

PUBLIC WORKS

Water Rate Study

Council Study Session – April 11, 2017



Art Griffith and Debi Fortin, FG Solutions, LLC

Stephen Dopudja, West Yost Associates

Tonight's Presentation

1. Capital Improvement/
Facilities Plan
2. FY 16/17 Financial Status
3. Draft Five-Year Financial Plan
4. Rate Structure Alternatives
5. Public Engagement
6. Next Steps
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



Why are we here?

- “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 Section** is to provide sufficient and safe water at the lowest possible cost to the City’s residents.”



Capital Improvement/Facilities Plan: Review Water System Facilities

- 75% of water supply is groundwater from Orange County
- 25% of water supply is from the State Water Project
- 433 miles of pipe
 - ~ distance from Garden Grove to San Francisco
 - 40% is over 60 years old
- 13 wells
- 5 pump stations
- 8 reservoirs holding 53 million gallons of water



Capital Improvement/Facilities Plan: Summary - Prioritization

- Key factors and criteria per 2008 Master Plan
 - Planning
 - Engineering
 - Operational Considerations
- Affordability for the City
 - Equally distribute proposed CIP project costs into three categories
- Discussions with City Staff

Priority Phase	Implementation Timeframe	Cost (millions)
Immediate	2017-2022	\$36.6
Secondary	2022-2027	\$41.4
Third	2027-2032	\$98.5
Total		\$176.5

Immediate and Secondary Phases: projects are well known

Third Phase: projects will be redefined after future Master Plan is completed; may take longer than five-years to complete

Capital Improvement/Facilities Plan : Immediate Priority Projects

- Reservoir Rehabilitations Required
 - Condition assessment identified necessary improvements to eight reservoirs
 - Seismic upgrades are needed as noted in condition assessment
 - Must maintain minimum fire flow storage
 - Runoff water from outside the reservoirs percolating into the ground and infiltrating into the reservoirs
- Reservoirs are of vital importance for maintaining reliable water service with the current storage capacity volume
- Designs to address reservoir deficiencies have been completed for the underground West Haven Reservoirs



Capital Improvement/Facilities Plan: Immediate Priority Projects

- Well Evaluation and SCADA Improvements Needed
 - Engineering evaluation and condition assessment of existing wells to determine life expectancy and identify required improvements.
 - Supervisory Control and Data Acquisition (SCADA) System
 - Existing SCADA system requires additional labor hours to operate water system
 - Cyber Security necessary to address water system protection and safety
 - Increased threat of computer hackings
 - Collection of historical pumping data for future master planning efforts
 - First phase of SCADA improvements has been completed
 - Portable Back-up Power Generators
 - Reliability of critical infrastructure during power outages



Capital Improvement/Facilities Plan: Immediate Priority Projects

- Water Master Plan Update
 - Most recent Water Master Plan was completed in 2008
 - Water conservation efforts have resulted in lower water consumption per capita
 - Industry standard - every 5-10 years with annual updates as needed
 - Essential tool in determining status of your water system's ability to perform up to industry standards and regulatory requirements
 - Vital in corroborating appropriate rates to sufficiently fund necessary improvements
- Asset Management Study
 - Evaluate the need for asset replacements
 - Determine budgetary requirements for the next planning period
 - Recommendations based on the physical condition of the assets, life expectancy and maximizing life cycle benefits of the assets
 - Often leads to greater rate stabilization into the future



Capital Improvement/Facilities Plan: Immediate Priority Projects

- Recurring Replacements
 - Service lines
 - Fire hydrants
 - Flow meters
 - Important to realize revenue
 - Determine lost and unaccounted for water
 - Valves
 - System appurtenances



Capital Improvement/Facilities Plan : Immediate Priority Cost Summary (2017-2022)

Category	Project Name	Cost (dollars)
Recurring Replacements	Service Lines, Fire Hydrants, Meters, Valves, and Appurtenances	\$17,537,415
Wells	Well Condition Assessment	\$733,257
Reservoirs	Reservoir Rehabilitations	\$16,272,538
Boosters	Potable Back-up Generators	\$1,047,510
Studies	Master Plan Update	\$550,000
Studies	Asset Management Study	\$327,347
Studies	Cyber Security	\$175,000
Total		\$36,643,067

