

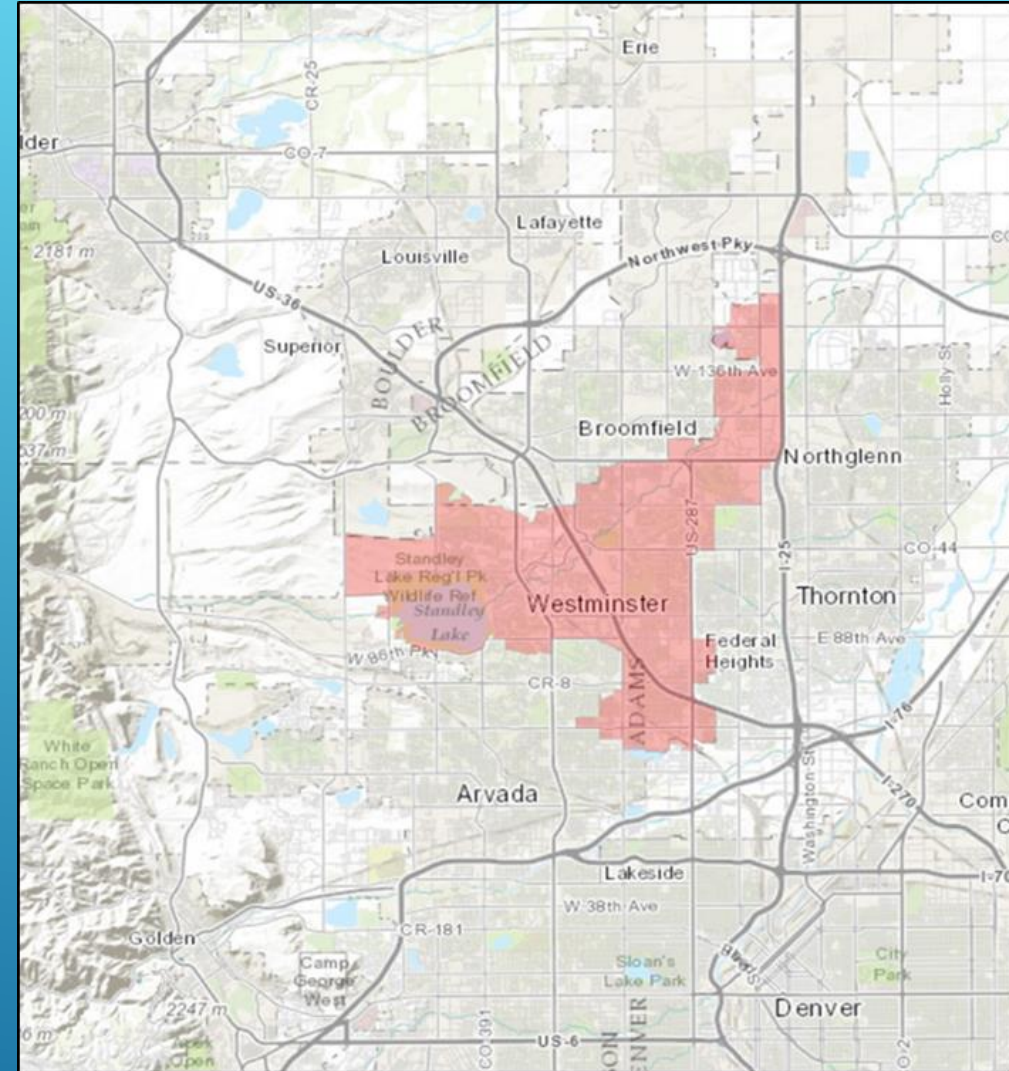
CONSERVATION LIMITS RATE INCREASES FOR COLORADO UTILITY

DEMAND REDUCTIONS OVER 30 YEARS HAVE
DRAMATICALLY REDUCED CAPITAL COSTS


Stu Feinglas, Senior Analyst, City of Westminster

WESTMINSTER, COLORADO

- ▶ Located between Boulder and Denver
- ▶ Municipal water and wastewater
- ▶ 134,000
- ▶ 32,600 accounts
- ▶ Water use
 - ▶ 75% residential
 - ▶ 25% commercial
- ▶ Buildout within a working generation



WHY ARE MY RATES GOING UP AGAIN WHEN I KEEP CONSERVING WATER?

