



RAFTELIS

# Water System Update

Agenda Item 12.5

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April 19, 2022



# PRESENTATION OUTLINE

- Water System Overview
  - Water System Status
  - Challenges and Responsibilities
  - Actions Taken To Date
- Capital Improvement Program (CIP)
- Financial Model Overview
- Next Steps & Questions

# WATER SYSTEM OVERVIEW



# WATER SYSTEM STATUS

- Two water systems (City and Cal Water) with in City Limits



Quality. Service. Value. ®

- City obtained ownership (2014); Re-organization (2018)
- Large Water Purveyor: >3,000 connections (2021)
- Current Division Structure
  - 1-Utility Director
  - 1-Water Operations Supervisor
  - 3-Water Maintenance Operators



# WATER SYSTEM STATUS

## 6 Facilities/Site Locations

### WELLS

1977-Industrial 1978- Watson Ranch  
1989- School Well 2004- Valley Glen  
2007-Parklane

PUMPING  
CAPACITY

12.2

MILLION GALLONS/DAY

### TANKS

1995- Watson Ranch 2003-Fitzgerald  
2007 Parklane (2 tanks)

STORAGE  
CAPACITY

4.3

MILLION GALLONS

### PIPES

LENGTH OF  
MAINS

45

MILES

3,100+  
Meters

Hundreds  
of Fire  
Hydrants

- 3 wells with storage tanks and booster pumps
- 1 “out of service”- emergency standby
- 2 direct feed wells
- 4 steel, above ground storage tanks from 0.8-1.5 MG
- Increased capacity in School Well (Developer Funded)
- 1 new well in progress; Tentative Spring 2023 (Developer Funded)

# CHALLENGES AND RESPONSIBILITIES

## Mandatory

- Meet State Requirements for Urban Water Purveyor
- Meet Drinking Water Quality Standards
- Meet Future Water Demands
- Recover Costs



## Preferred

- Replace Aging Infrastructure
- Implement Cyber Security Measures
- Minimize Risk- Implement Risk Management Programs
- Maintain Updated Standards and Procedures



## Discretionary

- Modernize System Controls (e.g. Automated Meter Reading System, Computerized Maintenance Management Systems)
- Additional Staffing
- Education & Outreach Programs



# ACTIONS TAKEN TO DATE



# CAPITOL IMPROVEMENT PROGRAM (CIP)





# WATER CAPITAL IMPROVEMENT PROGRAM

- CIP identified since completion of Water Master Plan, Risk Resilience Plan, etc.
- Annual update to 5-year CIP (July 2022)
- Proposed CIP projects selected based on urgency and risk of failure



# WATER CIP INVESTMENT LEVEL

Low	Medium	High
<ul style="list-style-type: none"><li>• ~10% First Year Revenue Increase</li><li>• High Risk- Failure of Infrastructure; Emergency Management; unplanned costs incurred</li></ul>	<ul style="list-style-type: none"><li>• ~25% First Year Revenue Increase</li><li>• Medium Risk- Proactive versus Reactive; fewer unplanned expenses/events</li></ul>	<ul style="list-style-type: none"><li>• ~50% First Year Revenue Increase</li><li>• Low Risk- More Efficient Operations; prepared for incurred cost</li></ul>

## Notes:

1. Estimated revenue increases are for the first year only
2. Difference between investment levels- duration & amount invested; impacts system's condition & risk
3. Lower investment: worse conditions and higher risk of failure = costly emergency repairs
4. **Costs for Chromium 6 treatment is not included**



# PROJECTED WATER CIP PROJECTS

Key Projects	Estimated Cost	High Investment Projected Timeline
AC Pipe Replacement	\$5.6 Million	Replace by 2030
Service Line Replacement	\$5.7 Million	Replace by 2030/Ongoing
Industrial Well Replacement- Fitzgerald Supply Well	\$3 Million	Replace in 1-3 Years
Watson Ranch Well Replacement or Rehab	\$3 Million	2-5 Years
Cyber Security Program: Telecom Development/Upgrades	\$500k	1-2 Years
Electrical & Generator Upgrades	\$400-600k per site	2-5 Years
Valve Exercising/Replacement	\$100k	Ongoing
Park Lane Tank Rehab	\$150k	2 Years

