



City of Waterford

Water Rate and Fee Study

Hansford Economic Consulting

September 15, 2016

Background

- ▶ City of Waterford purchased the Waterford and Hickman water systems in July 2015 from the City of Modesto.
- ▶ Waterford adopted Modesto's rate structure for the water system until a rate study could be completed.
- ▶ Waterford, River Pointe and Hickman water systems all have structural deficiencies which need to be addressed in the short-term and long-term.
- ▶ Council has decided to move forward with consolidation of all 3 water systems; all water systems will pay the same rates.

Reasons for Water System Purchase

- ▶ Autonomy from Modesto; Develop own water rates - not Modesto's!
- ▶ Merge the water systems to improve water quantity and quality
- ▶ Address State mandated system deficiencies
- ▶ Sewer delinquency shut-off leverage
- ▶ Possibility of surface water access

Purpose of the Study

- ▶ Make sure sufficient money to operate the water systems
- ▶ Create adequate revenue for funding of capital improvement projects (CIP)
- ▶ Equitable cost recovery from all customer classes
- ▶ Establish appropriate rate schedule through July 1, 2021 (end of fiscal year 2022)

Proposition 218



- ▶ Fees/charges shall not exceed the funds required to provide the service.
- ▶ Fees/charges shall not be used for any other purpose than that for which it is imposed.
- ▶ Fees/charges shall not exceed the proportional cost of service to each property.
- ▶ Fees/charges based on potential/future use of the service is not permitted

Subsidies

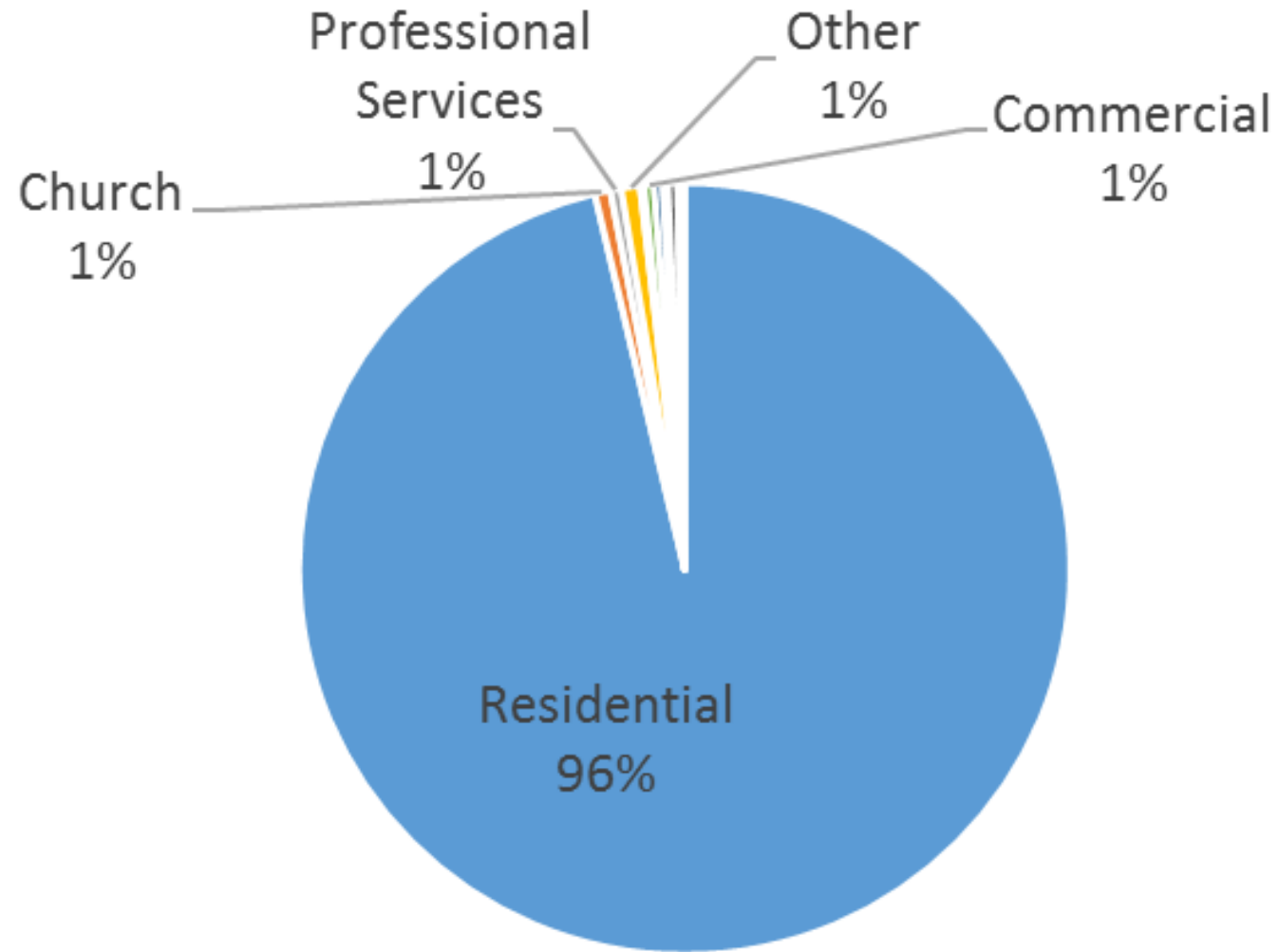
- ▶ Low-income and senior discounts and subsidies between customer types prohibited in rates
- ▶ Can provide subsidies if subsidy is:
 - ▶ funded by a discretionary fund (General Fund)
 - ▶ voluntary donations by other customers, or
 - ▶ approved as a special tax by 2/3^{rds} of rate payers



Prop 218 and Current Senior Discount

- ▶ Currently a 25% discounted rate for Low Income/Disabled; 5% for customers aged 65 years or more
- ▶ Discount means other customers paying more than their proportional cost of service
- ▶ According to Prop 218, fees/charges shall not exceed the proportional cost of service to each property.
 - ▶ Not funded by General Fund, voluntary donations, approved by 2/3 tax payer vote
 - ▶ Therefore, it is illegal to have customers subsidize others
 - ▶ Subsidy amount for current 150 customers is approximately \$7,000 under proposed rates.

