



CITY OF LAKEWOOD

*Utility Funding and Affordability Study
City Council Budget Workshop
December 16, 2017*

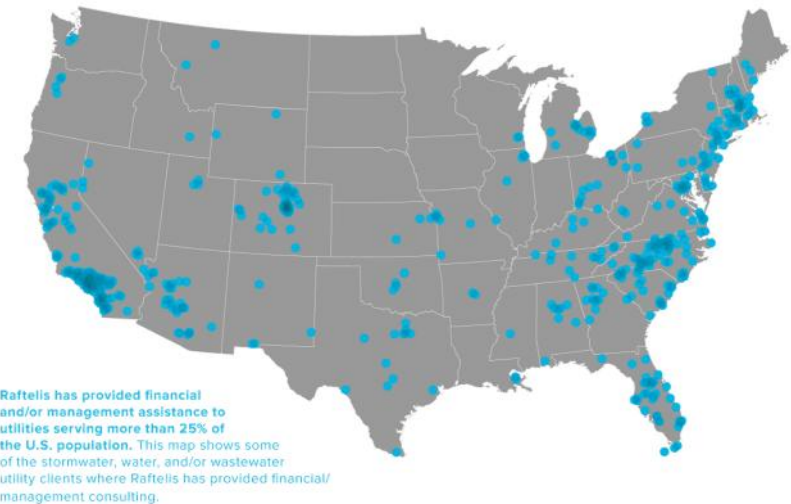
- Draft -

AGENDA

- » Introduction
- » Project Objectives & Approach
- » Financial Policies
- » Historical Data Review
- » Repair & Replacement Capital Planning
- » 2018 Capital Improvement Needs
- » 2018 Rate Recommendations
- » Next Steps

RAFTELIS FINANCIAL CONSULTANTS

- » One of the largest firms focused on finance & management solutions for municipal utilities
- » Work with hundreds of clients throughout the country each year
- » 75+ consulting professionals



PROJECT OBJECTIVES & SCOPE

Develop a financial plan that integrates operating, capital, and compliance costs while preserving the City's financial integrity and supports discussions with regulatory agencies.

- Phase 1 – Project Initiation and Kickoff Workshop
- Phase 2 – Capital Improvements Identification and Financing Options
- Phase 3 – Develop Financial Plan and Rate Design
- Phase 4 – Enhanced Financial Capability Analysis
- Phase 5 – Document and Present Results, EPA Support

UTILITY FINANCIAL PLANNING OVERVIEW

- » As an enterprise fund, the utility must run like a self-supporting business
- » Scale of operations, infrastructure, and investment requires thoughtful planning for future needs

Objective: Balance system reliability, sustainability and financial integrity with customer costs & impacts

PRELIMINARY FINANCIAL POLICIES

Measurement	Objective
Operating Fund	50% of annual O&M budget
Capital Reserve Fund	15% of prospective 3-yr average CIP needs
Debt Service Coverage Ratio	Senior Debt \geq 1.75; All Debt \geq 1.20
Debt Burden to Asset Value	\leq 50%
Sufficiency of Revenues Above Debt Requirements	Annual Debt service shall not exceed 35% of annual gross revenues
Credit Ratings	Moody's: AA; S&P AA; Fitch Aa+
Cash Financing of Capital	Annual revenues and cash reserves shall provide at least 25% of CIP Funding
Rate Stabilization Fund	5 % of annual revenue projection
Customer Affordability Metric	Annual costs for typical residential customers should be below 2% of MHI for each service

