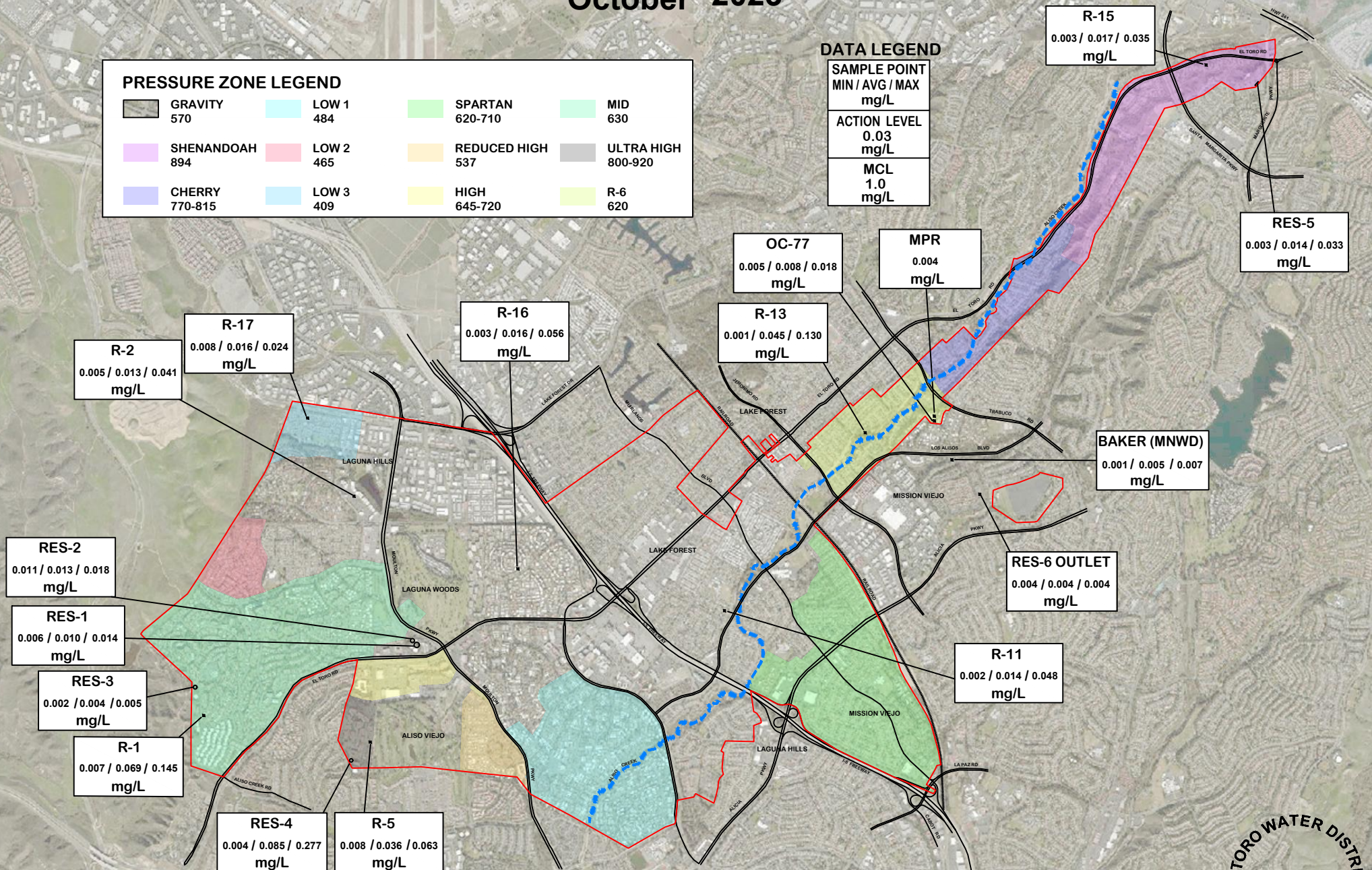
GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