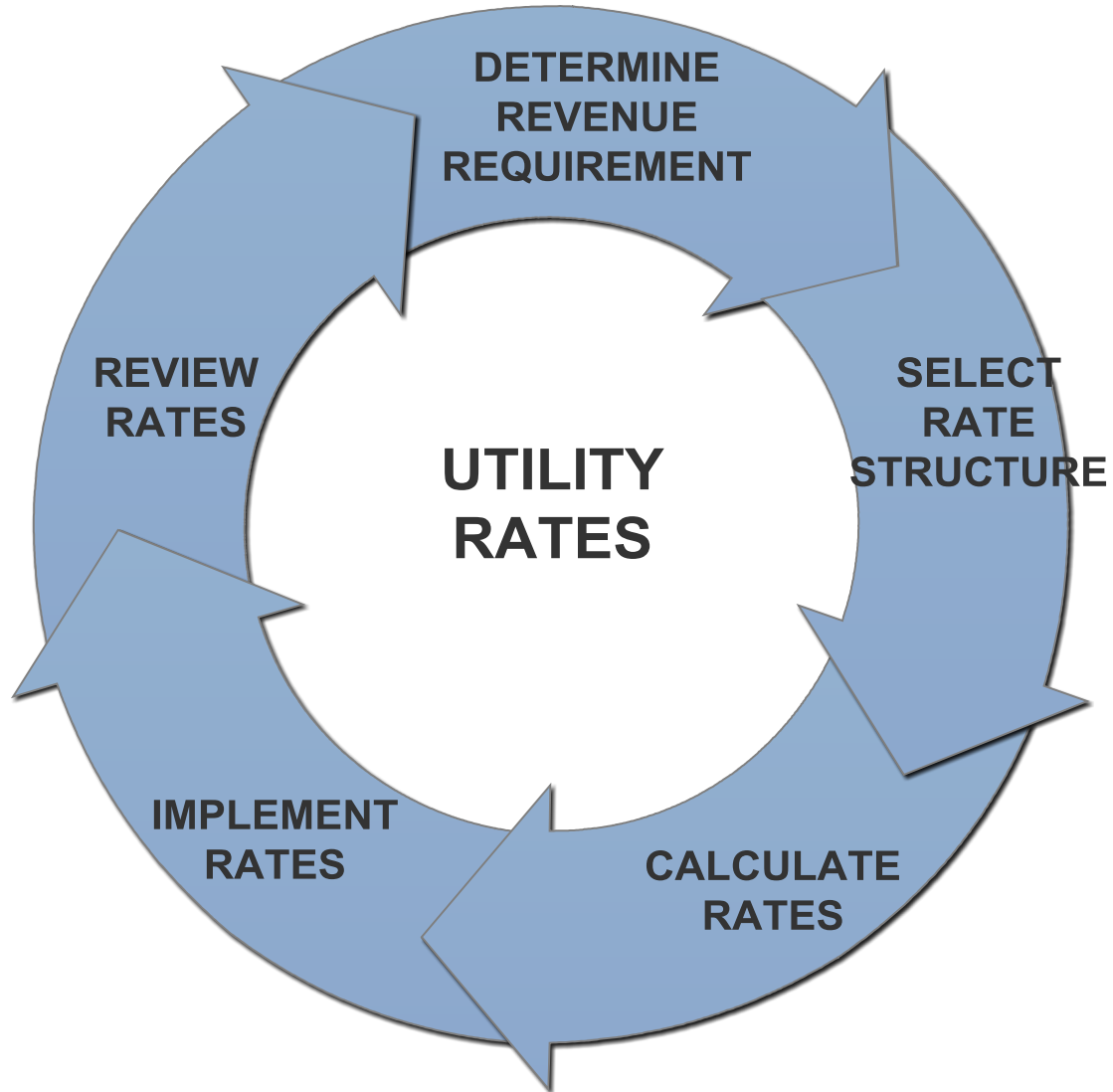
Customer Base



Why examine and raise the rates now?

- ▶ Adequately fund the water system so it can be operated safely and provide residents and businesses with clean, safe and reliable water.
- ▶ Create a fund and start putting aside money for future costs associated with long-term supply options (detailed in the Water Master Plan).
- ▶ Timely maintenance of existing facilities to ensure existing water sources remain viable.
- ▶ Build a small reserve for emergencies, higher than estimated capital costs, and possible future environmental standards.
- ▶ Ensure all customers are paying their fair share of system cost, ensuring compliance with Proposition 218.

Rate Setting Process



Rate Implementation

- ▶ Affects all properties with water service available to property
- ▶ Must provide a Public Hearing Notice including:
 - ▶ Amount of rate
 - ▶ Basis upon which rate is calculated
 - ▶ Reason for the rate
 - ▶ Date, time and location of public hearing
- ▶ One protest per parcel (could be owner or tenant but not both)
- ▶ Rate increases cannot be implemented if >50% of property owners protest

WATER MASTER PLAN AND CIP

Capital Projects

- ▶ **2013 (pre-purchase): TOTAL \$4.5 M**
 - ▶ Waterford: Identified six projects - \$2.9 M
 - ▶ Hickman: Identified well upgrades, new well, and pipeline replacement for \$1.6 M
- ▶ **2016 Water Master Plan: TOTAL \$17.8 M in 2016 \$'s**
 - ▶ Waterford: updated costs for six projects to \$5.8 M and
 - ❖ Added downtown alley pipe relocation (\$2.7 M)
 - ❖ Equipment/supplies/planning & environmental studies (\$1.9 M)
 - ❖ Surface water storage & booster pump station in 2026 (\$5.4 M)
 - ❖ These changes increased Waterford's project costs through 2026
 - ▶ Hickman: not estimated in the Master Plan