BILLED FLOWS

» Billed flows

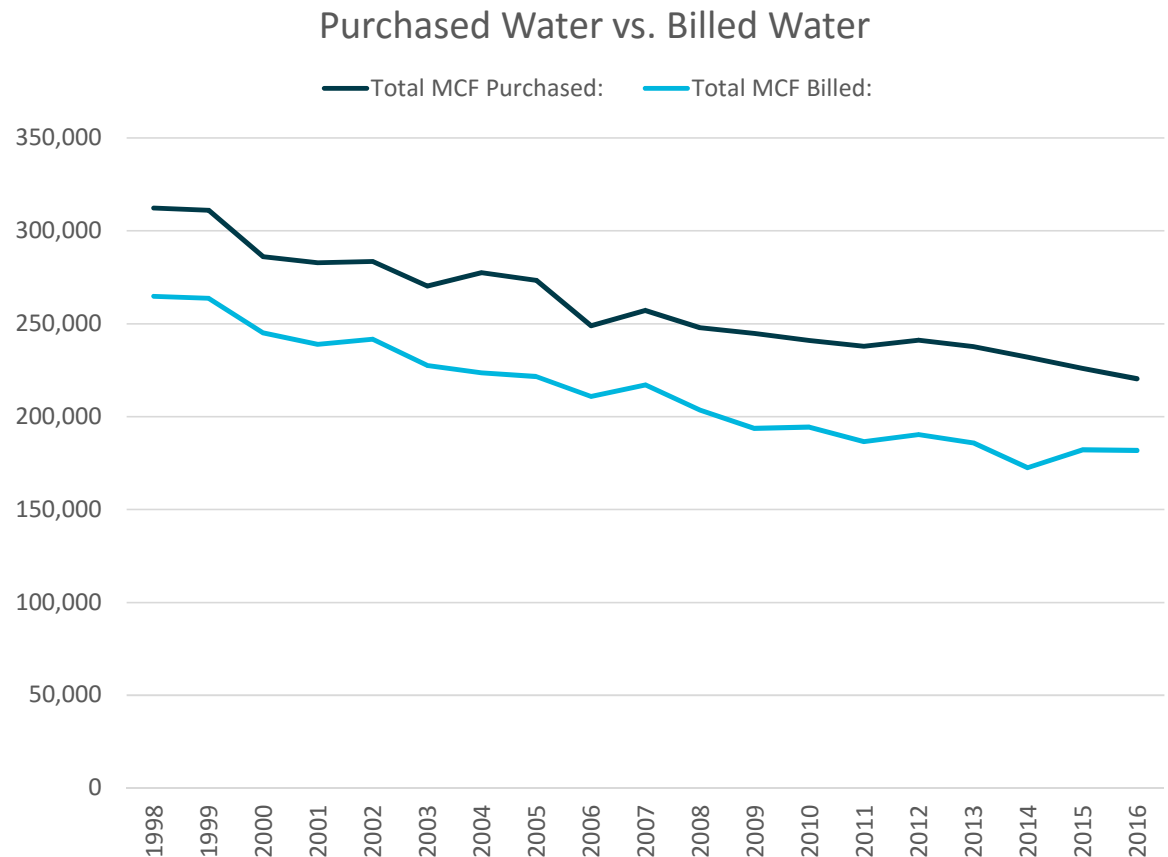
- 16% reduction from 2007-2016

» Purchased water

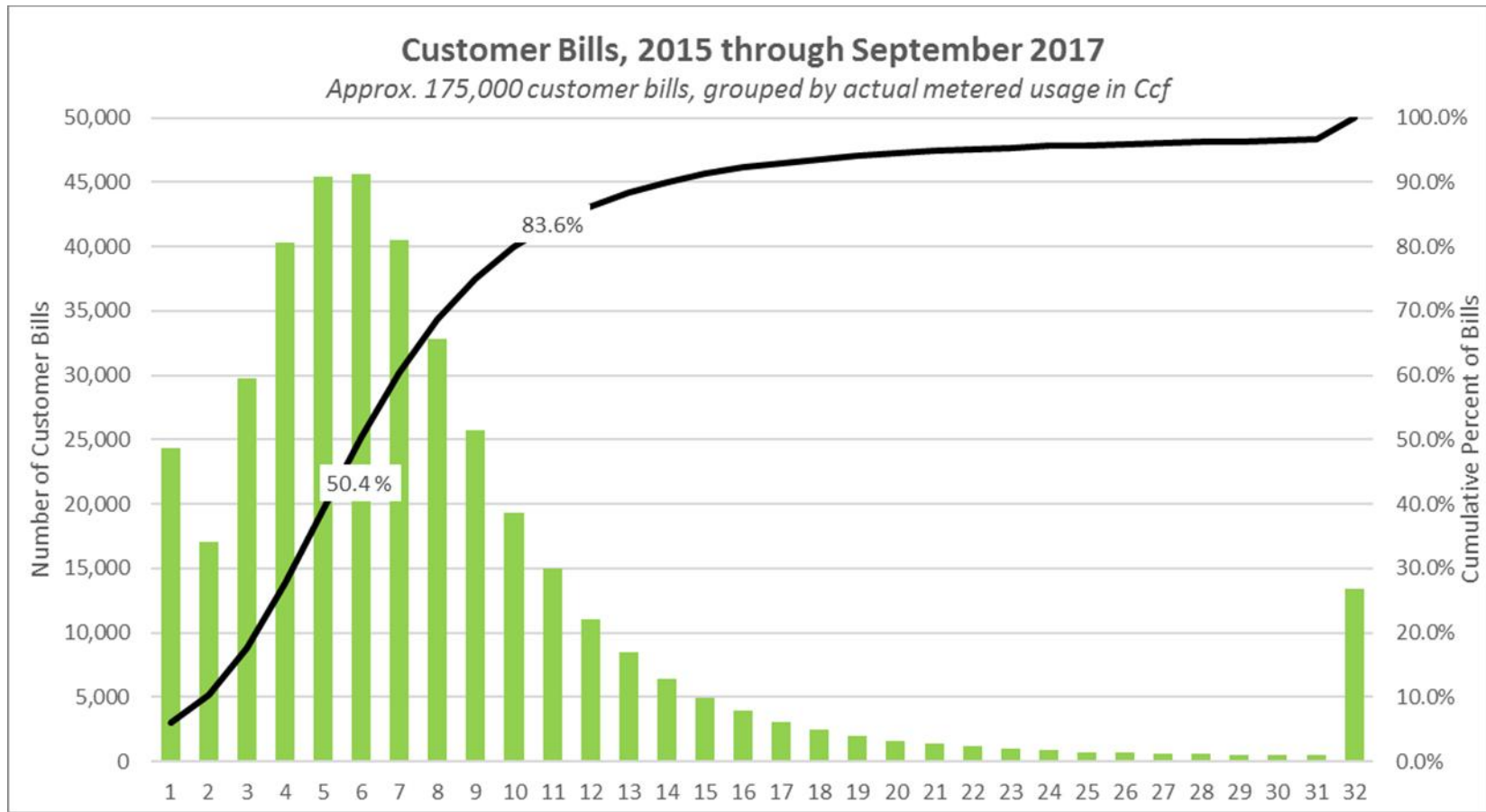
- 14% reduction from 2007-2016

» Non-rate water

- Purchased water averages 18% higher than billed water
- Metered, unbilled water is a component of this delta

