

City of Garden Grove PUBLIC WORKS

Water Rate Study

Council Study Session – June 2023



The City of Garden Grove

Agenda

- **Water Rate Study Introduction**
- **Water System Overview**
- **Accomplished Since Rate Study was Completed in 2018**
- **Current Issues**
- **Draft Five-Year Financial Plan FY 23/24 - FY 27/28**
- **Next Steps**
- **Request for Council Feedback**



Why do a Water Rate Study?

- **“The mission of the City of Garden Grove is to provide responsible leadership and quality services as we promote safety, cultural harmony, and life enrichment.”**
 - “The goal of the Water Services Division is to provide sufficient and safe water at the lowest possible cost to the City’s residents.”



Water Rate Study

- **Projects water utility revenues, expenses, and rates for a five-year period.**
- **Defines how to pay for water system repairs and Capital Improvements.**
- **Determines a cost-of-service based schedule of rates that incorporate the City's needs that will better serve our community.**



Description of Water System Facilities

- 85% of water supply is groundwater from Orange County
- 15% of water supply is from the State Water Project
- 433 miles of pipe ~ distance from Garden Grove to San Francisco
- 13 wells and 8 reservoirs
- 34,300 service connections
- Original cost, \$153 million City-owned water infrastructure
 - Between \$400 and \$800 million (estimated replacement cost to replace system in today's dollars)



Location of Pipes, Wells, Booster Pumps, PFAS Facilities and Reservoirs



Accomplished Since Last Rate Study

Accomplished Since Last Rate Study		
No.	Project Name	Project Amount
1	Water Main Replacement (Alwood Ave-Anthony Ave)	\$1.4 M
2	Water Main Replacement (Woolley Ln)	\$170,000
3	Well #21 Improvement	\$200,000
4	Westhaven Reservoir Rehabilitation	\$4.4 M
5	Pressure Reducing Valve Project	\$50,000
6	City Water Service Line Replacements (Orangewood-Brookhurst-Chapman-Palmwood)	\$1.3 M
7	Well #16, 19, 25 Condition Evaluation	\$ 0.5 M
8	Water Master Plan	\$1.0 M



Seismic Curb

Westhaven Reservoir Membrane and Seismic Curb



Membrane for the Roof Side

- Repair and rehabilitation work on two 10 million-gallon fully-buried reservoirs.
- Crack, spall, and joint repair.
- Construction of seismic curb, roof waterproofing, rust spot repair.
- Addition of a fall protection system for the reservoirs.
- Installation of the perimeter fence to prevent vehicle driving over the reservoirs.



The City of Garden Grove

Alwood-Anthony Water Main Replacement (4,200 lf)

- Water main replacements are needed to address fire flow deficiencies.
- A total of 18,150 lineal feet of pipe have been replaced since the last water rate increase.



The City of Garden Grove

Water Main Replacement Alwood Ave-Anthony Ave

Other Completed Projects

- **Well #21 Improvements**
 - Cleaning and redeveloping the well
 - Refurbishing the pump motor, replacing the well pump
- **Water Service Line Replacements**
 - Oranewood-Brookhurst-Chapman-Palmwood
 - New 6" replacement water main, one new fire hydrant
 - Replacement of 441 - 1" copper water service lines and water meters
- **Water Master Plan Update 2020**
 - A road map for the water system's capital improvement needs
- **Well #16, #19, #25 Condition Evaluation**



Currently In Progress

- **Magnolia Reservoir and Booster Pump Station Rehabilitation Project**
 - Repair and rehabilitation work for one 5 million-gallon fully buried pre-stressed concrete reservoir and the booster pump station.
- **Supervisory Control & Data Acquisition (SCADA) System**
 - Upgrading and rehabilitating the outdated SCADA System.
 - Gives staff the ability to manage and control the water system remotely.
- **Various Residential Streets Projects N of GG Blvd & E of Dale (120 water services and meter replacements)**
- **Lampson and Trask Reservoirs Rehabilitation**
- **Water Main Replacement (Orangewood Ave. – Dale St.)**