Rate Study CIP (through FY Ending 2026)

Project	Total Cost (2016 \$'s)	Total Cost (Future \$'s)
Estimated Project Costs		
Waterford Wells W242 and W244	\$1,437,000	\$1,615,000
Groundwater Exploration [1]	\$200,000	\$220,000
Water Conservation [2]	\$570,000	\$665,000
Consolidation of Water Systems [3]	\$3,250,000	\$3,520,000
Downtown Pipe Replacement	\$2,725,000	\$3,405,000
Supply Strategy / Surface Water Project [4]	\$1,200,000	\$1,485,000
Transmission Mains	\$500,000	\$645,000
Misc. Well Improvements	\$575,000	\$600,000
River Pointe Meter Replacement	\$105,000	\$110,000
SCADA Improvements [5]	\$400,000	\$420,000
New Equipment / Supplies	\$1,000,000	\$1,180,000
Master Plan and Rate Study	\$200,000	\$235,000
Total Estimated Project Costs	\$12,162,000	\$14,100,000

[1] Groundwater exploration costs reduced from \$300k to \$200k.

[2] Includes hard costs and program management costs at \$15,000 in 2017 and \$25,000 each year thereafter.

[3] Total estimated consolidation costs for all water systems including Hickman to benefit entire consolidated system.

[4] Not in the Water Master Plan until 2030. Includes costs for studies and securing water rights/options for surface water and possibly some hard costs.

[5] \$400k added for SCADA.

Funding of Capital Improvements by Year through 2022

Item	Total Next 6 years	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	Year 6 2022
	Future Dollars (rounded)						
Cash - Capital Fund	\$2,650,000	\$345,000	\$533,000	\$330,000	\$440,000	\$435,000	\$567,000
Cash - Operations Fund	\$1,060,000	\$36,000	\$127,000	\$131,000	\$248,000	\$255,000	\$263,000
Debt - Capital Fund	\$5,523,000	\$386,000	\$1,061,000	\$2,459,000	\$1,617,000	\$0	\$0
TOTAL	\$9,233,000	\$767,000	\$1,721,000	\$2,920,000	\$2,305,000	\$690,000	\$830,000

Assumed Debt Financed: --- Well replacements in Waterford,
 --- Consolidation of water systems,
 --- Portion of well improvements in Waterford

METHODOLOGY

Assumptions

- ▶ Annual operation and maintenance costs increase based on typical cost increases in the region.
 - ▶ All operations costs increased each year by 3.5%
- ▶ Water use based on best data available:
 - ▶ River Pointe - actual consumption Jan-Dec 2015
 - ▶ Waterford & Hickman- estimated for 12 months based on actual consumption Aug 2015- Feb 2016
- ▶ System rehabilitation costs introduced to the rate structure gradually, reaching 100% by 2022.
 - ▶ Includes a meter replacement program
- ▶ New rate structures in effect January 1, 2017; thereafter every July 1.
- ▶ All three water systems consolidated into one water system

Consolidation Assumptions

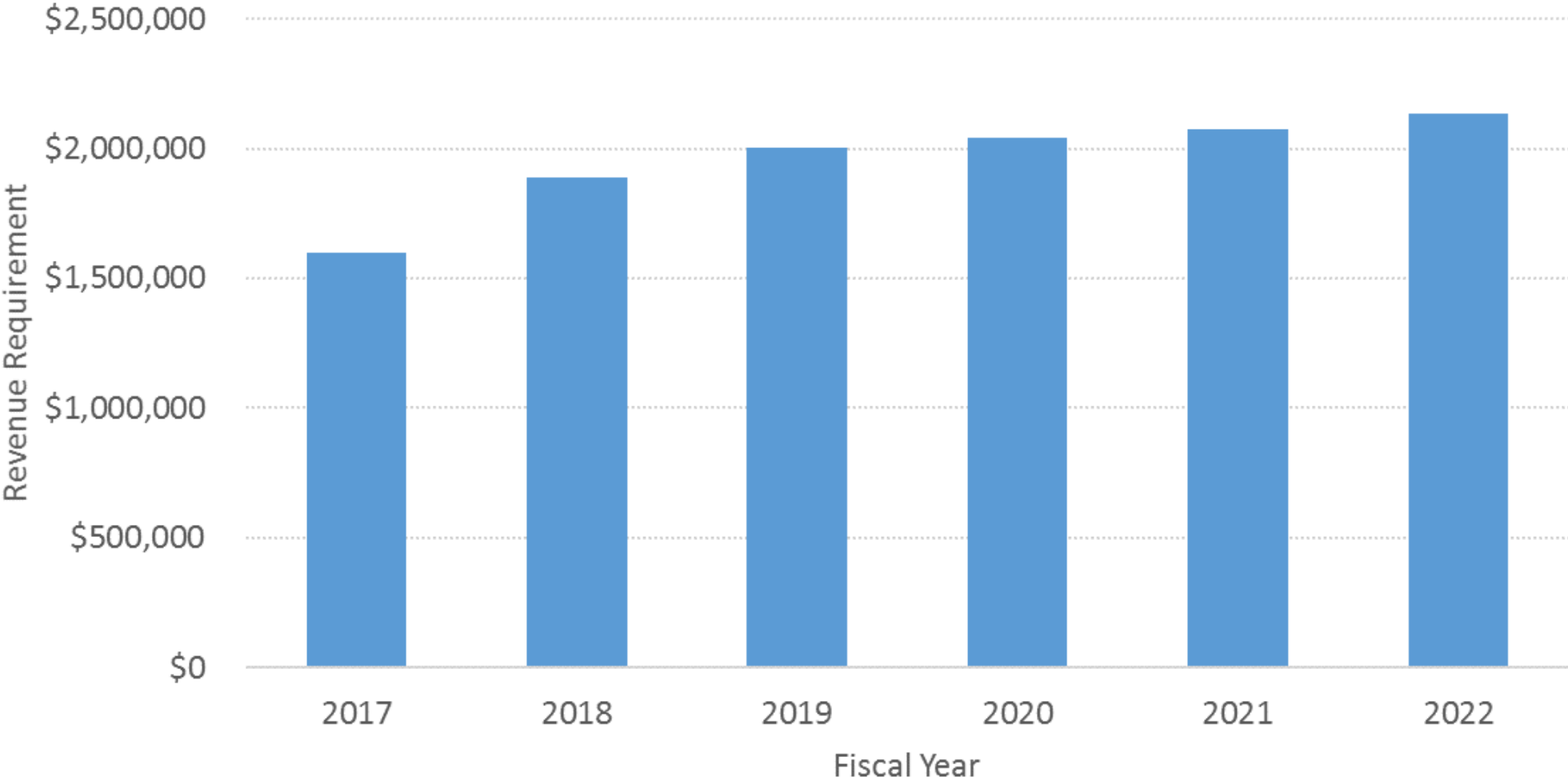
- ▶ Waterford, River Pointe and Hickman are connected via pipeline
- ▶ Same rate schedule applies to all systems
- ▶ Assumes consolidation is paid for with a 30-year, 0% interest loan from the Department of Water Resources State Revolving Fund
 - ▶ Potential exists for better terms, including grant funding, but this cannot be assumed for financial planning purposes