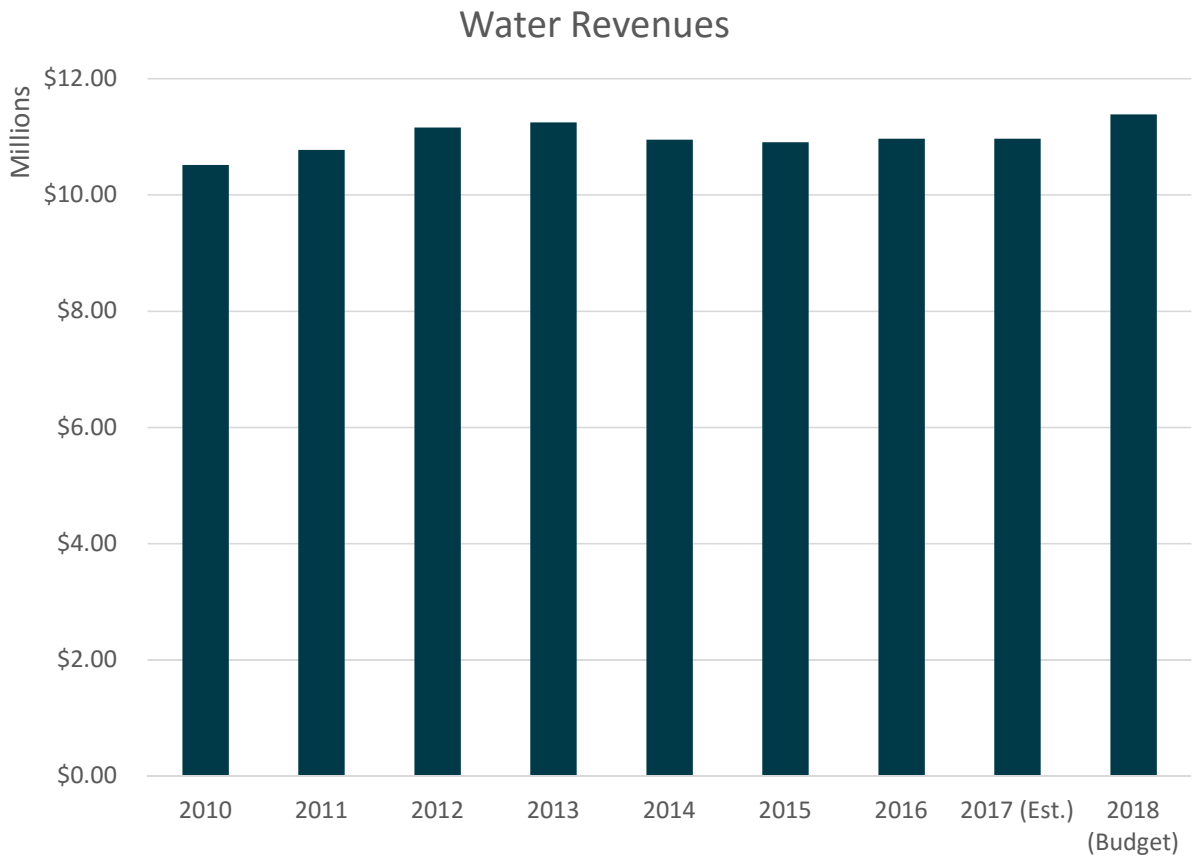


WATER CUSTOMER BEHAVIOR



WATER REVENUE

- » Rate revenues 0.5% annual increase
- » Miscellaneous revenues annual average approx. \$300,000



WASTEWATER REVENUE

- » Rate revenues 7.3% annual increase
- » Miscellaneous revenues annual average approx. \$400,000



CAPITAL REPAIR & REPLACEMENT REVIEW

Objectives

- » Develop planning-level capital investments over 40 year period
 - Regulatory requirements
 - Capacity needs
 - Service enhancements
 - Repair replacements

- » To be used in financial plan
 - Calculation of revenue requirements
 - Sensitivity analysis, funding capital at various levels

Approach

- » Collect and Review Existing Materials

- » Identify and Document Capital Planning Drivers and Metrics

- » Identify and Document Existing Deficiencies

- » Determine Future Capital Needs

WATER DISTRIBUTION

Water Main Attributes & Assumptions

Age	Calculated based on installation date. Data was provided in workbook and GIS.
Cost	Costs estimated based on an recent water main replacement costs. Unit rates for LF replacements by diameter were calculated and compared to industry standards.
Useful Life	Performance, specifically break history, and size are currently used along with age as desktop condition assessment and replacement prioritization.

WW COLLECTION ASSUMPTIONS & ANALYSIS

	Age	Cost	Useful Life
Pipe	<ul style="list-style-type: none"> No data provided indicating age of pipes in the asset shapefiles (GIS). Based on overlaying GIS with consultant (CT) pdf of 1920 and 1945 sewer maps. No data provided indicating material. Based on the categories of size and shape of the collection system pipes. <ul style="list-style-type: none"> Circular pipes with diameters from 6 to 18 inches assumed to be VCP, as well as diameters 20 to 22 inches, although these are nonstandard sizes Circular pipes with diameters 24 to 120 inches assumed to be brick Arch and egg pipes assumed to be brick Rectangular and ellipse pipes assumed to be concrete 	<ul style="list-style-type: none"> Estimated cost per inch diameter to maintain during the 40-year analysis Rehabilitation and replacement capital needs were based on following a rehab/replace ratio <ul style="list-style-type: none"> Combined and sanitary ratio of 80/20 Storm ration 90/10 Assumes a ramp up in costs over the first two years as GIS and CMMS systems functionality are improved 	<ul style="list-style-type: none"> Estimated: 100 years RUL calculated based on assumed age, expected useful life, and age adjusting factor Annual R/R estimate average of total needs over 40-year analysis period.
Manhole	<ul style="list-style-type: none"> Based on the estimated age of the corresponding sewer. 	<ul style="list-style-type: none"> Rehabilitation and replacement capital needs were based on following 80/20 rehab/replace ratio. Manholes less than 50 feet in depth: \$165/VF Manholes greater than 50 feet in depth: \$208/VF Assumes a ramp up in costs over the first two years as GIS and CMMS systems functionality are improved. 	<ul style="list-style-type: none"> Estimated useful life: 100 years---same life as pipes Aligned with sewer R/R
Outfall	<ul style="list-style-type: none"> Based on the recommendations for longer-term rehab in the KS 2017 Outfall Inspection Coastal Engineering Report. 	<ul style="list-style-type: none"> Based on average costs of similar rehab needs provided in the KS 2017 Outfall Inspection Coastal Engineering Report. Outfalls given rehab costs (priority A) are not included. 	<ul style="list-style-type: none"> Based on the recommendations for longer-term rehab in the KS 2017 Outfall Inspection Coastal Engineering Report.

LIFT STATIONS & TREATMENT PLANT

Lift Station Attributes & Assumptions

Age	Ages established from City personnel.
Cost	Costs estimated based on industry similar items, and knowledge of local systems. General cost established for periodic overhaul of stations—every 15 years.
Useful Life	Overhaul stations every 15 years.