- ▶ Water and wastewater rates have increased faster than the Consumer Price Index (CPI) over the past 15 years.
 - ▶ Long term conservation coupled with short term drought response has reduced demands.
 - ▶ Some utilities have experienced revenue shortfalls.
 - ▶ Customers are confused.
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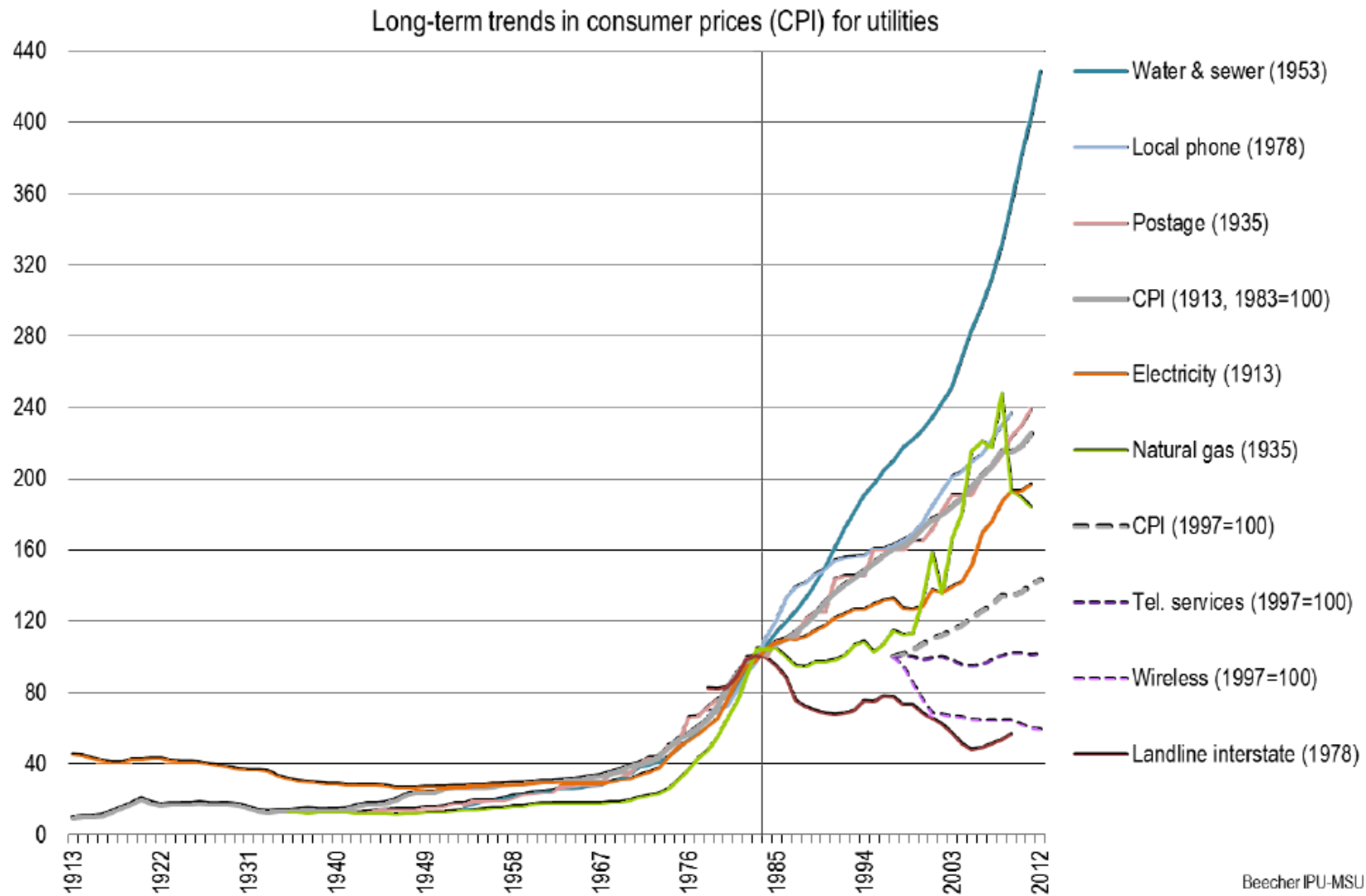
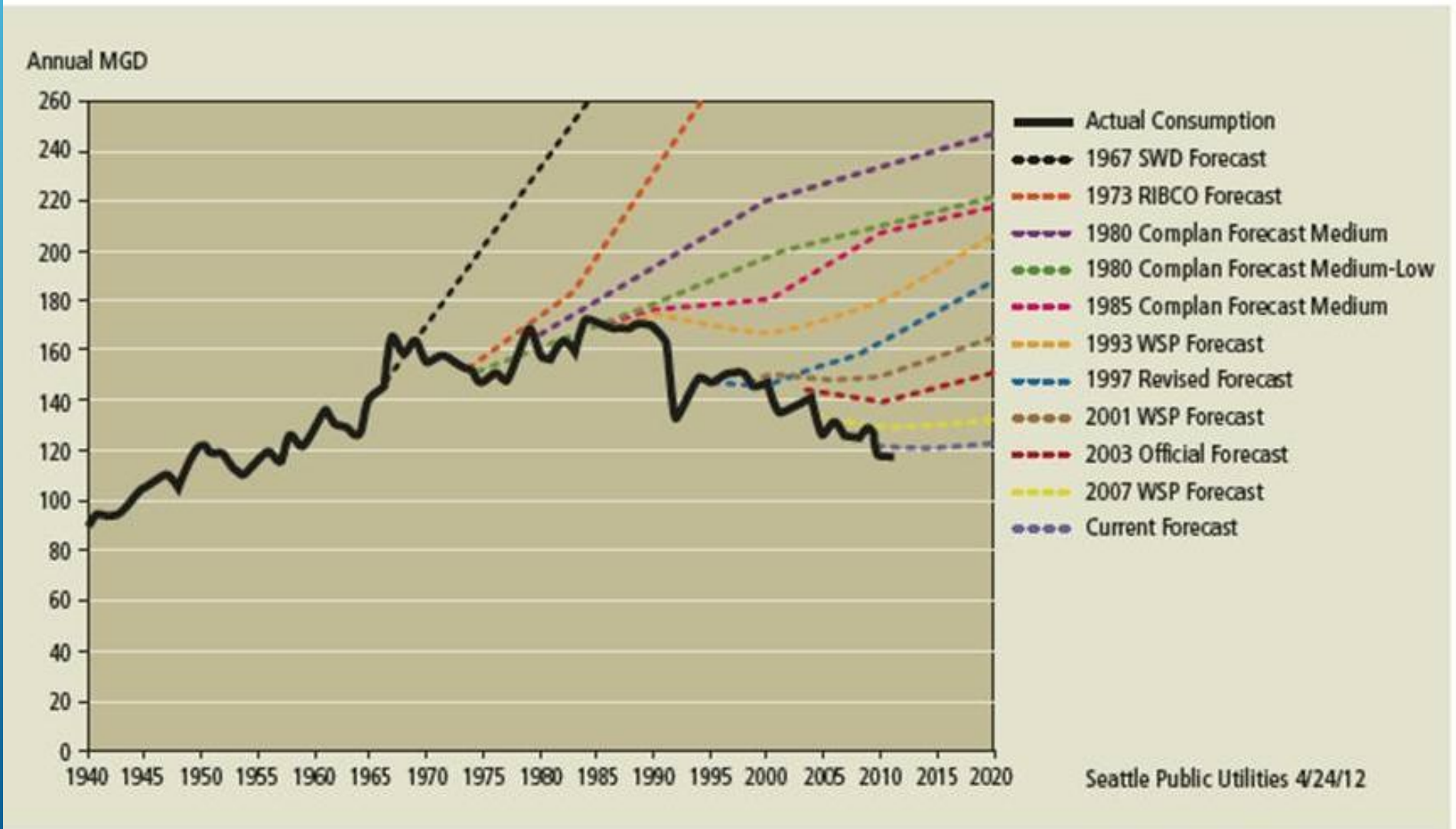