**Notes:**

1. All projects are critical
2. **Does not include Chromium 6 Treatment; pending State regulations**



# RATE STUDY/ FINANCIAL PLAN



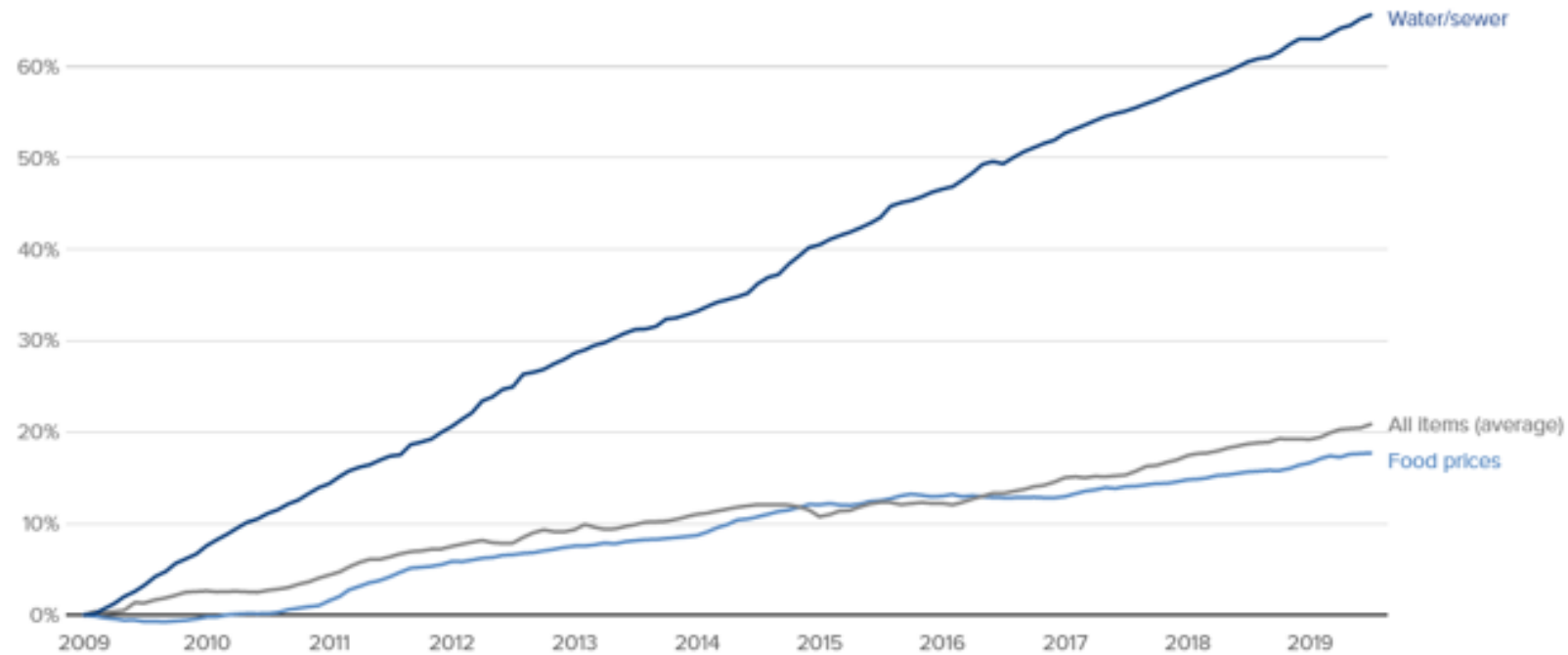
# RATE SETTING BACKGROUND

- Rate Study completed November 2018 with rates effective April 1, 2019
- Rates rescinded November 2020
- General Plan update May 2021 triggered the Water Master Plan Update.
  - West Yost updated Water Master Plan
  - Council adopted it in January 2022
- Raftelis hired to prepare financial plan and rate study incorporating new capital expenses and new revenue adjustments based on Water Master Plan update



# PUTTING UTILITY COSTS INTO PERSPECTIVE

What Americans pay for water and sewer service has increased much faster than inflation or the price of food.