Wastewater Treatment Plant Attributes & Assumptions

Age	Ages established from City personnel and available drawings.
Cost	Costs estimated based on industry similar items, and knowledge of local systems. Electrical and architectural costs spread over 10 years.
Useful Life	Estimated based on asset type.

SUMMARY FINDINGS: ESTIMATED CAPITAL COSTS

Asset Type	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10	Years 11-15	Years 16-20	Years 21-25	Years 26-30	Years 31-35	Years 36-40
Collection System	0.99	1.98	2.98	2.98	2.98	19.65	18.28	19.65	18.28	16.25	14.88	16.25
WWTP	4.21	1.72	1.88	1.84	9.41	6.67	6.76	3.79	13.86	4.92	7.51	3.67
Pump Stations						0.09	0.21		0.09	0.21		0.09
Water Distribution	1.89	2.27	2.72	3.27	3.92	19.6	19.6	19.6	19.6	19.6	19.6	19.6
Total	7.09	5.97	7.58	8.09	16.31	46.01	44.85	43.04	51.83	40.98	41.99	39.61

\$ Millions

Additional Programmatic Elements:

- CMMS
- GIS
- Condition assessment / asset management

2018 WATER CAPITAL IMPROVEMENT NEEDS

- » \$4.8 million watermain replacement project
 - Athens: Carabell to Warren
 - Atkins: Delaware to Hilliard
 - Hathaway: Clifton to Merl
 - Lewis: Madison to Franklin
 - Sylvan: Lake to Edgewater
 - Waterbury: Franklin to Lewis

- » Includes sewer repairs and manhole separations during paving restoration

2018 SEWER CAPITAL IMPROVEMENT NEEDS

» Total anticipated spending: \$11.6 million

– A number of projects underway and planned, including:

Project Name	Estimated 2018 Cost
Clean Water Pilot Study Project - Private Property	\$ 289,110
Madison Drop Chamber	710,000
Green Infrastructure Pilot (Design & Construction)	197,156
High Rate Treatment Design and Permitting	646,207
Concrete Restoration	282,429
Webb Rd Sewer Erosion Remediation	527,719
Digester & Code Upgrades with Electrical Generation Addition	4,457,815
Early action Sewer Separations	1,000,000
Lake Ave. Sewer Work	1,375,000

2018 RATE RECOMMENDATIONS

Water System Rates

5% Rate Increase

2017 Rate (\$/Ccf)	2018 Rate (\$/Ccf)
\$6.44	\$6.76

» **45% Homestead Discount for Eligible Customers**

Sewer System Rates

10% Rate Increase

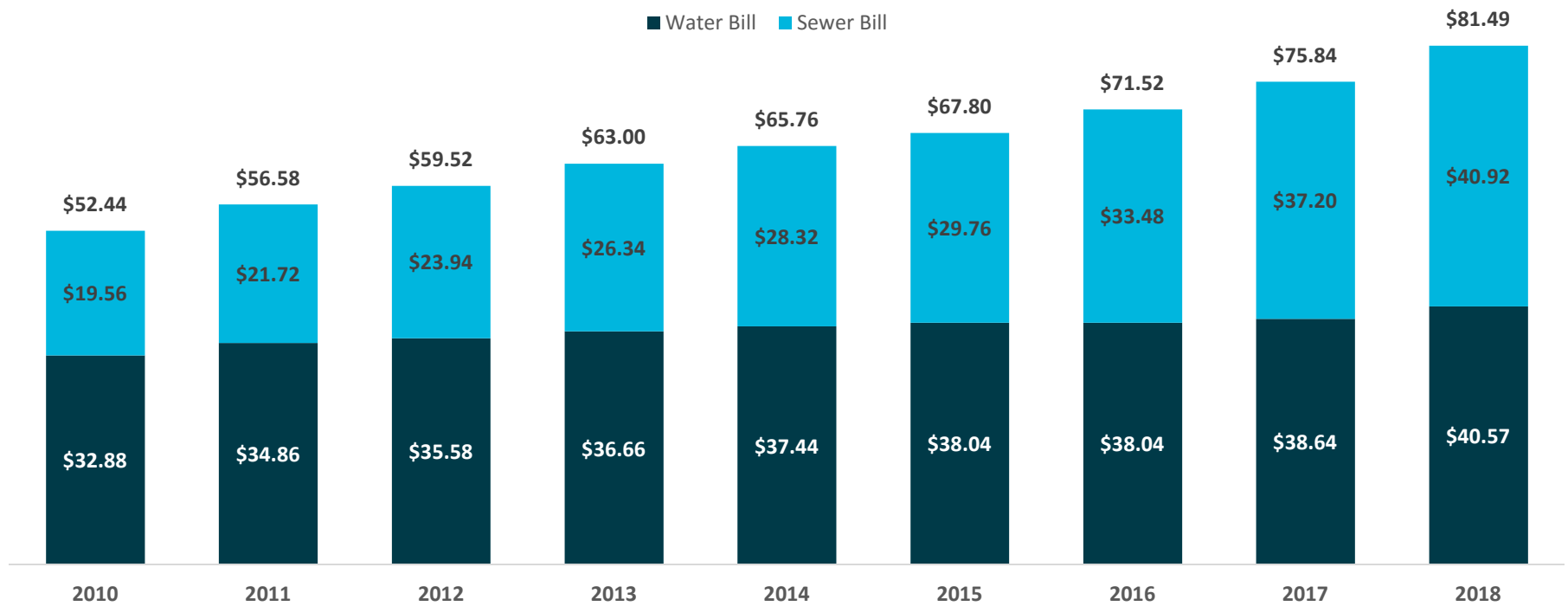
2017 Rate (\$/Ccf)	2018 Rate (\$/Ccf)
\$6.20	\$6.82