Current Issues

- **PFAS**
- **Drought/Water Conservation Objectives**
- **Ongoing Capital Improvement Needs**



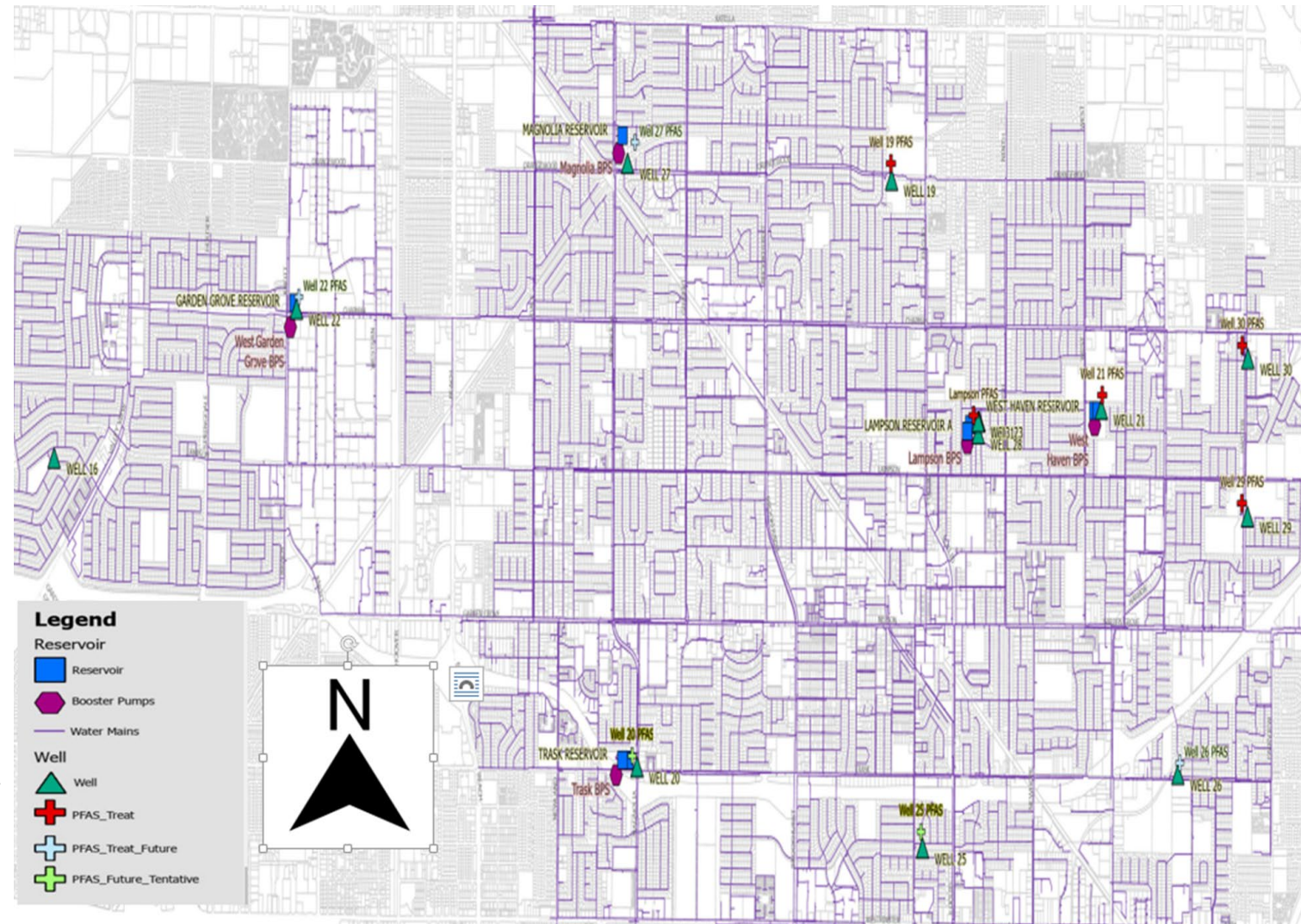
What is PFAS?