Meter Assumptions

- ▶ All SF residential 1” meters will pay ¾” meter rates
- ▶ CA Residential Code Section R313 (fire sprinklers)
 - ▶ “An automatic sprinkler system shall be installed and maintained in all newly constructed California Residential Code regulated buildings.”
 - ▶ All new residential development is required to install 1” meters in order to have sufficient flow for sprinklers



Revenue Requirement Increase



Revenue Requirement

(amount of \$ each year from water rates)

- Operating Expenses - *increase 3.5% each year from fiscal year 2015/ 16*
 - General Government
 - Supplies and Service
 - Water Conservation
 - Planning Studies
 - Utilities
 - Personnel
- Capital Projects and System Rehabilitation - *per City improvement plans and HEC calculations of asset replacement costs*
- Debt Service - *per rate model calculations*
- Operating Reserve - Minimum 3 months, Target 4 months

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
	Figures rounded to \$1,000					
Revenue Requirement	\$1,601,000	\$1,889,000	\$2,001,000	\$2,042,000	\$2,074,000	\$2,133,000

Debt Service

Project	Year Improved	Total Estimated Costs	Estimated Annual Debt Service
		Future Dollars (rounded)	
Well Improvements [1]	2018	\$425,000	\$19,000
Consolidation of Water Systems [2]	2019	\$3,871,000	\$129,000
Well Replacements W242 & W244 [1]	2020	\$1,779,000	\$79,000
Total		\$6,075,000	\$132,000
Estimated Total Financing Cost		\$748,000	

Terms:

[1] 2.0% interest, 30 years

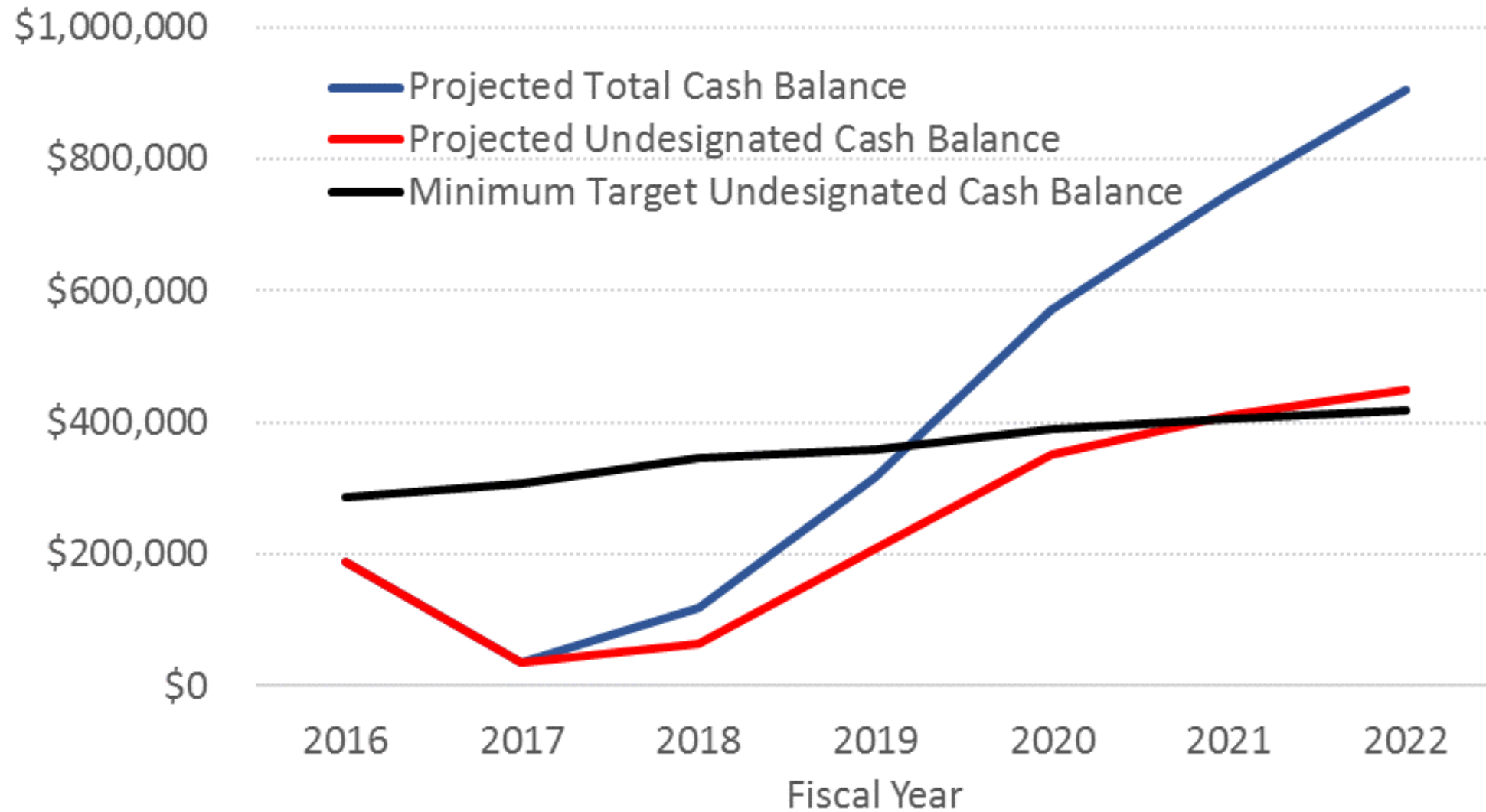
[2] 0.0% interest, 30 years

System Rehabilitation Costs

Depreciation	Fiscal Year Ending					
	2017	2018	2019	2020	2021	2022
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Existing Assets Annual Depreciation	\$273,067	\$273,067	\$273,067	\$273,067	\$273,067	\$273,067
New Assets Annual Depreciation	\$21,973	\$56,559	\$101,971	\$143,310	\$155,023	\$168,581
Total Annual Depreciation	\$295,040	\$329,625	\$375,037	\$416,376	\$428,090	\$441,647
Percentage of Depreciation in Rates	0%	20%	40%	60%	80%	100%
Estimated System Rehabilitation Cost	\$0	\$65,900	\$150,000	\$249,800	\$342,500	\$441,600

Source: HEC.

Water Fund Cash Balances



WATER RATE RESULTS

New Rate Schedule

	<i>New Rates Effective</i>	<i>1/1/2017</i>	<i>7/1/2017</i>	<i>7/1/2018</i>	<i>7/1/2019</i>	<i>7/1/2020</i>	<i>7/1/2021</i>
	Current						
	[1]						
Monthly Service Charge		All Water Systems [2]					
3/4"	\$15.03	\$26.94	\$31.47	\$33.29	\$33.54	\$33.63	\$34.14
1"	\$21.33	\$42.83	\$50.07	\$52.98	\$53.36	\$53.50	\$54.30
1.5"	\$36.90	\$105.33	\$123.35	\$130.56	\$131.46	\$131.73	\$133.66
2"	\$55.68	\$167.55	\$196.36	\$207.86	\$209.25	\$209.65	\$212.71
3"	\$105.80	\$366.34	\$429.36	\$454.51	\$457.55	\$458.41	\$465.09
4"	\$162.13	\$631.96	\$740.13	\$783.39	\$788.74	\$790.37	\$801.99
6"	\$318.47	\$1,303.99	\$1,528.91	\$1,618.58	\$1,629.26	\$1,632.16	\$1,655.86
Use Charge per HCF	\$1.40	\$1.54	\$1.79	\$1.88	\$1.89	\$1.89	\$1.92

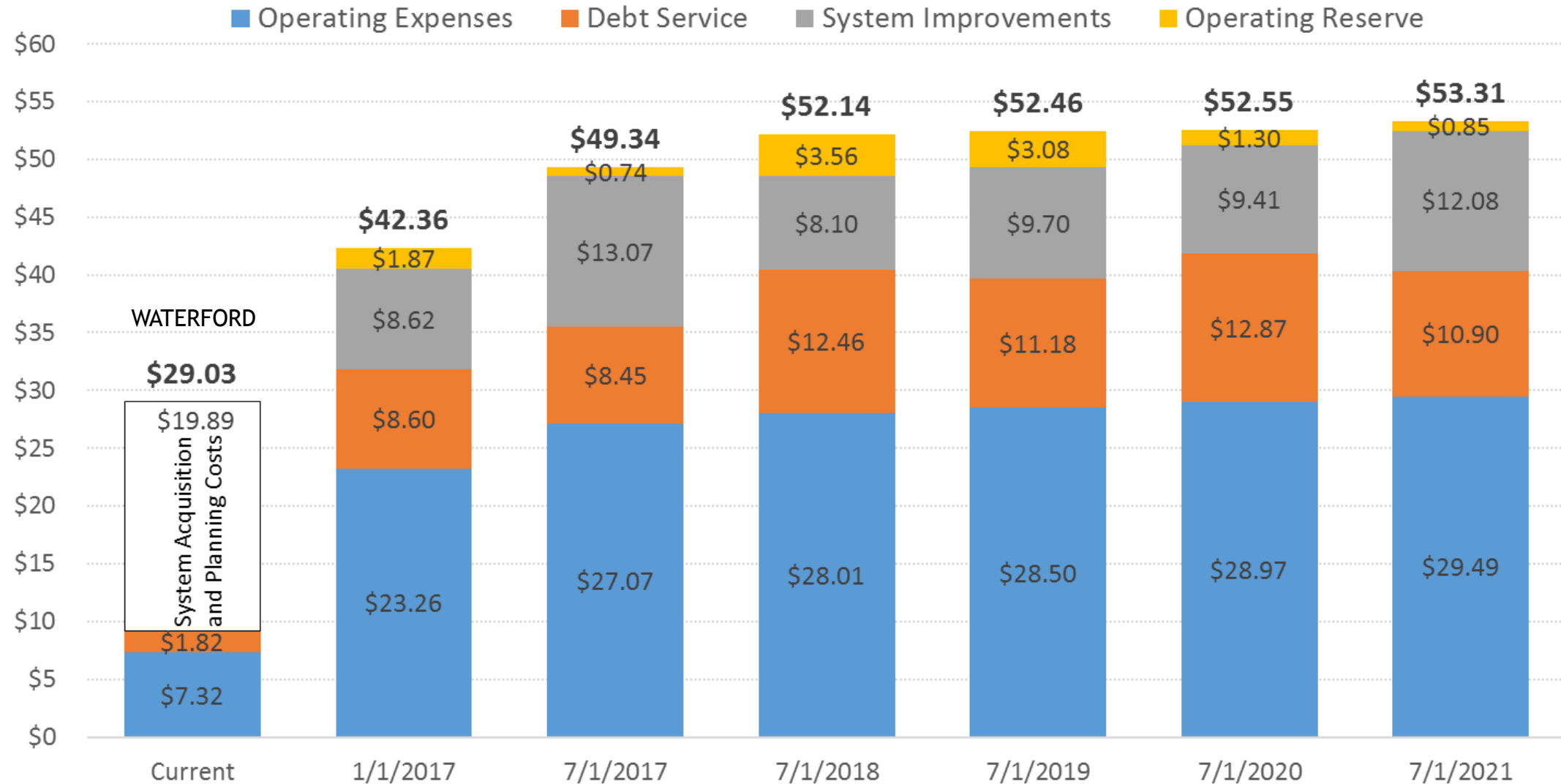
Source: HEC.