» **25% Homestead Discount for Eligible Customers**

CUSTOMER BILL IMPACTS

Typical Residential Bill
6 Ccf per Month

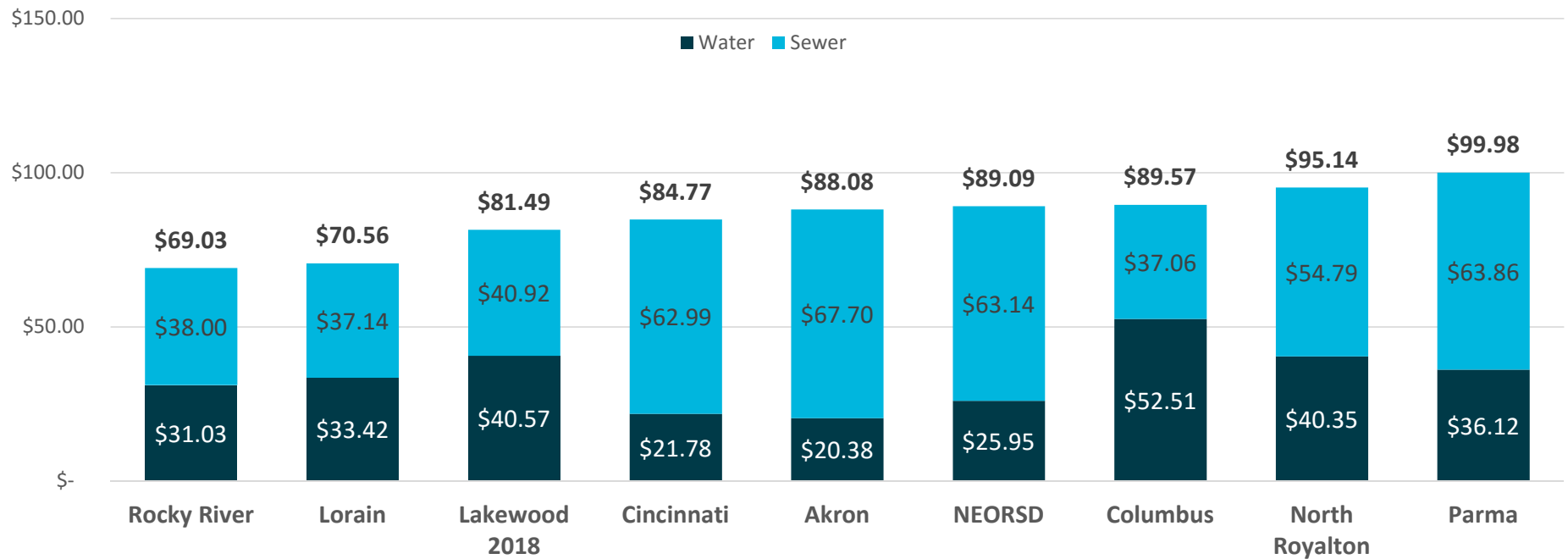
■ Water Bill ■ Sewer Bill



Water and sewer service for less than 2 cents per gallon at \$81.49

LOCAL BILL COMPARISON

Typical Monthly Residential Bill
(6 Ccf/month)



* Includes monthly estimate for front footage assessment for sanitary and storm line maintenance based on 100 ft. of front footage.