- **Chemicals used in industrial and consumer products since the 1950s**
 - Coatings for textiles, paper products and cookware.
 - Some firefighting foams and in the aerospace and aviation industries, such as at military installations nationwide.
- **The Environmental Protection Agency (EPA) indicates exposure to these compounds over certain levels may result in adverse health effects.**
- **The City partnered with the Orange County Water District (OCWD) to construct water treatment facilities equipped with Ion Exchange (IX) systems to remove contaminants to comply with applicable regulatory limits.**



Existing PFAS Affected Well Sites

- **Lampson (Wells #23, 28, 31)**
 - Operational (July 1, 2023)
- **Well #21**
 - Operational (November 2021)
- **Well #30**
 - Operational (July 26, 2022)
- **Well #29**
 - Operational (April 12, 2023)
- **Well #19**
 - Under construction, anticipated to become operational by 2025
 - *Delay due to need for a Variable Frequency Drive (VFD) installation prior to constructing treatment equipment*



The City of Garden Grove

New PFAS Treatment Sites



PFAS Equipment at the Westhaven Reservoir



The City of Garden Grove

New PFAS Regulations

- In March 2021, the Environmental Protection Agency issued a proposal to adopt stricter regulations and lower the maximum contaminant levels.
 - PFOA-4.0 ppt (parts per trillion) (*lowered by 1.1 ppt*)
 - PFOS-4.0 ppt (*lowered by 2.5 ppt*)
- OCWD will provide upfront costs for the design and construction of the new water treatment plants and provide the City with a partial reimbursement with similar conditions for existing PFAS treatment sites.



Mandatory Water Use Objectives

- Assembly Bill (AB) 1668 and Senate Bill (SB) 606 established long-term improvements in water conservation and drought-planning to adapt to climate change.
- Agencies Must Meet Target Objectives by January 2027
- The retail-wide water budget includes the following categories:



Residential
Indoor Use



Real
Water Loss



Residential
Outdoor Use



CII landscapes
with DIMs

Anticipated 5-10% Water Reduction



The City of Garden Grove

Ongoing Capital Needs

Upcoming Water Capital Improvement Projects		
	Project Name	Cost
1	Water Main Replacement (Woodbury Ave -Anabel Ave)	\$1.7 M
2	Well #19 Construction	\$2.2 M
3	Water Transmission Line Study	\$100,000
4	Water Main Replacement (Chapman Ave-Dale Street)	\$5.0 M
5	Water Main Replacement (Woodbury Rd-Taft St)	\$1.2 M
6	Various Water Main Replacements (2 miles each year)	\$10.0 M

- Water Main Replacements
- Well #19 Construction
- Water Transmission Line Study
- Water Service and Meter Replacements



Draft Five-Year Financial Plan FY 23/24 - FY 27/28

- **A year-by-year projection of revenues and expenses**
 - **Capital Spending**
 - **Cost to maintain the system**
 - **New PFAS treatment costs**
- **Considers current and future costs**
 - **Operations and Maintenance**
 - **Water Supply Costs**
 - **Capital Improvements**
- **Does not define Monthly Service Charges and Commodity Charges**