[1] Current rates are for Waterford and Hickman. River Pointe current charges are \$13.40 per residential unit per month and \$1.43 per hundred cubic feet.

[2] Waterford, River Pointe, and Hickman water rates.

Components of a Typical Single Family Bill

using 10 HCF



Affordability

Item	Water Service Area		
	Waterford	River Pointe	Hickman
Current			
Bill using 10 HCF	\$29.03	\$27.70	\$30.43
MHI of Service Area	\$3,722	\$3,722	\$4,000
Bill as % of MHI	0.8%	0.7%	0.8%
January 1, 2017			
Bill using 10 HCF	\$42.36	\$42.36	\$42.36
MHI of Service Area [1]	\$3,736	\$3,736	\$3,736
Bill as % of MHI	1.1%	1.1%	1.1%

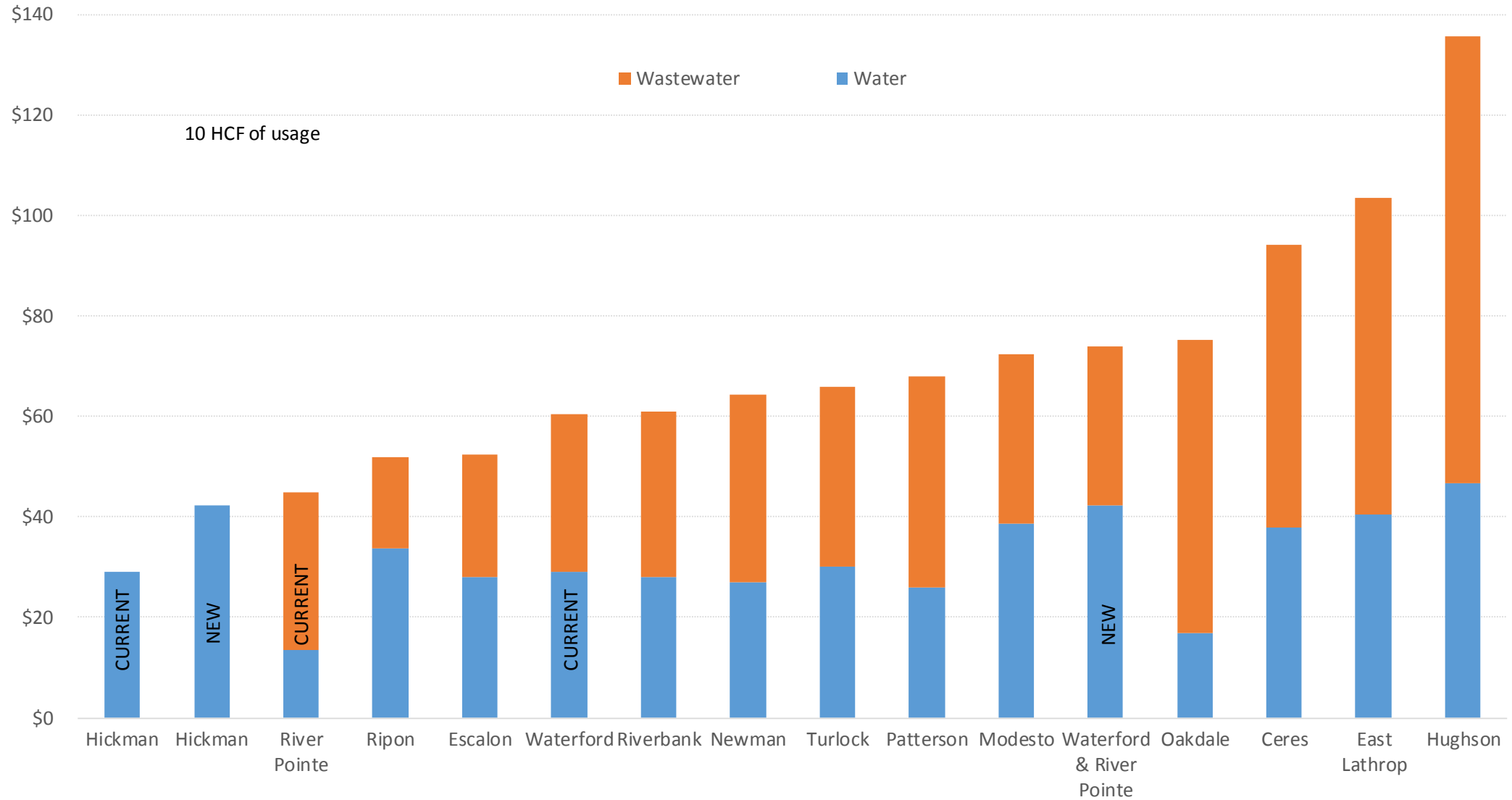
Source: HEC and US Census Bureau.