## DATA LEGEND

SAMPLE POINT  
MIN / AVG / MAX  
mg/L

ACTION LEVEL  
0.03  
mg/L

MCL  
1.0  
mg/L





# Weekly Water Quality System Status

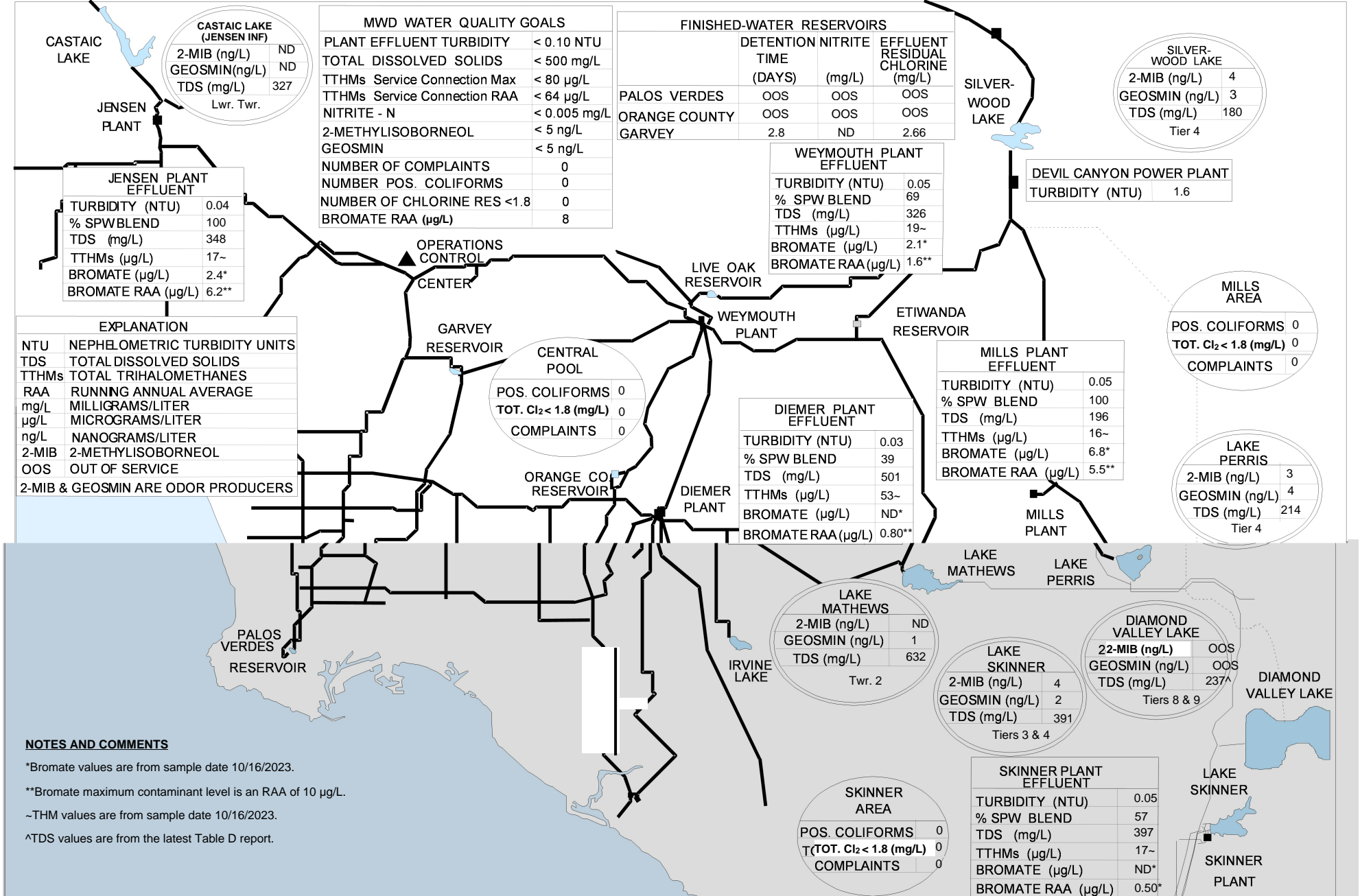
Wednesday, November 1, 2023

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## THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

No violations of State or Federal regulations were recorded during the current period.



MWD water quality goals meet or exceed all State and Federal regulations.