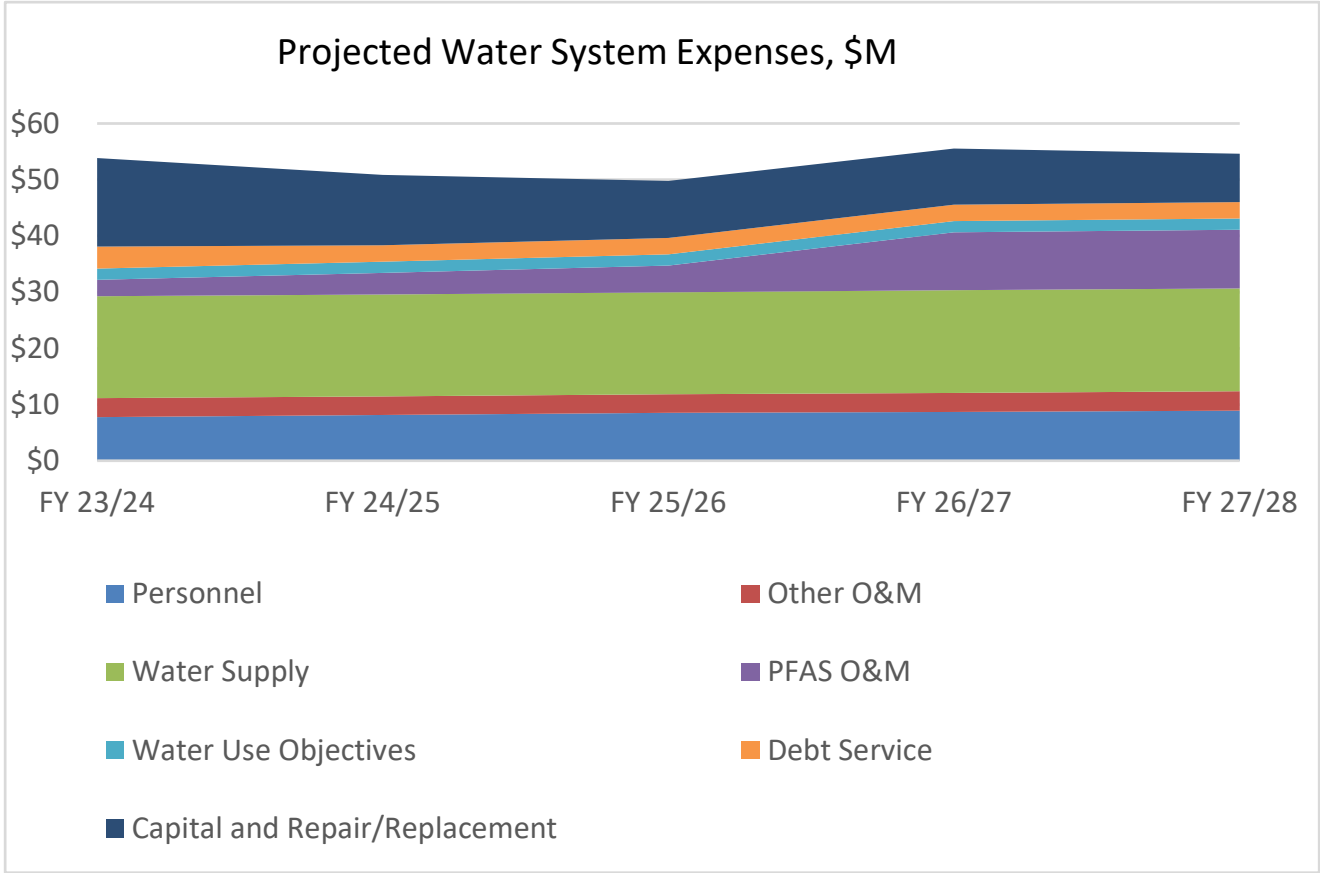
Projected Water System Expenses

Projected Water System Expenses					
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Personnel	\$7,803,861	\$8,176,893	\$8,503,969	\$8,716,568	\$8,934,483
Other O&M	3,379,684	3,272,637	3,347,454	3,396,086	3,445,933
Water Supply	18,091,190	18,138,267	18,150,687	18,234,847	18,277,481
PFAS O&M	2,946,038	3,859,637	4,715,393	10,299,211	10,453,897
Water Use Objectives	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Debt Service	3,861,971	2,917,071	2,920,271	2,921,871	2,921,871
Capital and Repair/Replacement	15,751,447	12,478,920	10,160,344	9,990,850	8,556,747
Total	\$53,834,191	\$50,843,426	\$49,798,119	\$55,559,433	\$54,590,412

- **Water supply costs are at today’s water purchase costs. Future increases will be recovered through future pass-through adjustments.**
- **PFAS O&M costs increase substantially as new facilities come online in 2026.**
- **Water Use Objectives compliance costs are a new expense.**