Exhibit 1. Long-term trends in the Consumer Price Index (CPI) for utilities (1913-2012).
 The index is set to 100 for 1982-1984 except for telephone and wireless services, where the index is set to 100 for 1997. Date () indicates start of series.

A BRIEF HISTORY OF DEMAND FORECASTING IN SEATTLE




WESTMINSTER'S AVOIDED COST ANALYSIS

- ▶ To examine the impact of conservation on rates Westminster looked at marginal costs due to the buildout requirements by removing conservation from the equation.
- ▶ *Conclusion: Reduced water use in Westminster since 1980 has resulted in significant savings in both water resource and infrastructure costs, saving residents and businesses 105% in tap fees and 111% in rates compared to what they would have been without conservation.*

CONSERVATIVE SCENARIO ASSUMPTIONS

HYPOTHETICAL ROLLBACK OF CONSERVATION

- ▶ Reclaimed system not included
 - ▶ Potable water use was increased
 - ▶ Sewer Savings not included
 - ▶ Rate structure changes
 - ▶ Inclined blocks and seasonal
 - ▶ Rebate programs
 - ▶ HE fixtures and appliances
 - ▶ Changes to plumbing codes
 - ▶ Landscape regulations and Xeriscape
 - ▶ Education
 - ▶ Attitude
- 

PROJECT DESCRIPTION

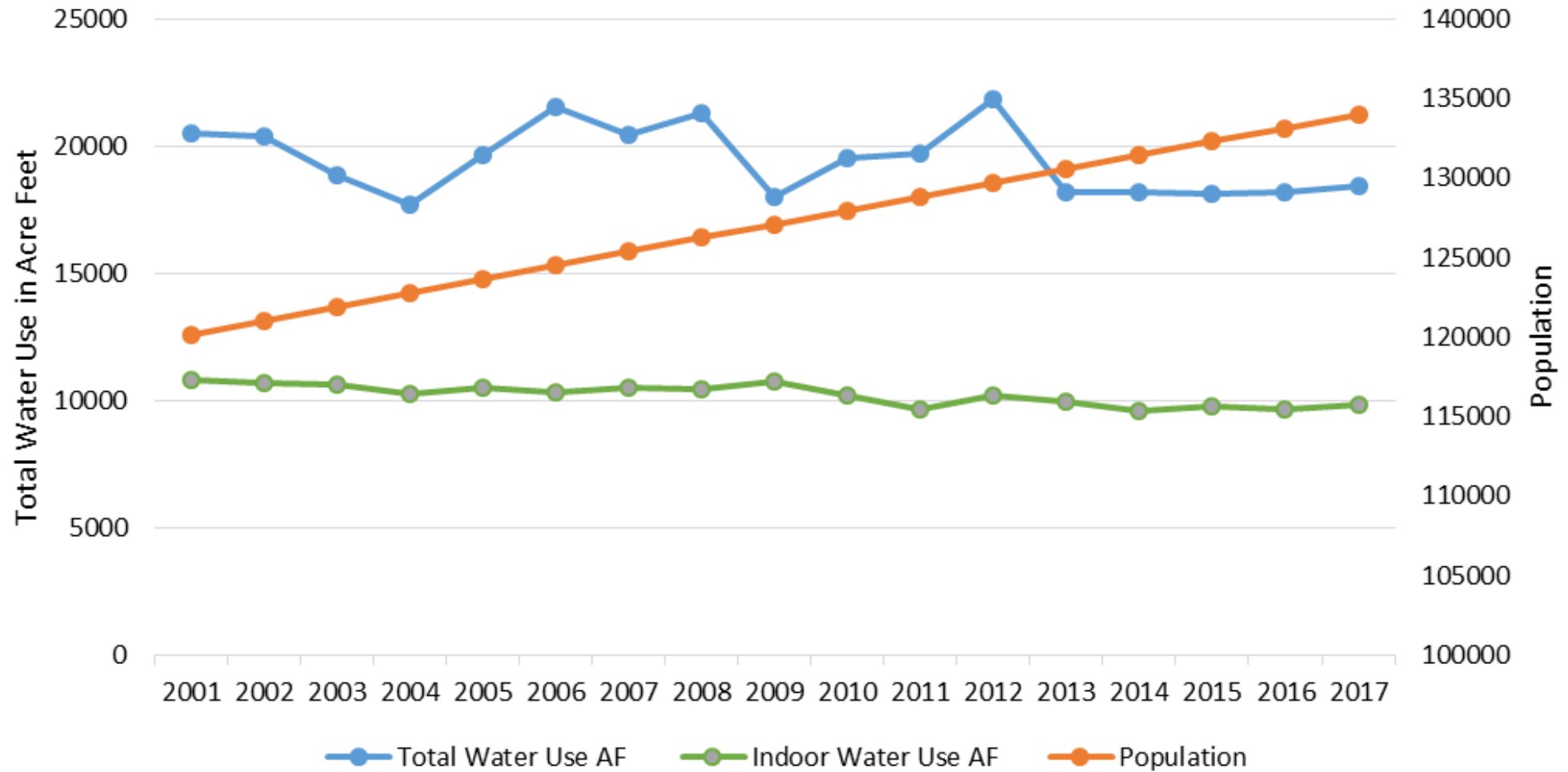
- ▶ As a result of conservation, Westminster's citywide per capita water use has been reduced 28% since 1980.
- ▶ Since 1980 (37 years) rates have increased while water use has gone down per SFD home
 - ▶ Annual water cost increase per home =
22% 1980 to 2012 in 2012 dollars
 - ▶ .7% increase per year
- ▶ Staff researched the effect on rates and tap fees (since 1980) had no conservation measures been implemented.