bill aff

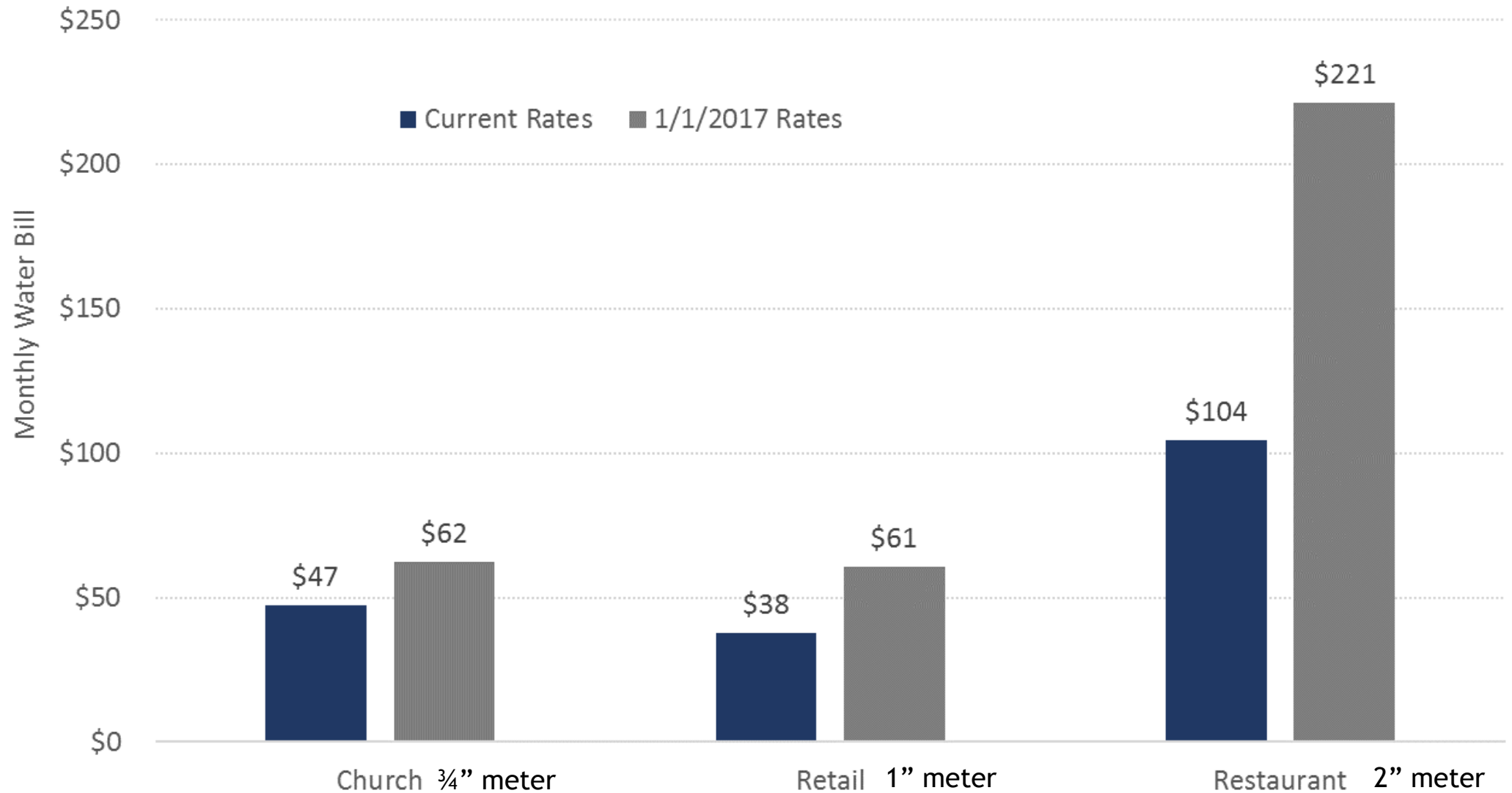
[1] Weighted average MHI for Waterford and Hickman.