Projected Water System Expenses, \$ Millions



Projected PFAS Costs

Projected PFAS Costs					
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Carbon Change Outs	\$156,868	\$163,143	\$187,536	\$396,582	\$406,497
Ion Exchange Resin Changeout	2,276,780	3,846,731	4,393,444	9,526,203	9,764,359
Labor: Future Hires	0	177,600	171,995	176,295	180,702
Power	193,500	210,210	272,470	297,916	305,364
Analytical	4,800	5,616	9,594	13,112	13,440
Maintenance Cost	47,250	52,650	104,335	154,883	158,755
O&M Contingency	208,133	237,064	435,758	622,589	638,154
Ion-Exchange Pre Filters	225,000	234,000	299,813	614,616	629,981
Total	\$3,112,331	\$4,927,014	\$5,874,945	\$11,802,197	\$12,097,252
Less Partial Reimbursement	(\$166,293)	(\$1,067,377)	(\$1,159,552)	(\$1,502,986)	(\$1,643,355)
Total Through Rates	\$2,946,038	\$3,859,637	\$4,715,393	\$10,299,211	\$10,453,897

- Ion exchange resin changeout is the largest cost
- O&M costs are partially reimbursed by Orange County Water District

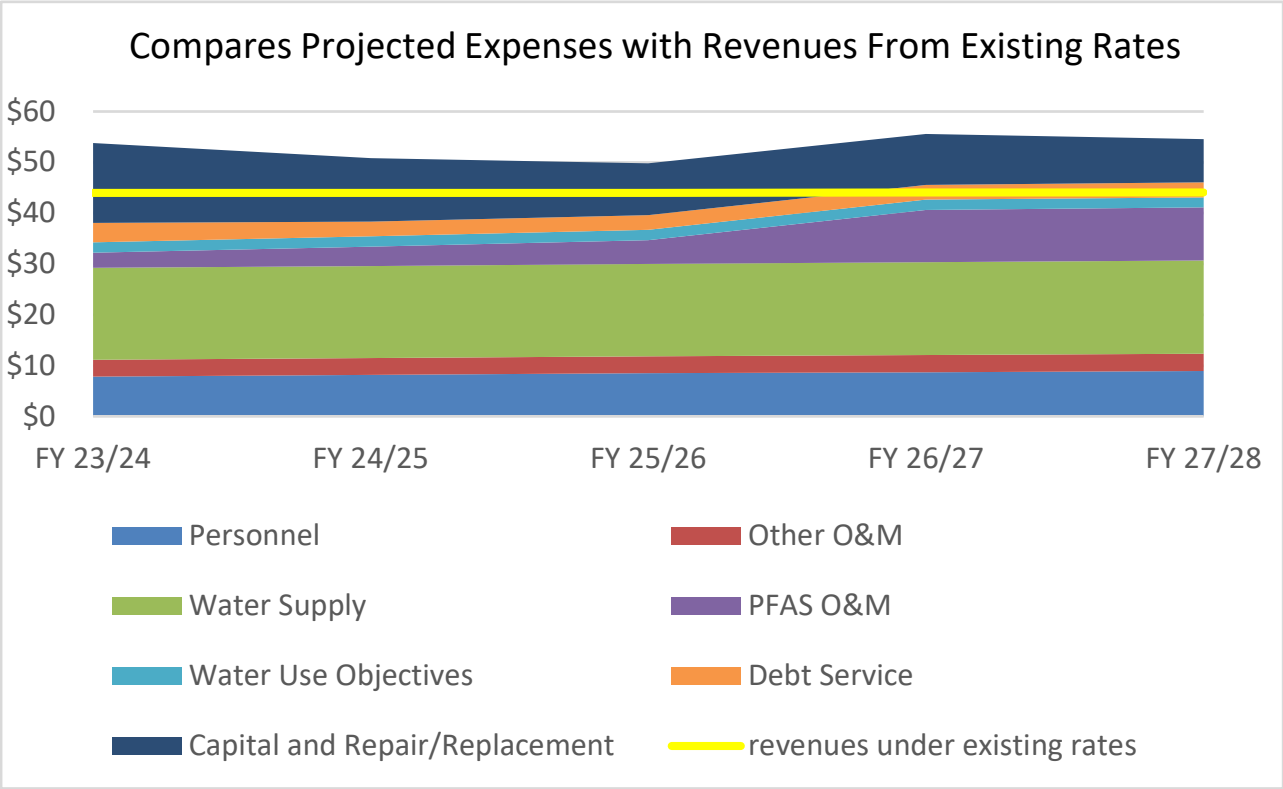


Capital Improvement Plan
Estimated Funding, FY 23/24 Dollars

Project List	Carry Forward	Budget FY 23/24	Estimated Cost				Total
			FY 24/25	FY 25/26	FY 26/27	FY 27/28	
Fund 602 Water Capital Fund Projects							
1) Magnolia Reservoirs and Booster Pump Station Project	\$0	\$800,000	\$0	\$0	\$0	\$0	\$800,000
2) SCADA Implementation Project	436,956	400,000	1,505,000	800,000	1,500,000	0	4,641,956
3) SCADA -FP2 Pressure Monitoring Improvements	0	419,180	0	0	0	0	419,180