1980 VS. 2017

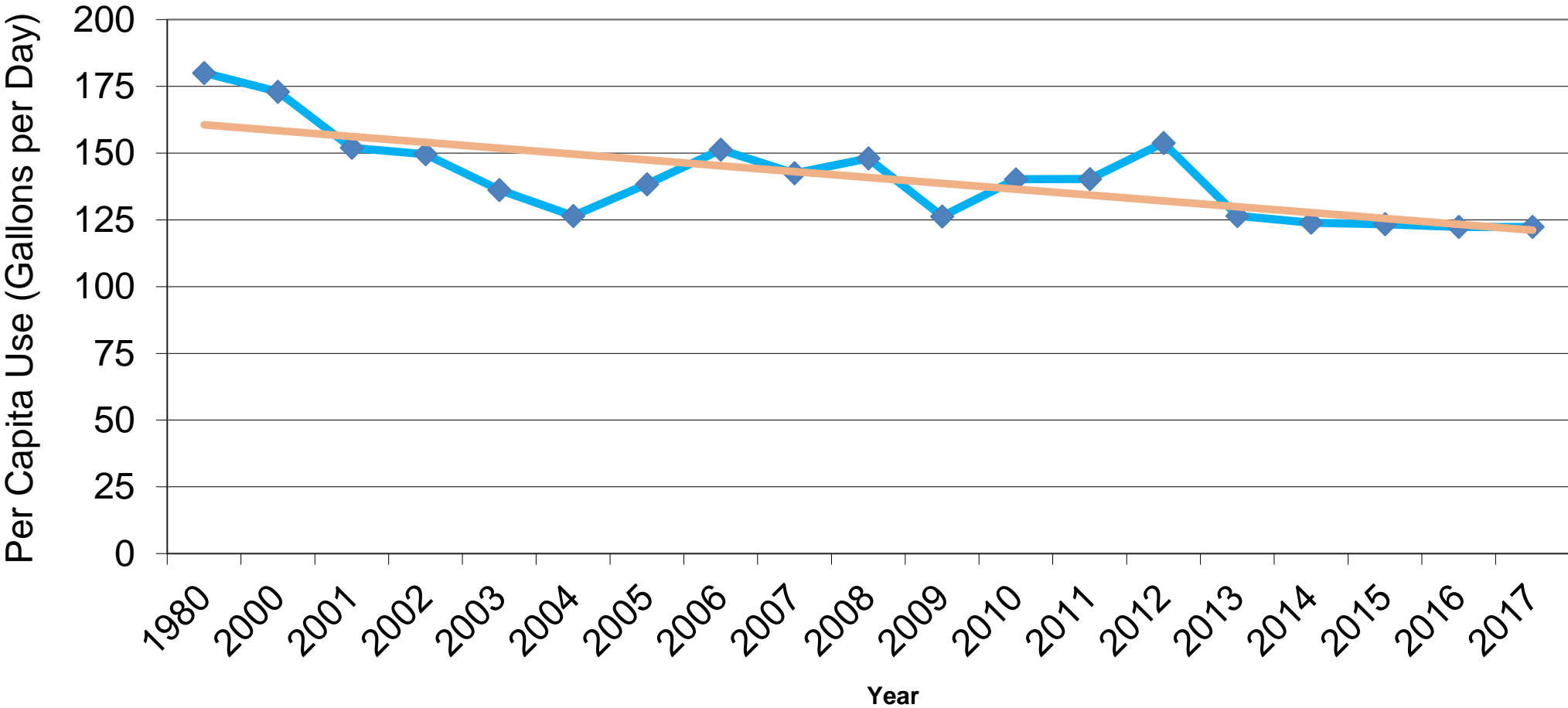


Single Family Water Bills 1980 vs. 2017	Amount	37 Year Average
1980 Annual Water Bill	\$120.00	
2017 Annual Average water Bill	\$515.00	
1980 Annual Water Bill Adjusted to 2017 (CPI)	\$380.00	5.85% (Total 216%)
1980-2017 Annual Unrelated to CPI	\$135.00	\$3.65
Unrelated to CPI Monthly	\$11.25	\$0.30