WATER QUALITY INFORMATION LINE: (800) 354-4420  
VISIT MWD ON THE WEB AT <http://www.mwdh2o.com>



## STAFF REPORT

**To: Board of Directors**

**Meeting Date: November 20, 2023**

**From: Hannah Ford, Engineering Manager  
Rory Harnisch, Senior Engineer**

**Subject: Capital Project Status Report**

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

R-6 Reservoir successfully provided service during the 8-day Allen-McColloch Pipeline shutdown from October 29<sup>th</sup> to November 4<sup>th</sup>. District staff continue to monitor water quality in the R-6 Reservoir because total trihalomethane (TTHM) and carbon tetrachloride (CCl<sub>4</sub>) concentrations remain elevated. Once blended with our other sources of supply prior to distribution, these constituents are close to their MCLs; the running average of quarterly samples should comply with requirements.

District staff are working with PaveWest, Inc. (PaveWest) to repair the R-6 Reservoir Perimeter Road. Due to concerns with subgrade stability, as shown in Figure 1, PaveWest suggested stabilizing the subgrade with cement treatment, which offers the additional advantage of cost savings through less net material export. The District's paving inspector, GMU, collected soil samples and conducted dynamic cone penetrometer testing (Figure 2) to recommend the appropriate cement treatment design approach. Based on GMU's recommendation, the District obtained a net credit of \$100,000 for the revised scope of work.



**Figure 1 – Moist Subgrade Conditions**



**Figure 2 – Dynamic Cone Penetrometer**

Layfield USA, Corp. (Layfield) continues to work on its punchlist for project closeout, which includes modifications to the installed manual transfer switch, operation and maintenance manuals, and warranties. The District agreed to Change Order No. 2, which resulted in a net credit in the amount of \$579,429.91 largely due to removing the perimeter road repairs and cover cleaning from the scope of work, as shown in Table 1.

**Table 1 – R-6 Reservoir Floating Cover and Liner Replacement Change Order No. 2**

<b>Description</b>	<b>Amount</b>
Coating for Outlet Vaults Pipes, Isolation Vault CIM wall & floor joints, Inlet opening liner ballast sand tubes.	ADD \$ 7,610.00
Revise location of existing and new vacuum vents, coating at exposed valve mating flanges at (3) outlet valves and drain valve.	ADD \$ 895.00
Provide (3) replacement life preserver cabinets with life preserver rings. (1) damaged by Layfield during construction and not included in cost. Total (4) to be provided.	ADD \$ 2,477.34
Credit for damaged replacement delineators along dam side concrete V-ditch.	CREDIT \$ 1,955.10
Credit to remove from contract scope (2) bollards at six rainwater removal pump panels and (2) bollards at pump discharge pipe (total 24 bollards).	CREDIT \$ 9,532.15
Credit to remove from contract scope provisional bid item #27, Perimeter Road Replace Asphalt Paving.	CREDIT \$ 330,000.00
Credit to remove from contract scope provisional bid items #28, Perimeter Road Slurry Seal.	CREDIT \$ 75,525.00
Credit to remove from contract scope bid item #24, Floating Cover Cleaning.	CREDIT \$ 159,000.00
Credit for ETWD incurred additional cost for Saturday work (3 @ \$1,800).	CREDIT \$ 5,400.00
Credit for unused quantity of unit cost bid item #15, replacement of perimeter concrete anchors.	CREDIT \$ 9,000.00
<b>Total Change Order No. 2</b>	<b>CREDIT \$ 579,429.91</b>

Layfield is working with their electrical subcontractor on an additional change order to cover unforeseen electrical work associated with installing conduit to the flow meter in the drain vault. The District's divers successfully installed the pre-purchased open switch cords from Mueller at the end of October. Mueller agreed to cover the cost of the diver due to their substantial delays.

## **II. Grit Chamber Rehabilitation Project**

As recommended by the Headworks Rehabilitation Study, the District has been modifying the scope of work for the Grit Chamber Rehabilitation Project to improve maintainability, longevity, and energy efficiency of the grit removal system. In order to obtain the most competitive price for the additional scope, District staff terminated the existing coating improvement contract with SS Mechanical, Inc. and combined the original recoating and new mechanical improvement scope. Staff placed the project out to bid in early November and held a mandatory pre-bid meeting with six prospective bidders in attendance at the District's Water Recycling Plant (WRP). Staff will recommend award at the December Board meeting.