Source: Bureau of Labor Statistics—Consumer Price Index

8

CBS News article: "Water costs are rising across the US – here is why", August 27, 2019



# WHAT IS FUNDED BY UTILITY RATES

- The water utility is an enterprise fund: **a self-supporting government fund not supported by tax dollars**
  - Water service is not like police, fire, libraries, and parks
- City's water utility is funded by the money it receives from customers to pay for:
  - Operating costs (wholesale water costs, salaries, benefits, supplies)
  - Capital costs (pipes, pumps, tanks)
- Our system's condition and level of service (outages, failures) reflects the investment in it



# WHAT IS A RATE STUDY?

- Rate Study: The process of determining utility rates by comparing a utility's revenue with costs.
- As part of a rate study, we prepare a financial plan by comparing **revenue** with **costs**. As an enterprise fund it must be self-funding.
- Today we are seeking input on **costs (capital investment)**
- We will set revenue to match your costs





# RATE STUDY OVERVIEW

**1**

## Rate Setting Framework

- Financial goals and policies
- Pricing objectives

**2**

## Financial Plan

- Evaluation of CIP and financing options
- Cash flow analysis for financial sufficiency

**3**

## Cost of Service & Rate Design

- Cost allocations
- Rate design
  - Rate calculations
  - Customer impact analyses

**4**

## Final Rate Adoption

- Public Outreach
- Report
- Prop 218 Notice
- Public Hearing



# WATER UTILITY FINANCIAL PLAN

1

## Quantify Expenses

- Operating & Maintenance
- **Capital (CIP)**
- Reserves

2

## Project revenue

- Rate Revenue
- Other Revenue

3

## Adjust revenue to cover expenses

Revenue = Cost



# FY 2022 Comparison of Revenue and Expenses

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**FY 2022**

<b>Estimated Revenue</b>	<b>\$1,895,609</b>
Interest Income	\$26,400
Other Revenue	\$50,315
<b>Subtotal Revenue</b>	<b>\$1,972,324</b>
<b>Budgeted Expenses</b>	
Salary	\$415,106
Benefits	\$164,351
General	\$723,389
Power & Utilities	\$325,000
Contractual Services	\$337,286
<b>Total Expenses</b>	<b>\$1,965,132</b>

**Estimated Cashflow** **\$7,192**

## **What about capital investment?**

At the start of FY 2022, City had \$4.9 M in cash – but \$2.4M should be held in reserve (operating and capital reserve), leaving \$2.5M for capital



# SUMMARY

- City is simply covering O&M costs and not funding capital investment
- Must increase your rates for capital investment
- The question is: how much?



# POTENTIAL IMPACTS TO RATE STUDY

- These are PRELIMINARY REVENUE INCREASE ESTIMATES based on FY 2022 balances and budgets
- Financial model updates:
  - FY 2023 Budget
  - FY 2023 starting reserve balances
  - **Results may change!**
- Inflation is now 7 to 8%
- Construction costs are going up (fuel, materials)- will affect your costs and investment
- Does not include costs for Chromium 6 treatment