Water Use vs. Served Population 2001 - 2017

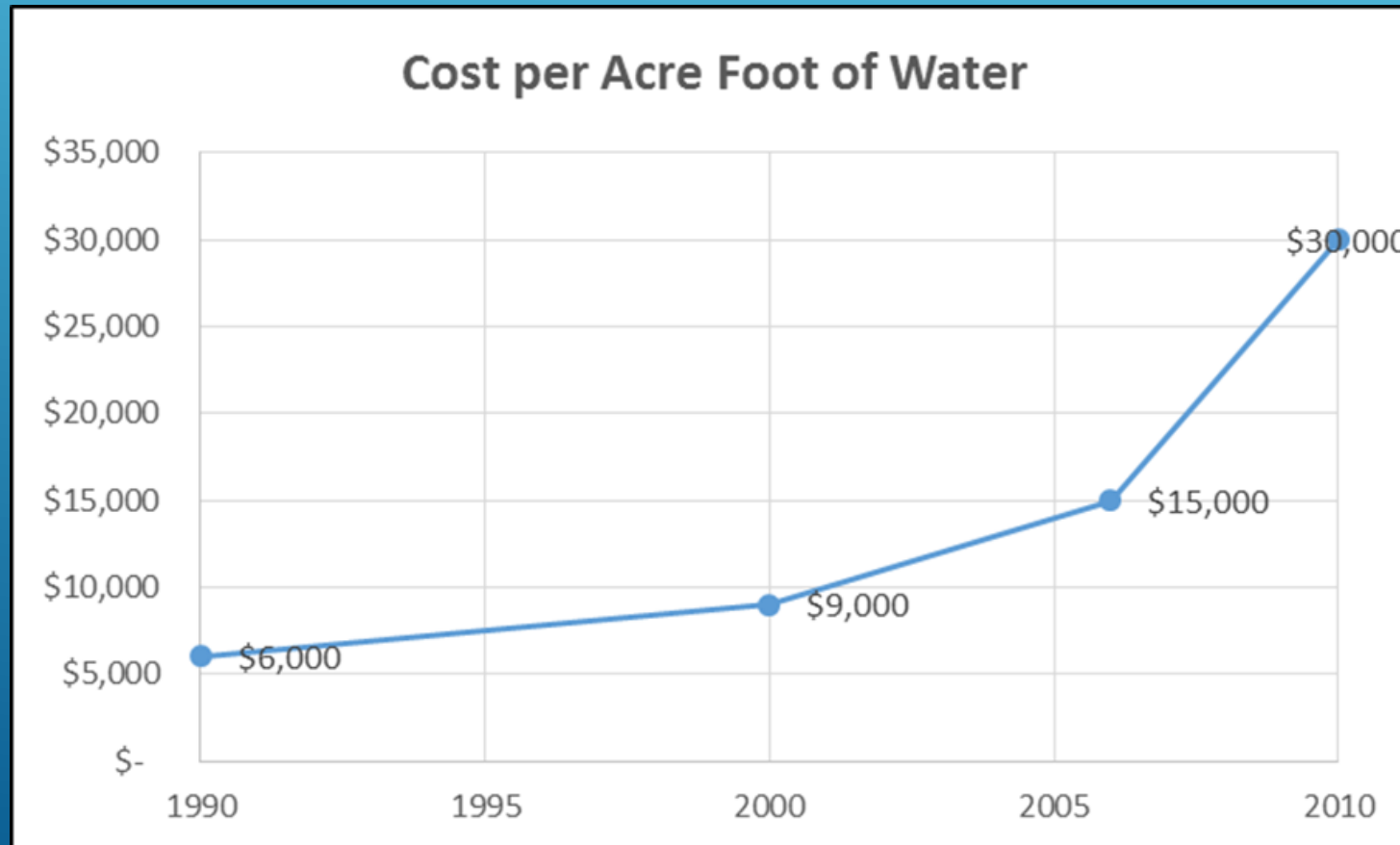


Per Capita Water Use (Gallons per Day) Since 1980



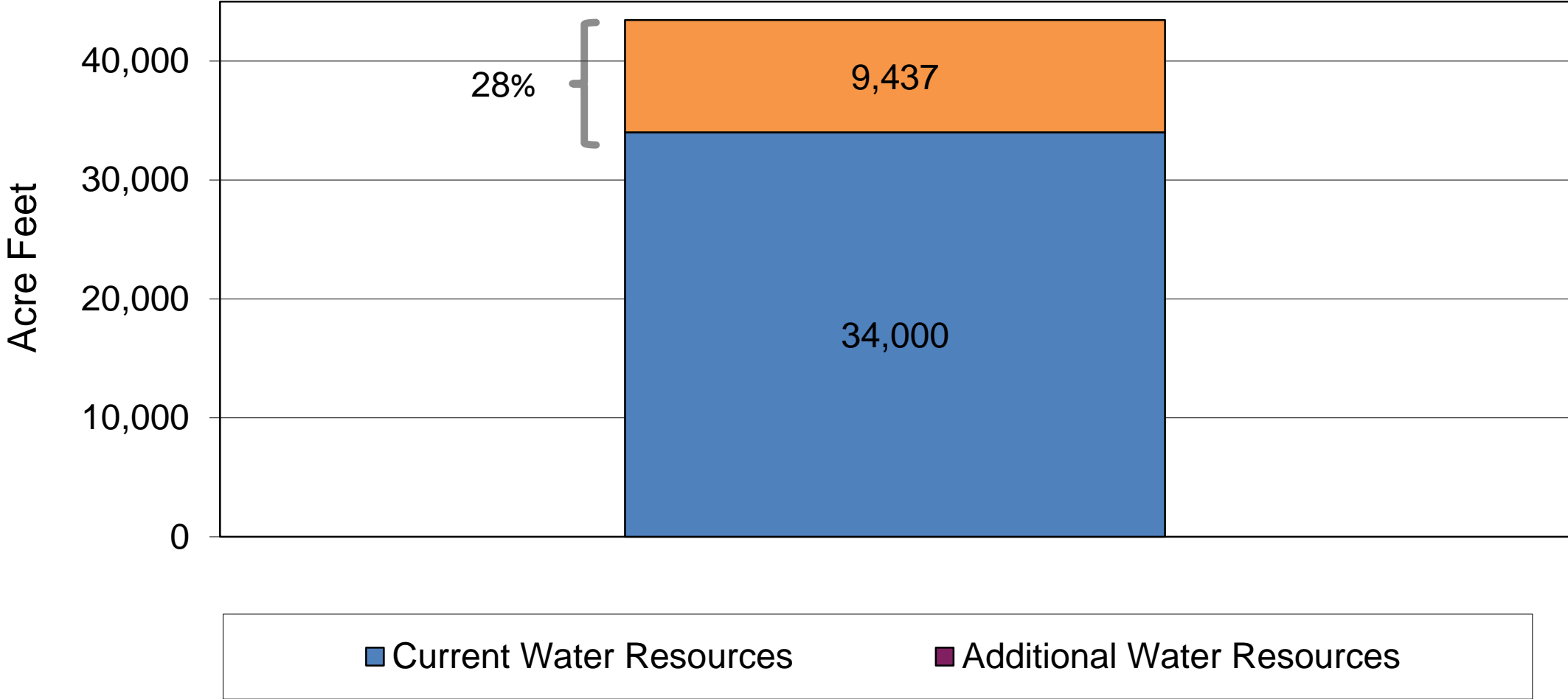
CONSERVATIVE SCENARIO ASSUMPTIONS