4) SCADA - HP4-5 SCADA - Trask & Westhaven	0	1,450,000	0	0	0	0	650,000
5) SCADA - HP1-3 SCADA - Mag, Lampson, & WGG	0	0	900,000	0	0	0	900,000
6) Water Improvement Project Woodbury Rd and Taft St	0	0	1,200,000	0	0	0	1,200,000
7) Water Improvement Project - Orangewood and Yorkshire Ave (~7,400	3,956,942	0	0	0	0	0	3,956,942
8) Water Improvement Project - Chapman Ave and Dale St (~10,000 ft)	0	5,000,000	0	0	0	0	5,000,000
9) Well assessment (Well 16, 19, 25)	57,142	0	0	0	0	0	57,142
10) Well 19 Construction	0	2,200,000	0	0	0	0	2,200,000
11) Water Improvement Project - Woodbury Ave & Anabel Ave (~3,500 ft)	0	1,680,000	0	0	0	0	1,680,000
12) Water Main Replacement (2 miles each year)	0	0	0	2,084,000	4,000,000	4,000,000	10,084,000
13) Design and Construction of Lampson and Trask Reservoirs Rehabilitatic	0	830,000	3,000,000	3,000,000	0	0	6,830,000
14) Various Residential Streets Projects N of GG Blvd & E of Dale	0	1,200,000	0	0	0	0	1,200,000
15) Water Transmission Line Study	0	0	100,000	0	0	0	100,000
16) Well 26 Property Purchase	0	0	1,643,000	0	0	0	1,643,000
Subtotal	\$4,451,040	\$13,979,180	\$8,348,000	\$5,884,000	\$5,500,000	\$4,000,000	\$41,362,220
Fund 603 Water Replacement Fund Projects							
Water Main Replacement (services, hydrants, meters, valves, etc.)	\$0	\$3,807,227	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$17,807,227
Total, Fund 602 and 603 Combined	\$4,451,040	\$17,786,407	\$11,848,000	\$9,384,000	\$9,000,000	\$7,500,000	\$59,169,447