- NEORS D rates increasing approx. 8.3% in 2018 and 7.0% per year through 2021

FINANCIAL PLANNING MODEL

PRELIMINARY RESULTS



FINANCIAL PLAN ASSUMPTIONS & DATA

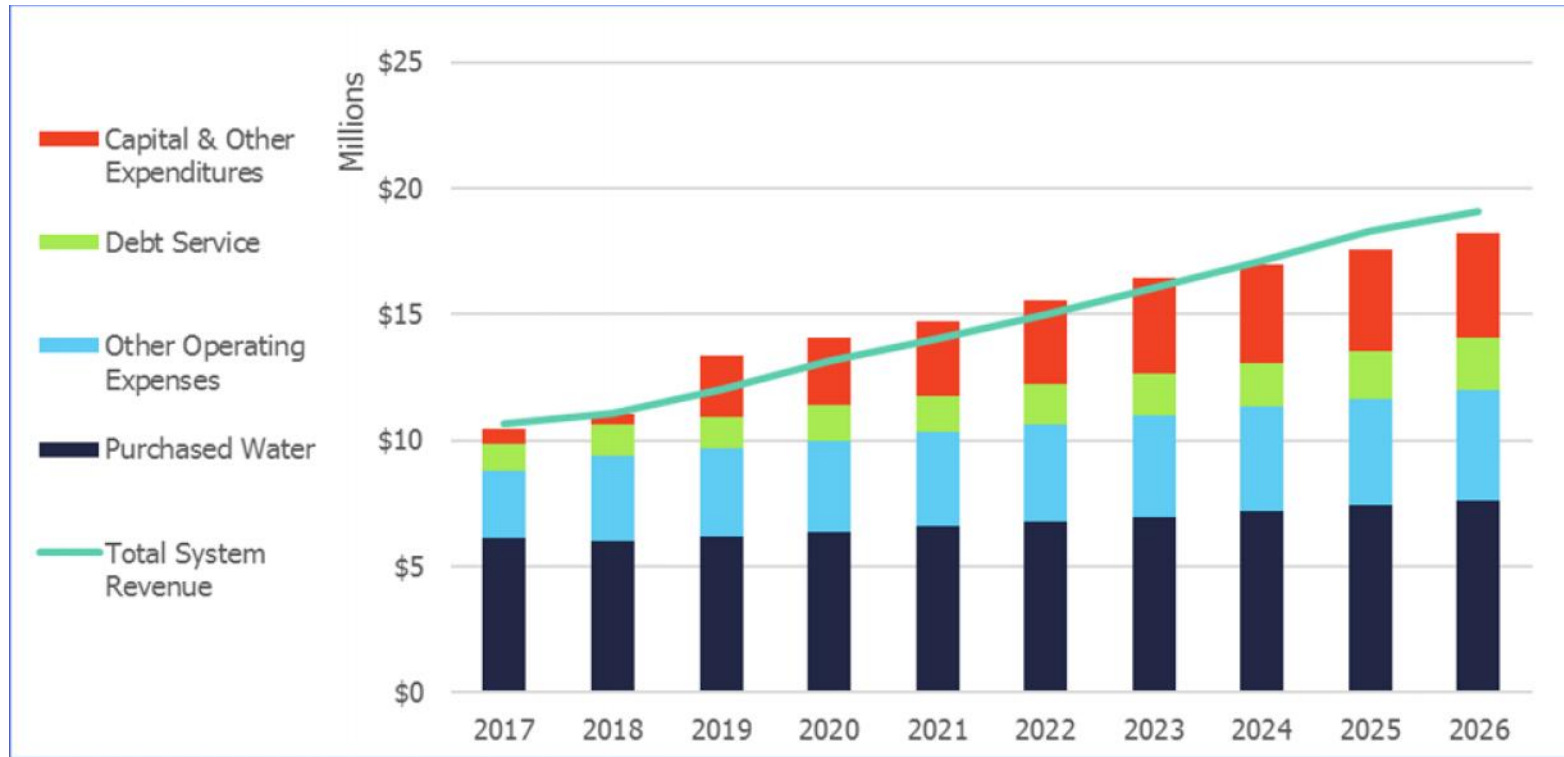
- » The financial plan is based on City data for:
 - Customer Information and System Revenues
 - Operating Costs
 - Debt Service
 - Capital Program

- » Reasonable projection of O&M costs (~3% annually)