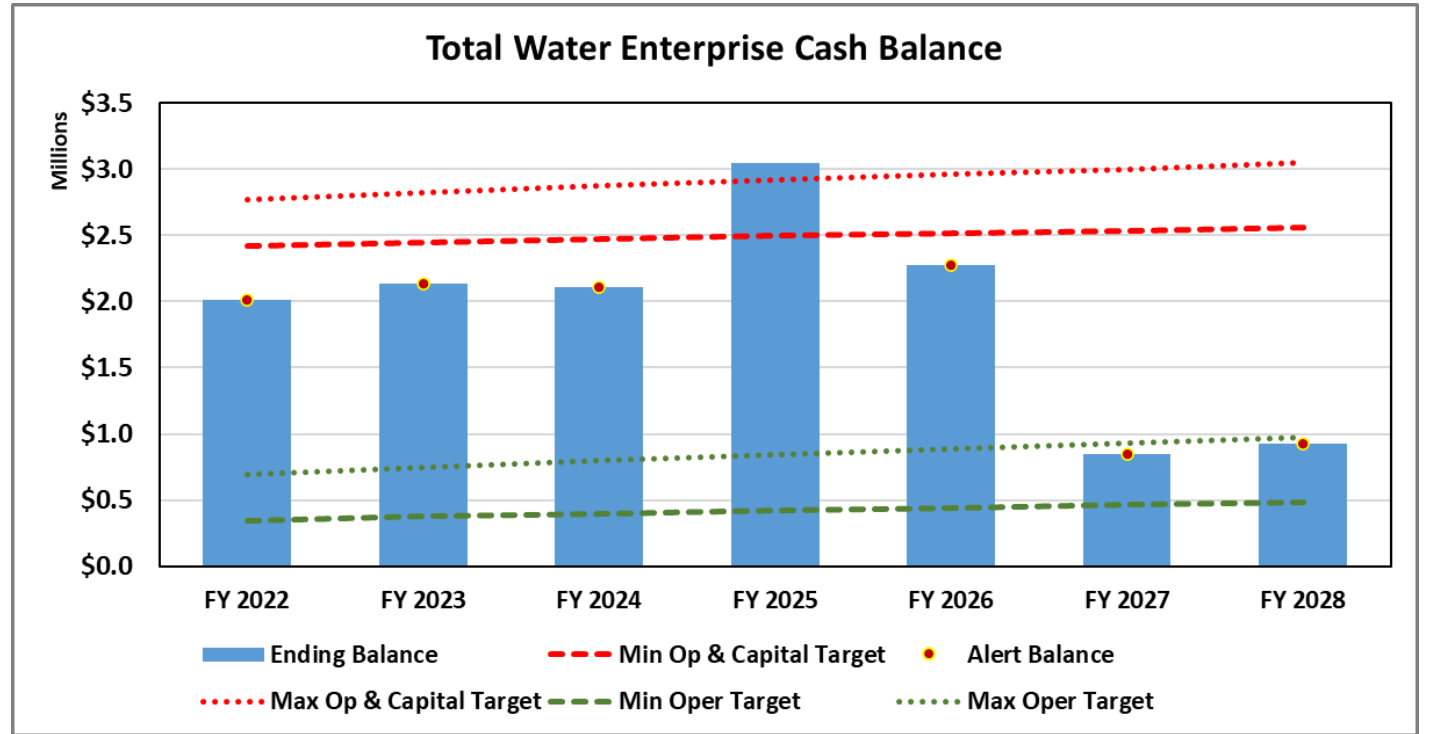
# High Investment Financial Plan

Total \$25.7M in investment

50% in the first year

\$19.2M in debt

Average CIP \$5.1M per year



## High CIP

Revenue Increases	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Assumed Month of Increase	March	March	March	March	March
Revenue Increase (%)	50%	18%	16%	14%	12%
Debt	\$9,200,000	\$0	\$10,000,000	\$0	\$0
Calculated Debt Coverage Ratio	110%	240%	180%	249%	322%
Capital Investment	\$2,369,025	\$7,222,034	\$7,966,064	\$3,867,665	\$3,850,726
Assumed Debt Coverage Ratio = 1.10					