Capital Improvement/Facilities Plan : Rate Setting Considerations

- Service provided to customers and how it's messaged
 - Providing a safe and reliable service vs. a commodity
- Project Prioritization
 - Why storage is the highest priority project?
 - Storage is integral to the operation of the system, especially during emergencies
 - Water Master Plan is a critical planning document
 - Last updated in 2008, update needed to reflect current demand conditions and future expansions
 - List of fire flow improvements determined using 2008 water demands



Capital Improvement/Facilities Plan : Secondary Priority Cost Summary (2022-2027)

Category	Project Name	Cost (dollars)
Recurring Replacements	Service Lines, Fire Hydrants, Meters, Valves, and Appurtenances	\$20,330,670
Wells	Well Rehabilitations (Wells 16, 19, &25)	\$5,582,221
Boosters	Booster Pump Replacements (Lampson, Magnolia & Trask) & Natural Gas Engine Replacements (Lampson and Magnolia)	\$5,522,712
Pipelines	Existing and Future Fire Flow Projects, International West Specific Plan Pipelines	\$9,942,502
Total		\$41,378,105

Capital Improvement/Facilities Plan : Third Priority Cost Summary (2027-2032)

Category	Project Name	Cost (dollars)
Recurring Replacements	Service Lines, Fire Hydrants, Meters, Valves, and Appurtenances	\$23,568,819
Wells	Groundwater Well (West Pressure Zone)	\$4,223,298
Pipelines	Existing Fire Flow Projects	\$70,715,827
Total		\$98,507,944

Notes:

1. Projects to be re-evaluated as part of the upcoming Master Plan; project list and costs might change;
2. Projects may take longer than five years to complete



Capital Improvement/Facilities Plan : Proposed Project Costs

- 2008 Water Master Plan Costs Were Escalated
 - To 2016 costs according to the Turner Building Cost Index
 - Into the future based on an assumed 3% annual inflation rate
 - Includes industry standard total contingency (for construction and for engineering design and construction management)
- West Haven Reservoir Rehabilitation Costs
 - May 2016 average bid cost with a 30% contingency for construction and construction management
- Remaining Reservoir Rehabilitation Costs
 - Condition Assessment of Eight Concrete Reservoirs prepared by Kleinfelder and Simon Wong in December 2013.
 - An additional industry standard total contingency (for construction and for engineering design and construction management) were added to the proposed costs before escalation



Tonight's Presentation

1. Capital Improvement/
Facilities Plan
- 2. FY 16/17 Financial Status**
3. Draft Five-Year Financial Plan
4. Rate Structure Alternatives
5. Public Engagement
6. Next Steps
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



FY 16/17 Financial Status:

Revenue and Expense Comparison, \$M

Revenues from Rates	\$29.86
Other Revenues	<u>\$0.69</u>
Total Revenues	\$30.55
O&M Expenses	\$26.57
Debt Service	\$2.39
Replacement Projects	\$2.02
Capital Projects	<u>\$0.98</u>
Total Expenses	\$31.96
Surplus (Deficit)	(\$1.41)

- On a cash basis, expenditures projected to exceed revenues by \$1.41M
- Utility will spend reserves to pay for capital and portion of replacement projects
- Capital spending (~\$1M) is lower than past spending (~\$5M per year)



FY 16/17 Financial Status: Capital Projects

- Capital project spending has been reduced from ~\$5M per year to \$1M this year.
 - High priority facilities rehabilitation and fire flow deficiency projects have been deferred
- Currently, insufficient funding to complete the Capital Improvement/Facilities Plan
- Absent a Rate Increase:
 - FY 17/18 Budget likely will allocate minimal capital budget



FY 16/17 Financial Status: Reserves, \$M

Projected End of Fiscal Year 16/17 \$19.7

Some reserves are dedicated for:

Two Months of Cash Flow	\$4.4
\$500,000 for Emergency Contingency	\$0.5
5% of Net Plant	\$6.9
Total, Dedicated Reserves	<hr/> \$11.9

Reserves Available for Capital, Replacement \$7.9

With no rate increase, available reserves will be used up in 1-2 years, depending on amount of replacement and capital spending; Capital Improvement/Facilities Plan will not get implemented.