### III. New Warehouse

The general contractor Dumarc Corporation (Dumarc) continued construction efforts by installing vapor barrier, steel reinforcement, and placing the slab concrete in late October, as shown in Figure 3. Dumarc then proceeded with excavations for the incoming electrical duct bank, communications duct bank, and 2-inch potable water service from the existing backflow device to both the proposed warehouse and the existing WEROC building. District staff agreed to a change order to add the 2-inch water service to the contractor's scope of work in the amount of \$35,875.



**Figure 3 – New Warehouse Slab**

District staff is also coordinating with the Air Quality Management District (AQMD) and their contractor in order for them to install their proposed concrete pad, electrical duct bank, and equipment to occur in late November.

Due to manufacturer delays, the pre-engineered metal building (PEMB) is scheduled to be delivered to the project site by late December and installed before the nesting season begins on February 1, 2024. The long lead item electrical components have an anticipated delivery of early September 2024, at which time Dumarc will re-mobilize to the site for installation.

Table 1 summarizes the cost and schedule as percent complete. Because invoiced to date reflects work through the end of October 2023, budget expenditure is on track with schedule completion.

**Table 1 – New Warehouse Project Schedule and Budget Status**

Construction Contract	Total	Earned to Date	Percent Complete
Budget	\$2,219,875 <sup>1</sup>	\$822,767	37%
Schedule	June 13, 2023 – September 4, 2024		36%

<sup>1</sup>Includes Change Order No. 1 of \$35,875.

### IV. Aliso Creek Lift Station Alternatives Analysis

District staff and Tetra Tech, Inc (Tetra Tech) began development of the Aliso Creek Lift Station Alternatives Analysis Study. Tetra Tech conducted a progress meeting with District staff to review alternatives, such as adding a new wet well near the existing lift station entrance. The site footprint is severely constrained, so options are limited. Next, Tetra Tech will develop an alternative that leverages submersible pumps in the existing wet well and perform influent flow monitoring in early December.



## **V. Asset Management**

Hazen and Sawyer (Hazen) conducted a workshop to review the WRP consequence of failure assignments. Next, District staff will work with Hazen to review risk scores and develop the CIP by the end of the calendar year.

Regarding the completed Computerized Maintenance Management System (CMMS) Evaluation TM, District staff are discussing the results of that evaluation with other Districts and staff to determine how best to integrate asset management and ongoing maintenance management efforts.

## **VI. System Wide Arc Flash and Coordination Study**

District staff continue to coordinate with Southern California Edison (SCE) to obtain the requested utility information, but SCE staff have indicated responses will be limited to eight sites per month starting in December (three months after the original data request was submitted).

Hazen and District staff are conducting site visits without shutdowns this month and will start conducting site visits with shutdowns next month, as SCE schedule allows. The WRP shutdown has been delayed, as indicated in the following update.

## **VII. WRP Main Electrical Power Breaker**

The breakers have all been installed, but District staff is still working with Schneider Electric on the new Automatic Transfer Switch (ATS) installation. District staff received the ATSSs at the end of October, but the received parts were not correct (3-pole instead of 4-pole). Schneider Electric is sending the ATSSs to a local shop for modification to the correct design. Once Schneider Electric indicates the anticipated schedule, District staff will schedule the SCE shutdown and installation.

## **VIII. Tertiary Disinfection Optimization Project**

District staff received and addressed DDW's comments on the tracer test and are now planning to conduct the test over three Wednesdays on November 29<sup>th</sup>, December 6<sup>th</sup>, and December 13<sup>th</sup>. During testing, recycled water cannot be produced so the District has requested limited use of the recycled water system during this time.

## **IX. Cathodic Protection Repair on Moulton Parkway**

The District hired the Farwest Corrosion Control Company (FCCC) to conduct a survey of the 1,000-ft section of piping along Moulton Parkway. Results indicate some interference with cathodic protection on the Joint Transmission Main (JTM), so FCCC will need to conduct another set of surveys to determine where the cathodic jumps from JTM to the District's main and how to best restore the impressed current cathodic protection system to the entire main. The next survey will take place over three days at the end of the month.