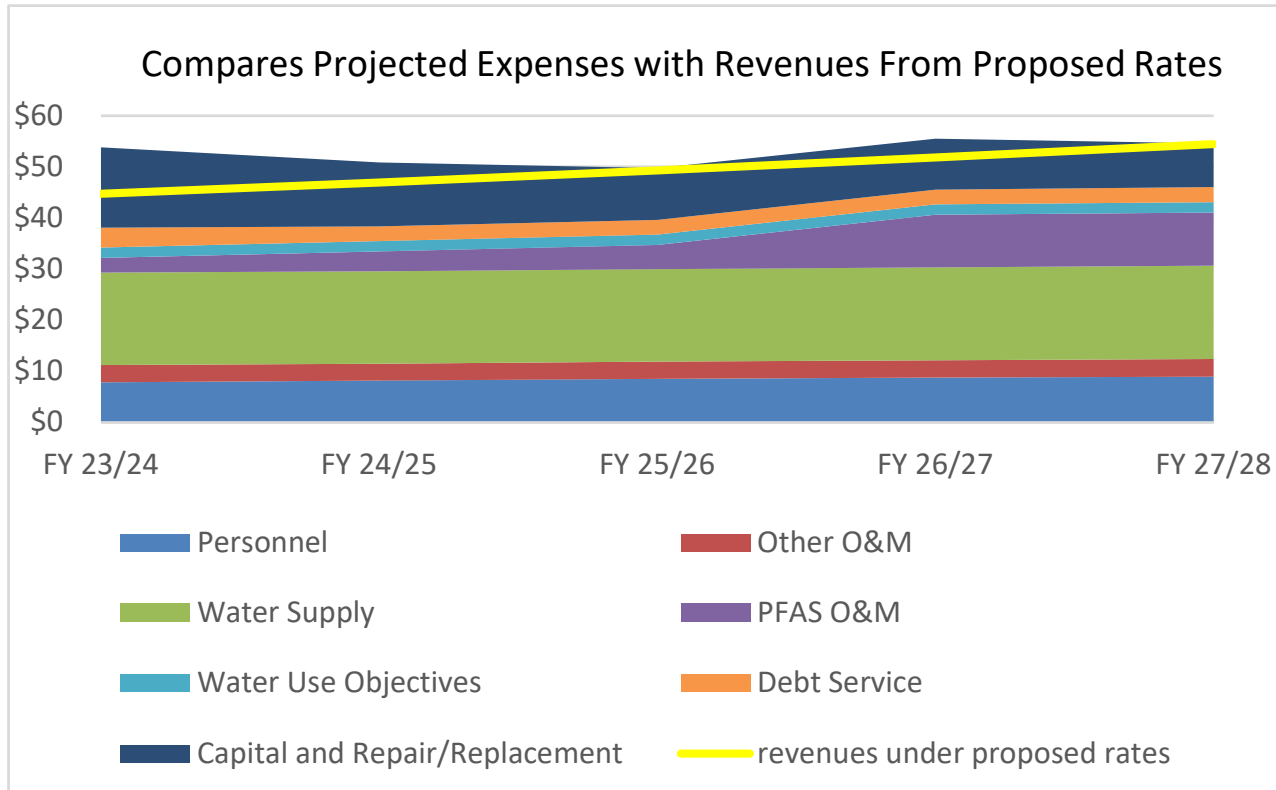
Comparison of Expenses and Revenues with Existing Rates



- **Yellow line: revenues from existing rates**
- **Area above yellow line: use of existing reserves to pay for capital projects and system replacement**
- **Existing rates do not collect enough to pay expenses and maintain system reserves.**



Comparison of Expenses and Revenues with Proposed Rates



- Revenues are sufficient to fund system expenses, replacement and capital.
- System reserves meet City's reserve balance criteria through FY 27/28



The City of Garden Grove

Projected Revenue Increases

Projected Revenue Increases					
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Projected Revenue Increases Not Including Future Pass Throughs	5.50%	5.50%	5.50%	5.50%	5.50%
Projected Pass Throughs, \$/ccf	\$0.00	\$0.12	\$0.23	\$0.35	\$0.47

- **Table shows projected revenue increases, not a proposed rate schedule.**
- **Proposed rates to collect this revenue will be shown at later Study Sessions.**
- **Pass-Through Adjustments are calculated annually. Council must adopt these Adjustments every year.**



Next Steps

- **Receive Council feedback.**
- **Modify Revenue Requirement analysis per Council feedback.**
- **Develop proposed rate structure.**
- **Present proposed Rate Structure at a future Study Session.**
- **If acceptable to Council, proceed with Public Engagement.**



Proposed Schedule

- **Draft Rate Study Results: August 2023**
- **Future Council Study Sessions:**
 - July – Preliminary Rate Schedule
 - August – Draft Rate Schedule
- **Public Engagement: September 2023**
- **Prop 218 Notification, if approved: Fall 2023**
- **Adoption, if approved: December 2023**
- **Rate changes go into effect, if any: January 2024**



Feedback, Questions, Comments?

Garden Grove Bl

GARDEN GROVE
Est. 1874
HISTORIC
MAIN STREET
County of Orange

Thank you for your time.

SPEED
LIMIT
25



BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE

BUY IN
GARDEN
GROVE