Regional Utility Bill Comparison

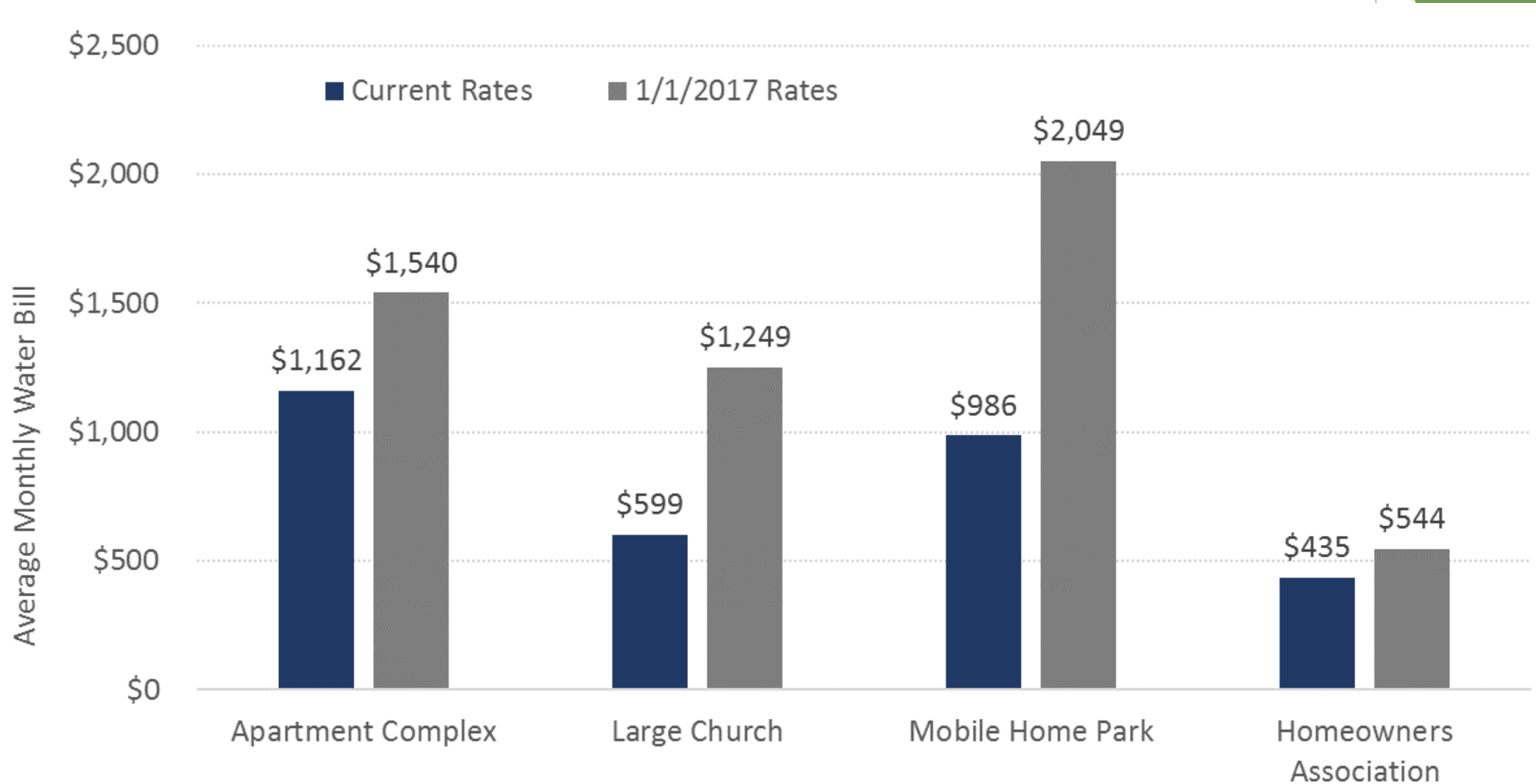
Typical Monthly Bill for a Single Family Home with 3/4" Meter



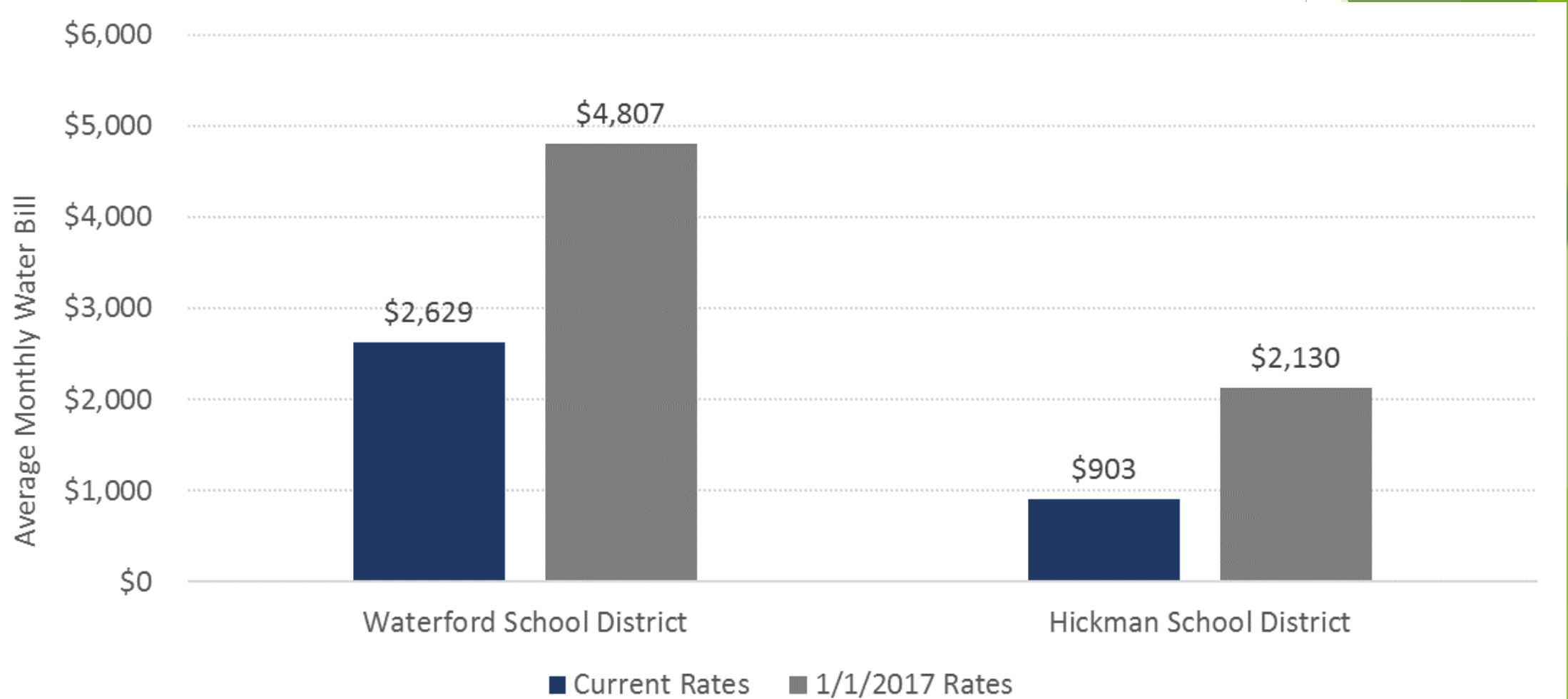
Average Monthly Impact to Non-Residential Users



Average Monthly Impact to Large Water Users *(each account has multiple meters)*



Average Monthly Impact to Waterford and Hickman School Districts



CONNECTION FEE RESULTS

Waterford Water Connection Fee per ¾” Meter

Current:
\$7,052

1/1/2017:
\$6,260