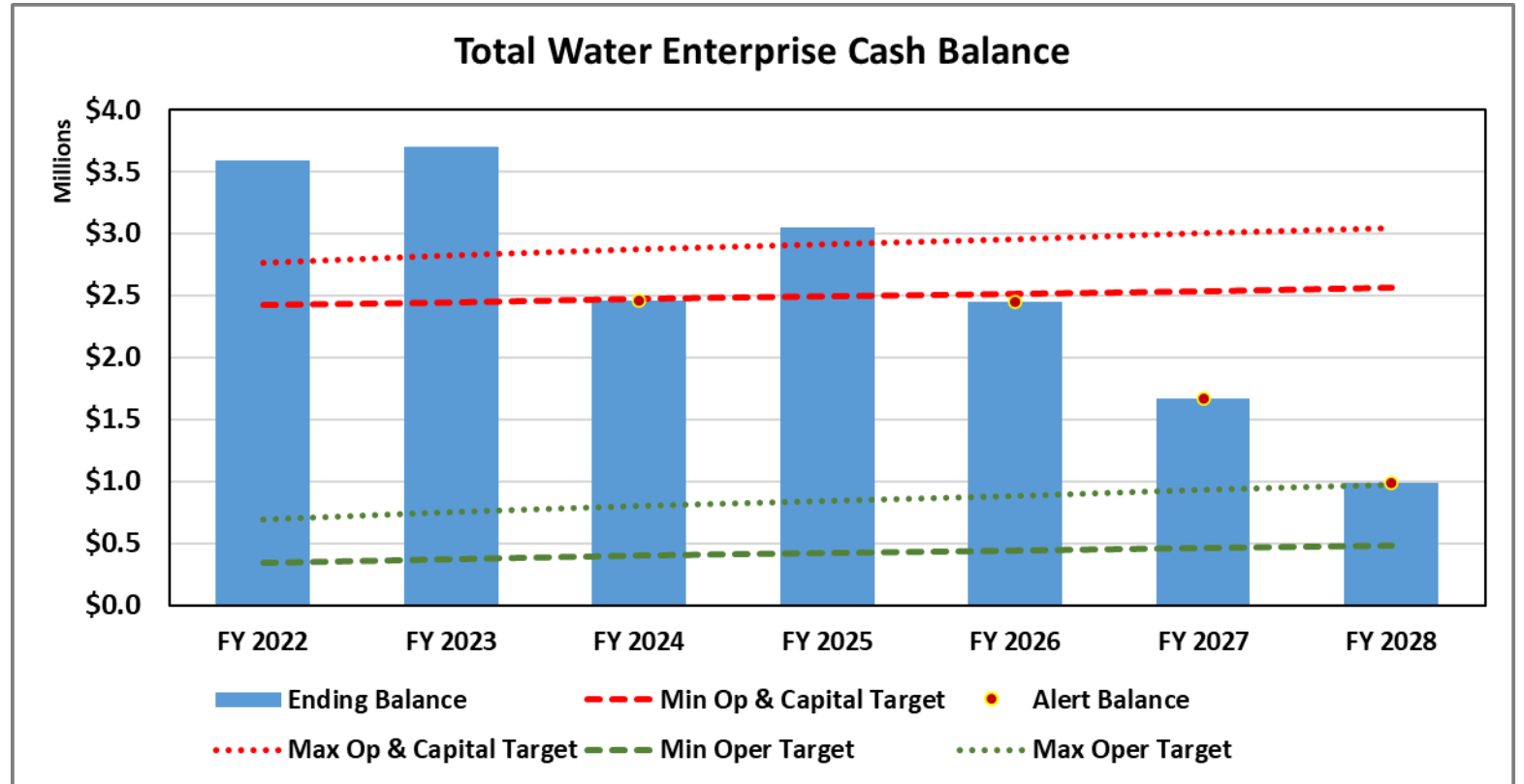
# Medium Investment Financial Plan

Total \$12.6M in investment

25% in the first year

\$7M in debt

Average CIP \$2.5 M per year



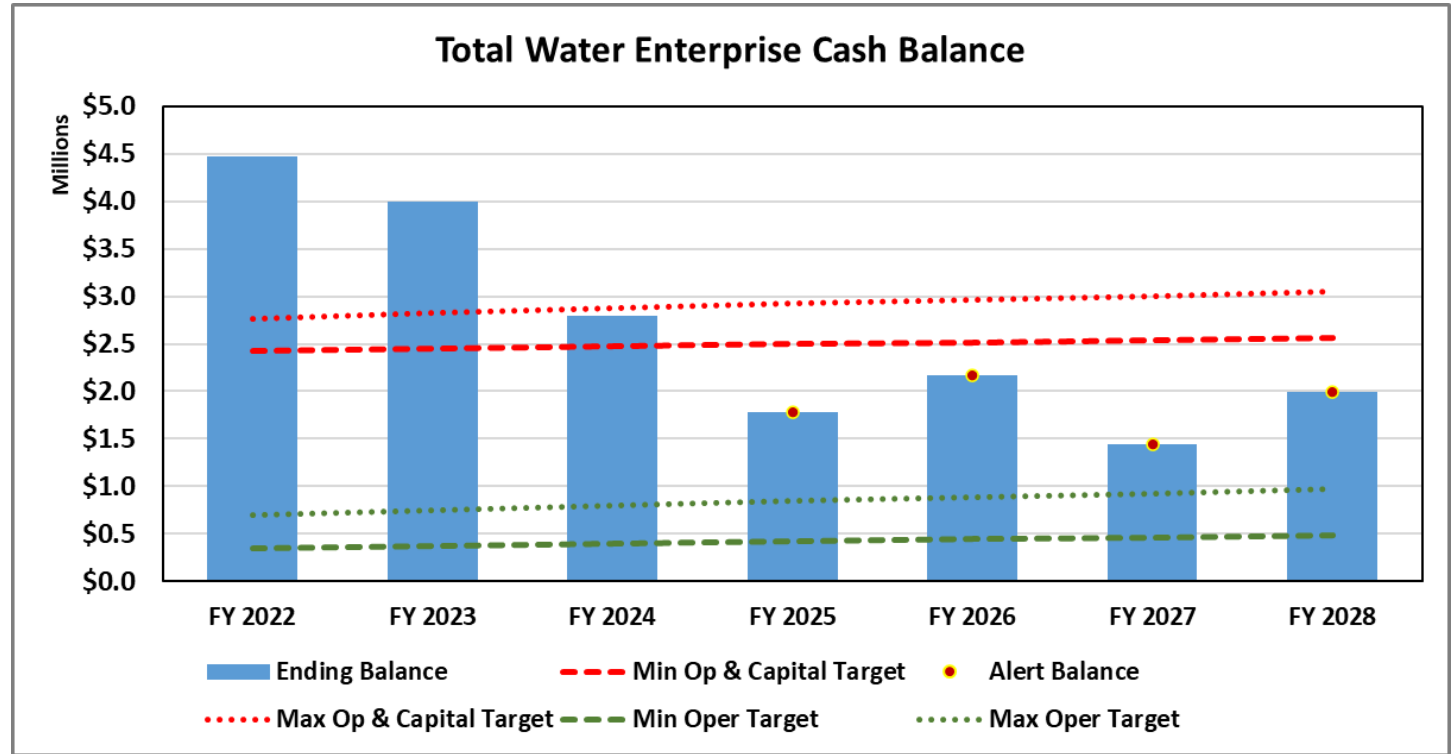
Medium CIP	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Assumed Month of Increase	March	March	March	March	March
Revenue Increase (%)	25%	10%	10%	10%	9%
Debt	\$3,500,000	\$0	\$4,000,000	\$0	\$0
Calculated Debt Coverage	115%	307%	221%	304%	399%
Capital Investment	\$1,605,968	\$3,590,398	\$3,646,967	\$1,692,242	\$2,082,445
Assumed Debt Coverage Ratio = 1.10					