**X. Lead and Copper Rule Revisions Compliance**

District staff are working with MWDOC and Hazen to execute the contract agreement in the amount of \$87,398 from Phase 1. District staff responded to an extensive data request for Hazen and is now responding to their questions on the submitted data.

**XI. Mathis Lift Station Inlet Piping Improvement Project**

After Board approval of the construction contract, staff issued a construction agreement with Tunnel Works Service, Inc (TWS). Staff is working with TWS to obtain City and County permits to begin the work and intends on holding a preconstruction meeting in mid-November.

**XII. DAF Unit 2 Retrofit and Rehabilitation**

The District is working with the contractor, SS Mechanical Corp. (SS), on the submittal phase of the project. All pre-purchased equipment for this project is on site, including the mechanical components and 40-HP Nikuni pump. District staff and SS held a preconstruction meeting last month, and SS intends on mobilizing to the site in late November for project completion by the end of the year.

**XIII. Caltrans I-5 Widening Utility Relocations**

Phase B is complete, and the District received 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 December 2023.

**XIV. Energy Efficiency Analysis**

District staff are responding to a data request for InPipe Energy to determine the most appropriate potential locations. District staff continues to work on developing the recommended energy efficiency projects for the WRP and pump stations. None of the pump stations have been eligible for rebates to date due to ineligible pump type.

**F.Y. 2023/24 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
2023/24 Capital Projects															
	P-3 Pump Station Rehabilitation							RFP	RFP	A	E	E	E	\$200,000	
	Moulton/El Toro Cathodic Protection Study	ET	ET	ET	ET	ET	ET							\$100,000	< \$50,000
	Surcharge Capacity Repair on Gowdy Avenue						RFP	RFP	A	E	E	E	E	\$52,000	
	Northline Coating Improvement Project					B	A	C	C	C				\$91,000	
	Headworks and Secondary Clarifier Rehabilitation			RFP	RFP	A	E	E	E	E	E	E	E	\$2,926,000	
	Grit Chamber Rehabilitation	E	A	E	E	B	A	C	C	C	C	C	C	\$861,861	\$542,228
	DAF Unit No. 2 Rehabilitation Project	A	C	C	C	C	C							\$221,641	\$209,595
	Aliso Creek Pump Station Rehabilitation Project	RFP	RFP	A	E	E	E	E	E	RFP	A	E	E	\$826,000	\$120,000
	Asset Management	A	E	E	E	E	E	E						\$120,000	\$113,140
	System-Wide Arc Flash and Coordination Study	RFP	A	E	E	E	E	E	E					\$180,000	\$179,550
2023/24 Capital Equipment															
	R-6 Security Cameras and Fence Alarm Replacement			A	C	C								\$84,000	\$114,234
	Freeway Electrical Equipment Replacement		A											\$110,000	\$155,646
	Core Switch Replacement	Ordered and received, total cost was within GM authority												\$63,000	< \$50,000
Revenue Bond Projects															
	R-6 Reservoir Floating Cover	C	C	A	C	C	C	C						\$12,442,344	\$11,903,880
	New Warehouse	C	C	C	C	C	C	C						\$4,006,421	\$3,924,409
	South Orange County Turnout Project	Coordinating with MNWD on schedule												\$3,000,000	
Previous Fiscal Year Carryover															
	P-4 Pump Replacement	ET	A					R	C					\$59,000	\$73,701
	ETM Backflow Prevention Project	C	C	C	C									-	\$304,463
	Tertiary Disinfection Optimization Project	A	E	E	E	E	E	E	E	E	E	B	A	-	\$107,321
	Effluent Pump Station Rehabilitation		C	C	C									\$150,000	\$425,000
	WRP Main Electrical Power Breaker Upgrades						R	C						\$140,000	\$196,124
	Mathis Lift Station Inlet Drop Piping Repair	E	E	E	A	C	C	C						-	\$33,510
	Caltrans I-5 Widening Utility Relocations						C	C						\$0	\$627,365
Total														\$25,633,267	\$19,030,166

**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 known 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.

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**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 untended 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.

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**Evaporation:** The process that changes water (liquid) into water vapor (gas).

**Estuary:** Where fresh water meets salt water.

**Evapotranspiration:** 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.

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**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 is 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.

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**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.

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**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.

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**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

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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.

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**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 30<sup>th</sup> 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.