- » 1% annual reduction in billed flows

- » Capital funded with mix of cash and debt

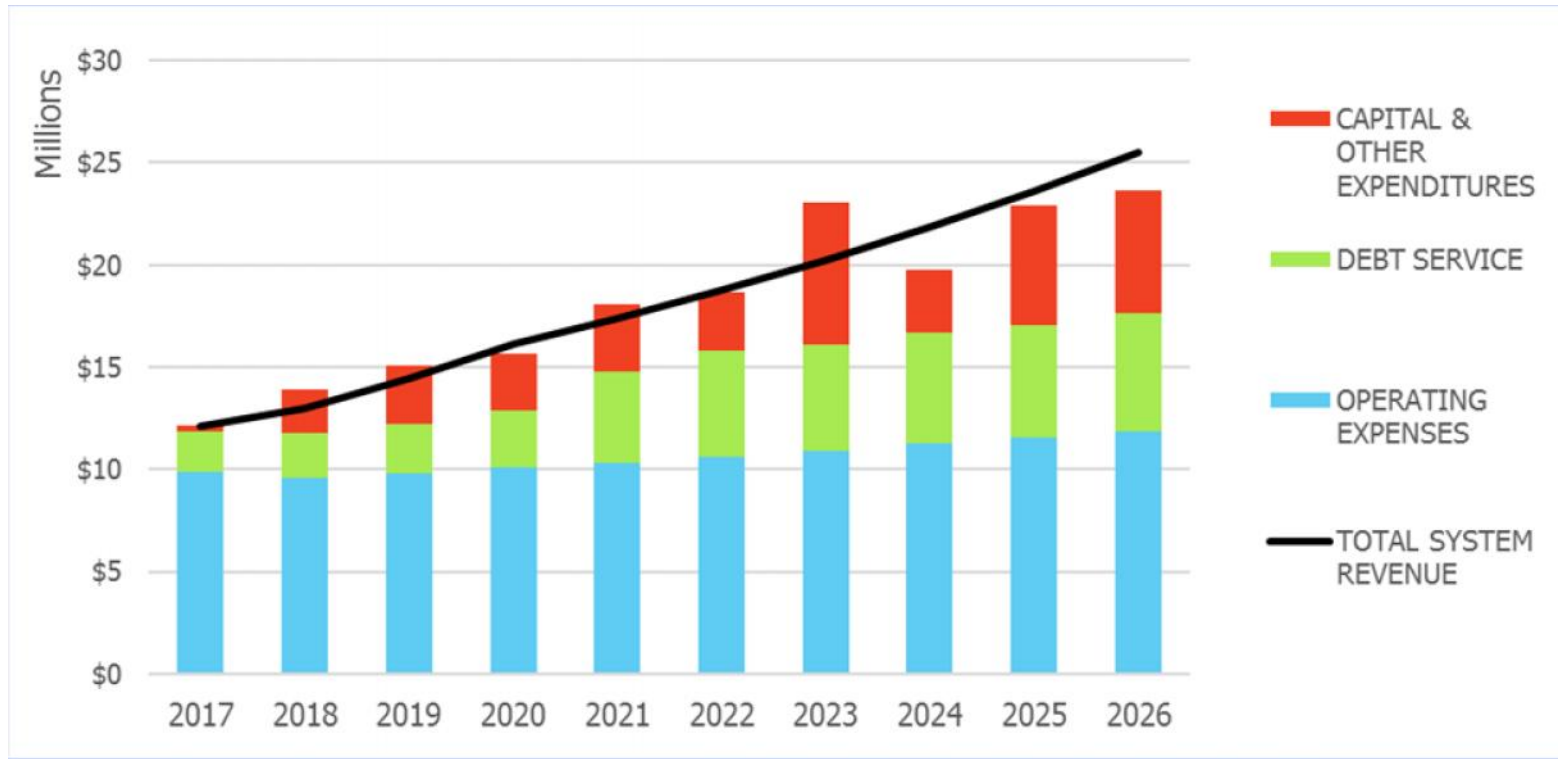
WATER FINANCIAL PLAN



	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
Projected Water Rate Increase	5.0%	10.0%	10.0%	8.0%	8.0%	8.0%	8.0%	8.0%

** Preliminary Draft – Subject to Change*

WASTEWATER FINANCIAL PLAN



	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
Projected Sewer Rate Increase	10.0%	15.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%

** Preliminary Draft – Subject to Change*

NEXT STEPS

- » Refine operating and capital costs for 2019-2027
 - IWWIP Scenarios and Results
 - R&R Capital Needs

- » Review updated financial plan and rate recommendations

- » Prepare geographic and demographic data for affordability analysis

- » Affordability & Financial Capability Assessment

THANK
YOU

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MUNICIPAL ADVISOR:**

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