# Low Investment Financial Plan

Total \$5.9M Investment  
**9%** in the first year

No debt

Average CIP \$1.1M per year

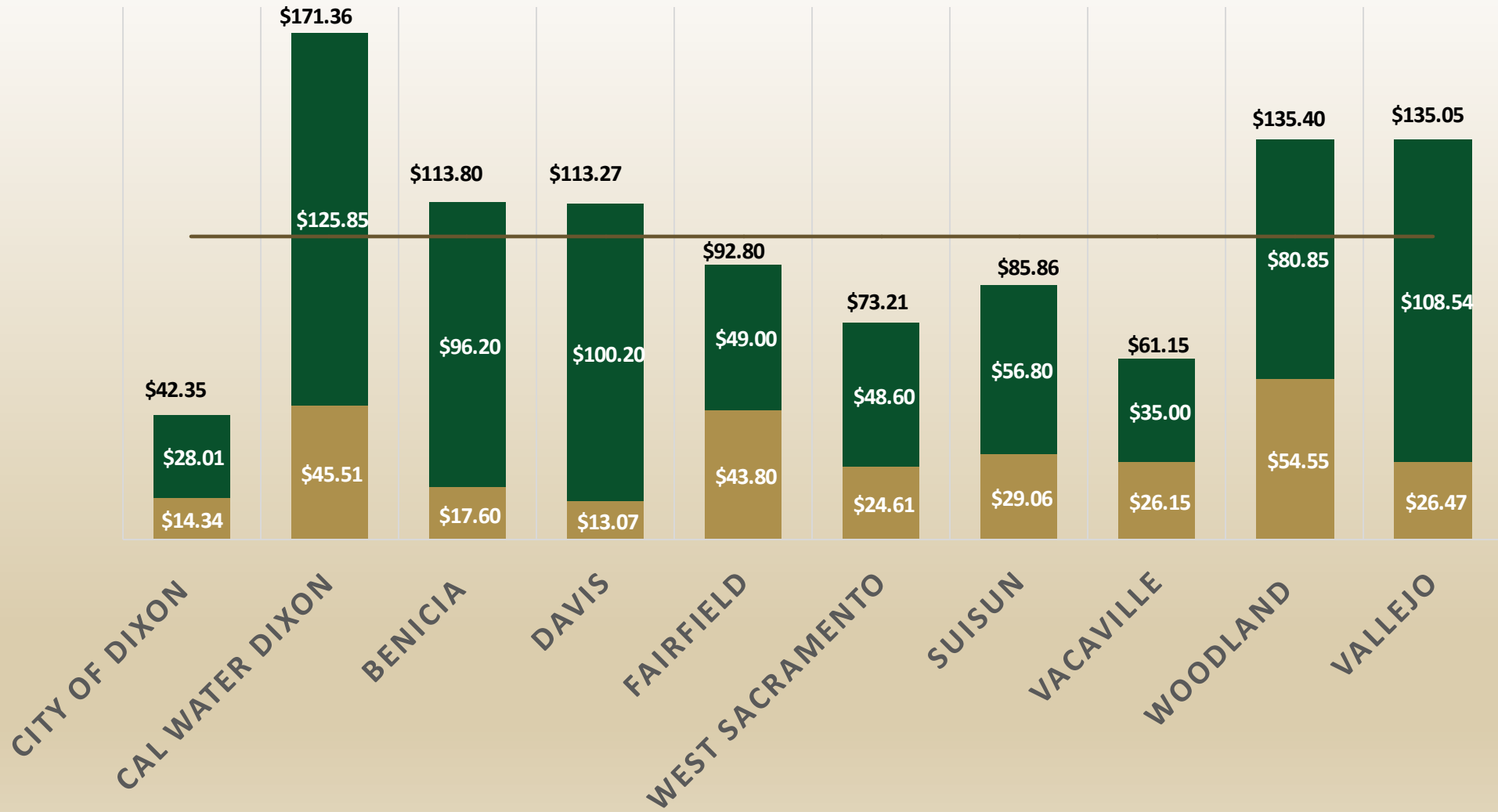


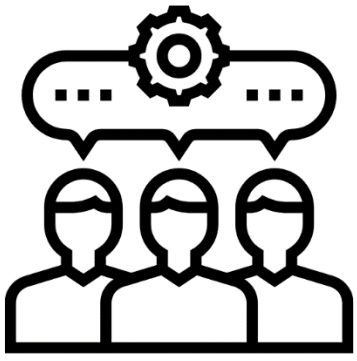
Low CIP	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Assumed Month of Increase	March	March	March	March	March
Revenue Increase (%)	9%	8%	8%	7%	7%
Debt	\$0	\$0	\$0	\$0	\$0
Calculated Debt Coverage	#N/A	#N/A	#N/A	#N/A	#N/A
Capital Investment	\$677,658	\$1,629,058	\$1,644,623	\$329,335	\$1,670,383
Assumed Debt Coverage Ratio = 1.10					



# AVERAGE MONTHLY WATER COST FOR A SINGLE FAMILY HOME

■ Monthly Fixed Charge (3/4 inch)     
 ■ Monthly Use Charge (20 CCF)     
 — Average \$102.42





# NEXT STEPS

- Water system condition will reflect level of investment
- Once the rate study is finalized, staff will return with options for level of investment
- Community Workshop: April 28, 2022 6:30pm



# Questions?

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