Increased regional water demands would have placed stress on limited supply of South Platte basin water, which would have resulted in:



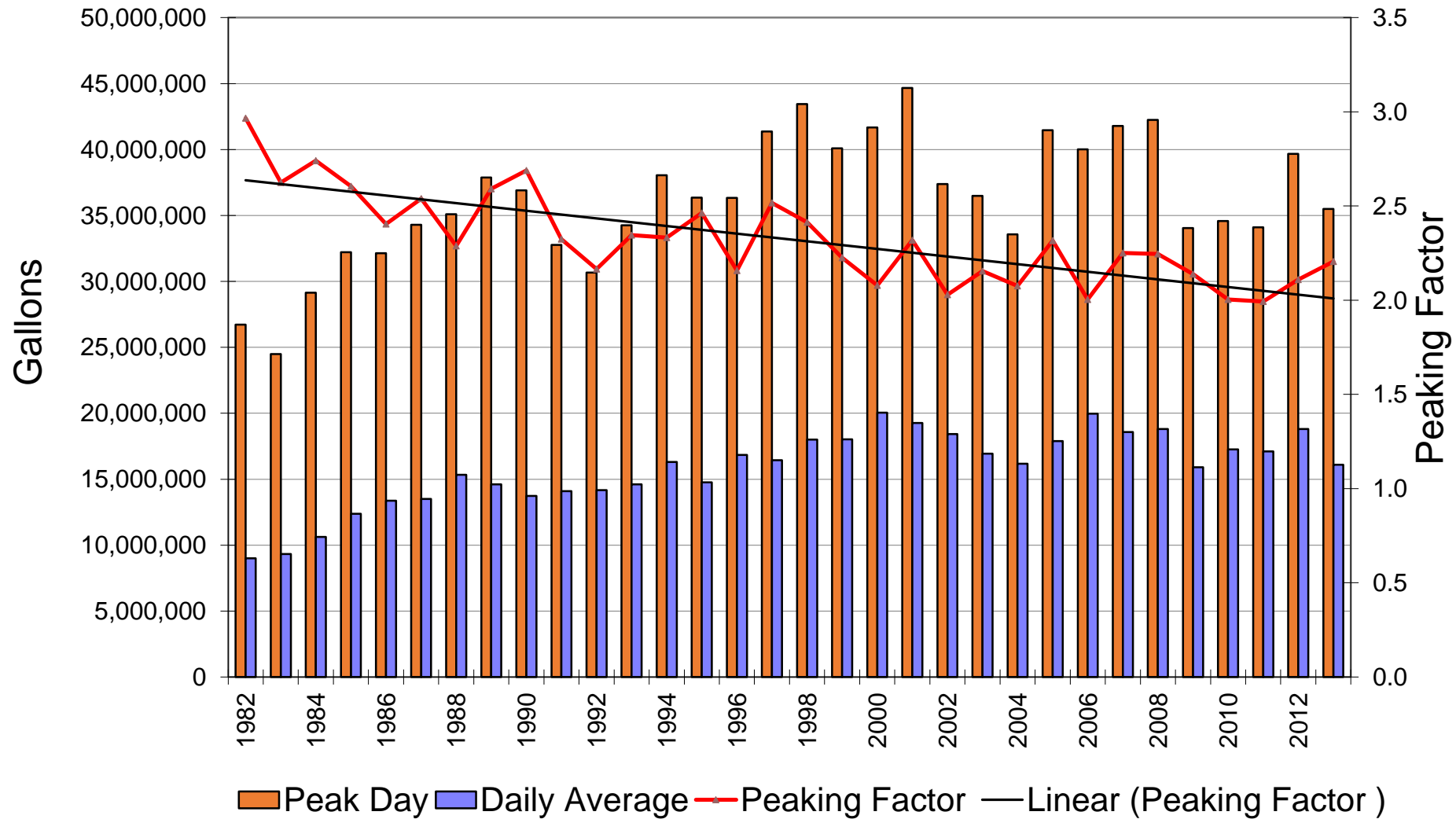
- ▶ Higher water resource costs
- ▶ Higher rates
- ▶ Limited economic growth