Tonight's Presentation

1. Capital Improvement/
Facilities Plan
2. FY 16/17 Financial Status
- 3. Draft Five-Year Financial Plan**
4. Rate Structure Alternatives
5. Public Engagement
6. Next Steps
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



Draft Five-Year Financial Plan: What is it?

- Year-by-year projection of revenues and expenses
- Calculations show overall changes in water utility revenues
- Considers current and future costs
 - Operations and Maintenance
 - Water Supply
 - Capital Improvement/Facilities Plan (safe and reliable water supply)
- Specific rate structures not yet determined
 - Will be presented in future Study Session



Draft Five-Year Financial Plan: Key Assumptions

- Build Capital Improvement/Facilities Plan projects
- Meet financial performance targets:
 - Reserves > 2 months cash flow + 5% of system value + \$500K
 - Debt service coverage ratio > 1.75
- Includes costs to purchase water
 - Increases in wholesale costs (Metropolitan Water District, Orange County Water District)
 - Water demand partially “rebounding” from drought levels
- Inflation included in calculations
- Issue debt in FY 18/19 (\$10M)



Draft Five-Year Financial Plan: Pass-Through Costs

- The City does not control these costs
- Automatically adjusted each January based on actual costs from water suppliers
- 2016: \$0.67 per hundred cubic feet (“hcf”)
- 2017: \$0.82 per hcf (effective February 2017)
- Projected June 2022: \$1.22 per hcf



Draft Five-Year Financial Plan: Overall System Revenue Increases

- Approximately 4.7 percent per year for next five years
 - ~1/3 of increases are pass-through increases
 - Water supply costs the City doesn't control
 - Effective in January of each year
 - Remaining ~2/3 of increases
 - To pay for Capital Improvement/Facilities Plan and continued operation
- Specific rate structures at future Study Session



Tonight's Presentation

1. Capital Improvement/
Facilities Plan
2. FY 16/17 Financial Status
3. Draft Five-Year Financial Plan
- 4. Rate Structure**
5. Public Engagement
6. Next Steps
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



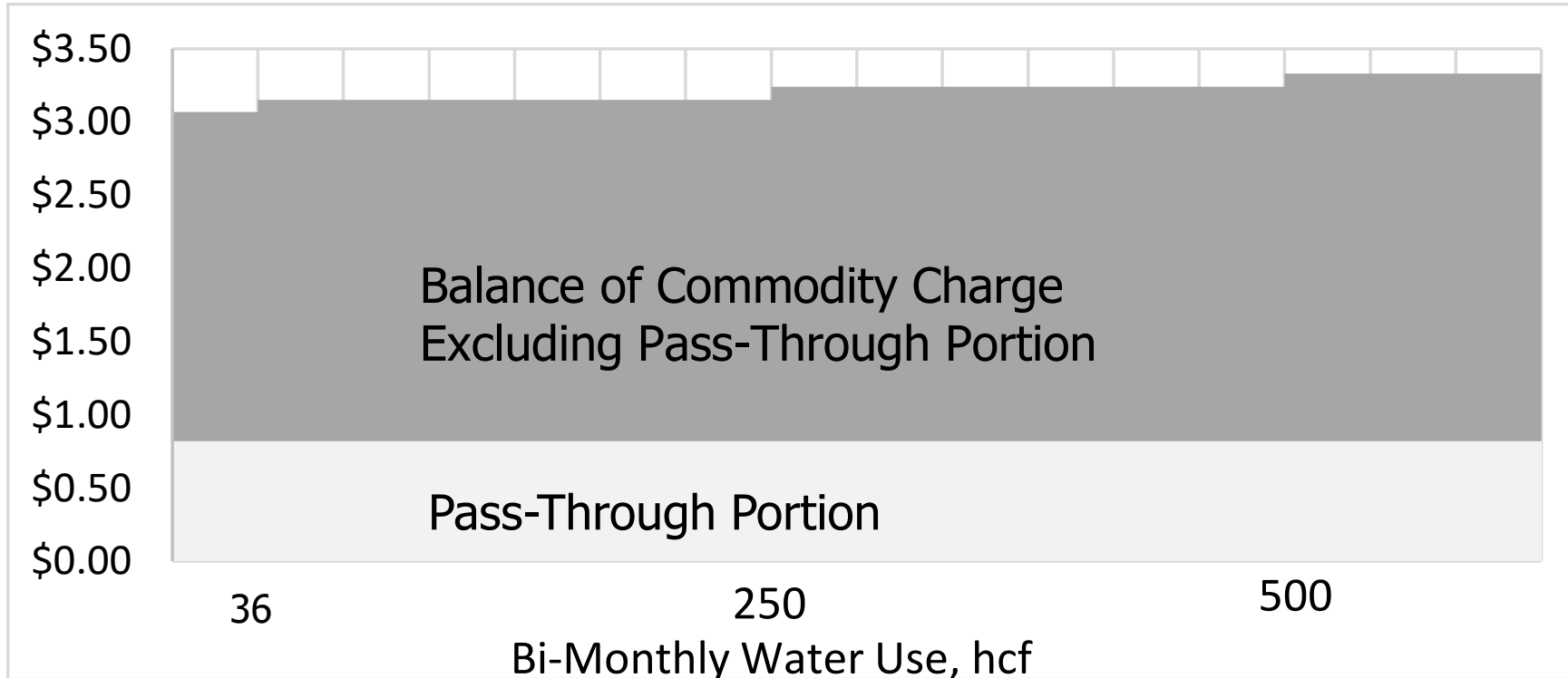
Rate Structure:

Review Current Rate Structure

- **Minimum Charge:** depends on meter size; \$12.74 every two months for most customers
- **Capital Recovery Charge:** depends on meter size; \$1.47 every two months for most customers
- **Commodity Charge:** depends on water use.



Rate Structure: Current Commodity Charge, \$/hcf



- Not a significant change in cost between the four tiers
- Most customers use < 36 hcf, so they are only charged the lowest tier rate



Rate Structure Alternatives: Two Topics to Discuss

1. How much should Minimum Charge be?
2. Water rate tier alternatives

Tonight: Informational Only;
no specific rate structure proposals are yet available



Rate Structure:

How much should Minimum Charge be?

- Higher Minimum Charge:
 - Increases revenue stability
 - Reduces risk to City
 - Better alignment with “cost-of-service” principles
 - Increases affordability concerns



Rate Structure: Water Rate Tier Alternatives

1. Uniform Block
2. Increasing Block
3. Budget-Based

How they are the same: Calculating the cost of water in each tier

How they are different: how much water is included in each tier



Rate Structure:

Water Rate Tier Alternatives: Uniform Block

- One tier; all water sold at the same rate
- Easy to administer
- Does not send conservation signal
- Allowable under Proposition 218



Rate Structure:

Water Rate Tier Alternatives: Increasing Block

- Similar to existing Commodity Charge
- Recent court decision: must document how the cost of each tier is calculated
- Likely revision: three tiers instead of four
- Possible revision: change how much water is included in each tier
- Better alignment with “cost-of-service” principles



Rate Structure:

Water Rate Tier Alternatives: Budget-Based

- Discussed at January 24, 2017 Study Session
- Three water rate tiers: indoor, outdoor, excessive
- Amount of water included in each tier unique to each customer
 - Number of people per household
 - Landscaped area of parcel
 - Also depends on weather (same for all customers)
- Better alignment with “cost-of-service” principles
- Customers understand this rate structure and consider it fair
- More effort to administer



Tonight's Presentation

1. Capital Improvement/
Facilities Plan
2. FY 16/17 Financial Status
3. Draft Five-Year Financial Plan
4. Rate Structure Alternatives
- 5. Public Engagement**
6. Next Steps
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



Public Engagement

- Public Workshop
- Rate Study Hotline
- Contact Most Affected Customers
- Contact Top Water Users
- Website / Water Bill Inserts
- Presentation to Community Groups



Tonight's Presentation

1. Capital Improvement/
Facilities Plan
2. FY 16/17 Financial Status
3. Draft Five-Year Financial Plan
4. Rate Structure Alternatives
5. Public Engagement
- 6. Next Steps**
7. Ask for Council Direction:
 1. Whether future rate proposal alternatives should include rate increases
 2. Feedback on rate structure alternatives



Next Steps:

- Aerial Imagery Analysis
 - Council agenda item 4/11/17 to authorize this task
 - Characterize landscape area of each customer
 - Completion of this task determines remaining schedule
- Rate structure calculations
 - Study Session to present Rate Structure Alternatives
- Public engagement
- Billing system software modifications



Feedback, Questions, Comments?

Thank you for your time.