Projected Buildout Water Demand

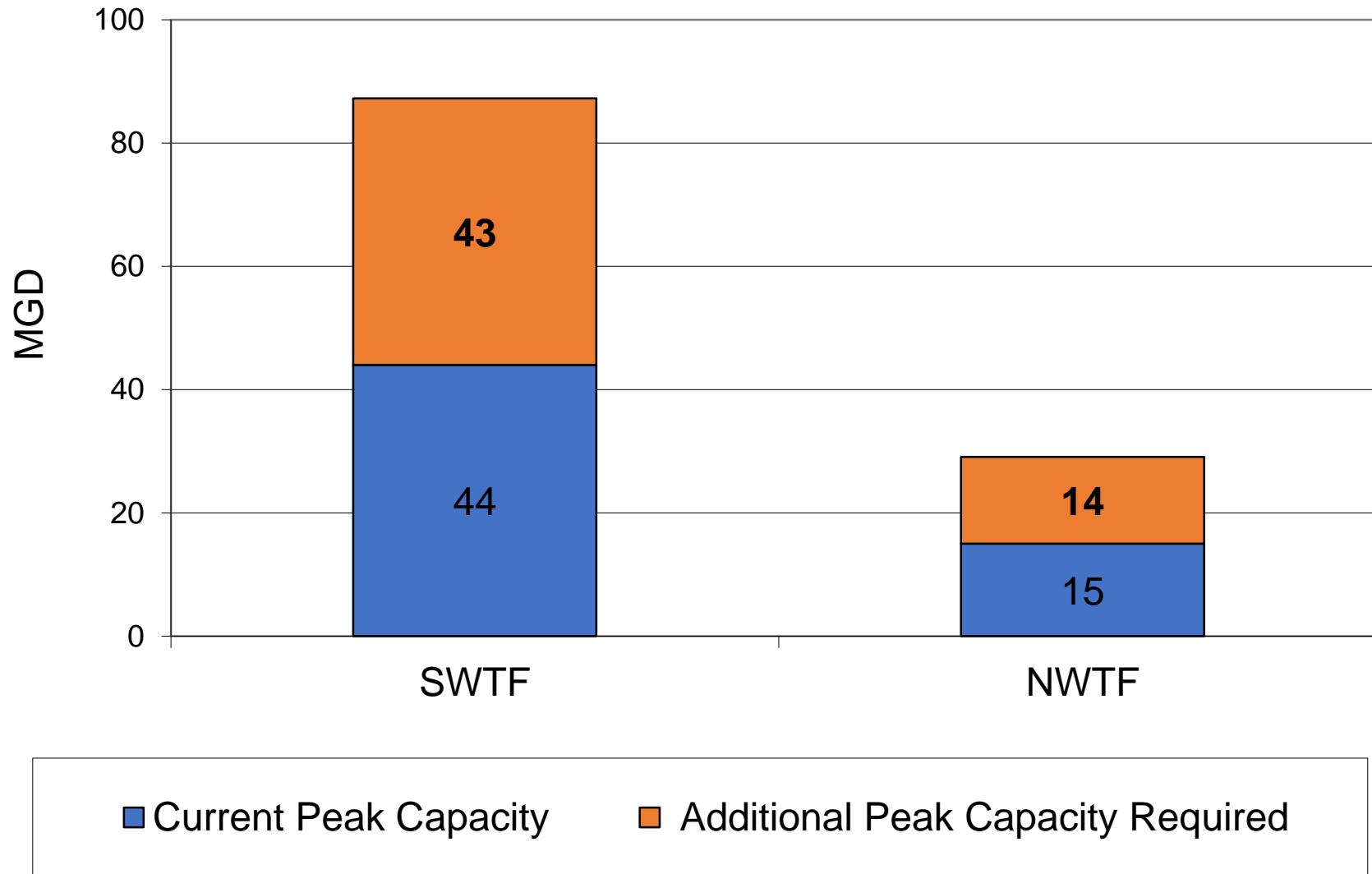


Potable Water Production

Peak Day, Daily Average, Peaking Factor

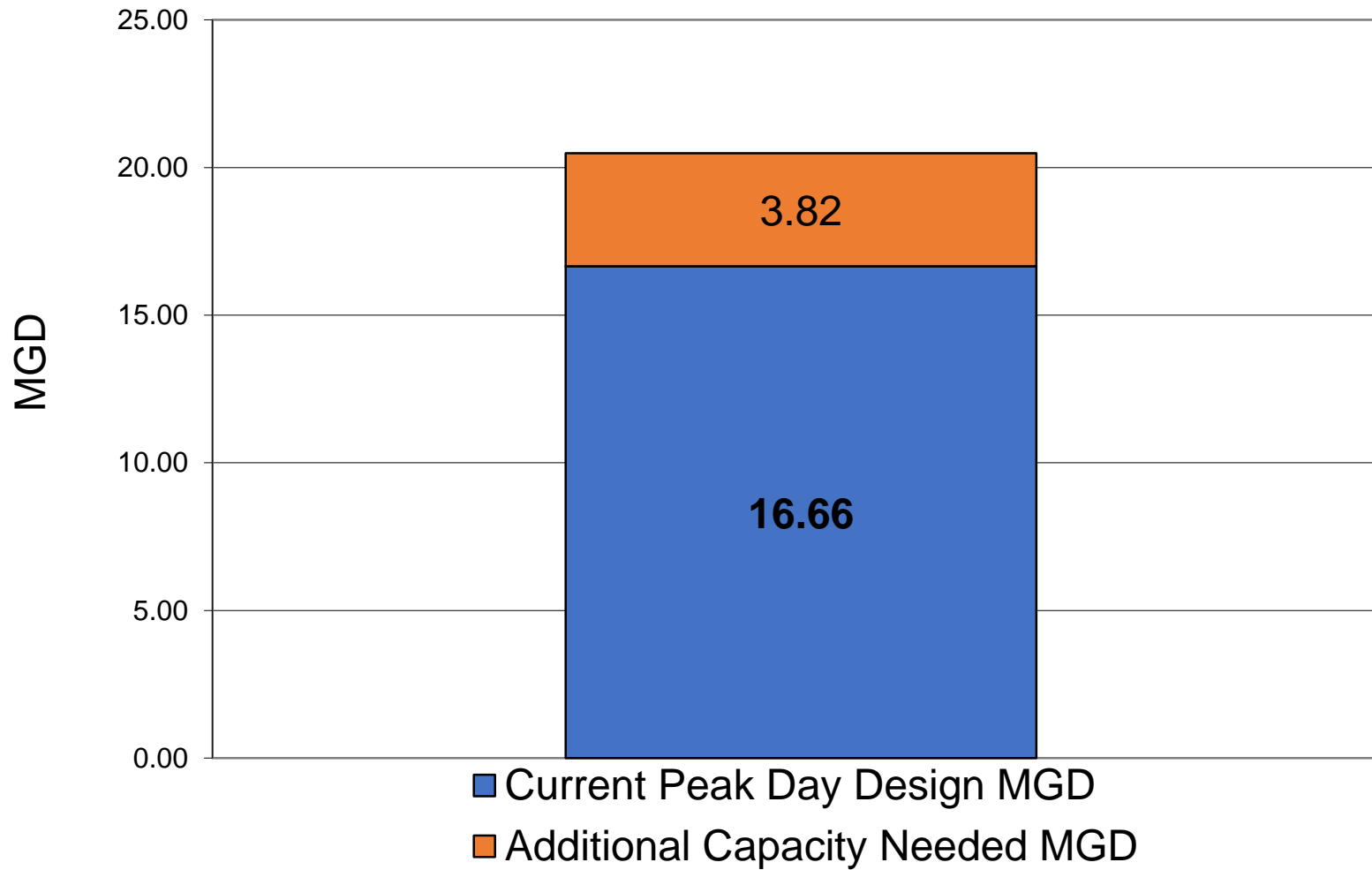


Water Treatment Plants




Cost: 57MGD * \$4.4M/MGD = \$250.8M

Wastewater Treatment Facility

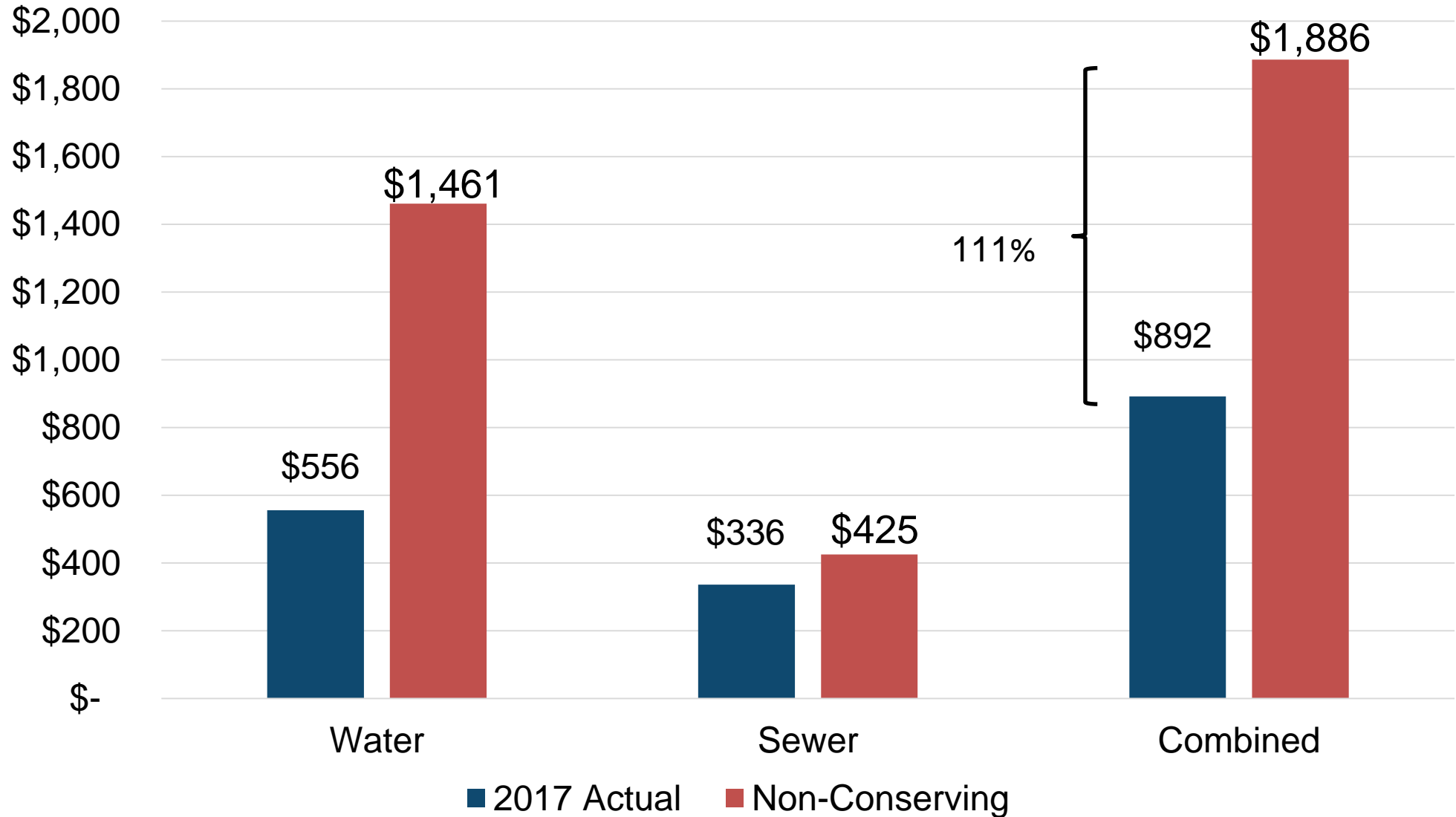


Cost: 3.8 MGD * \$8,000,000/MGD = \$30.4M

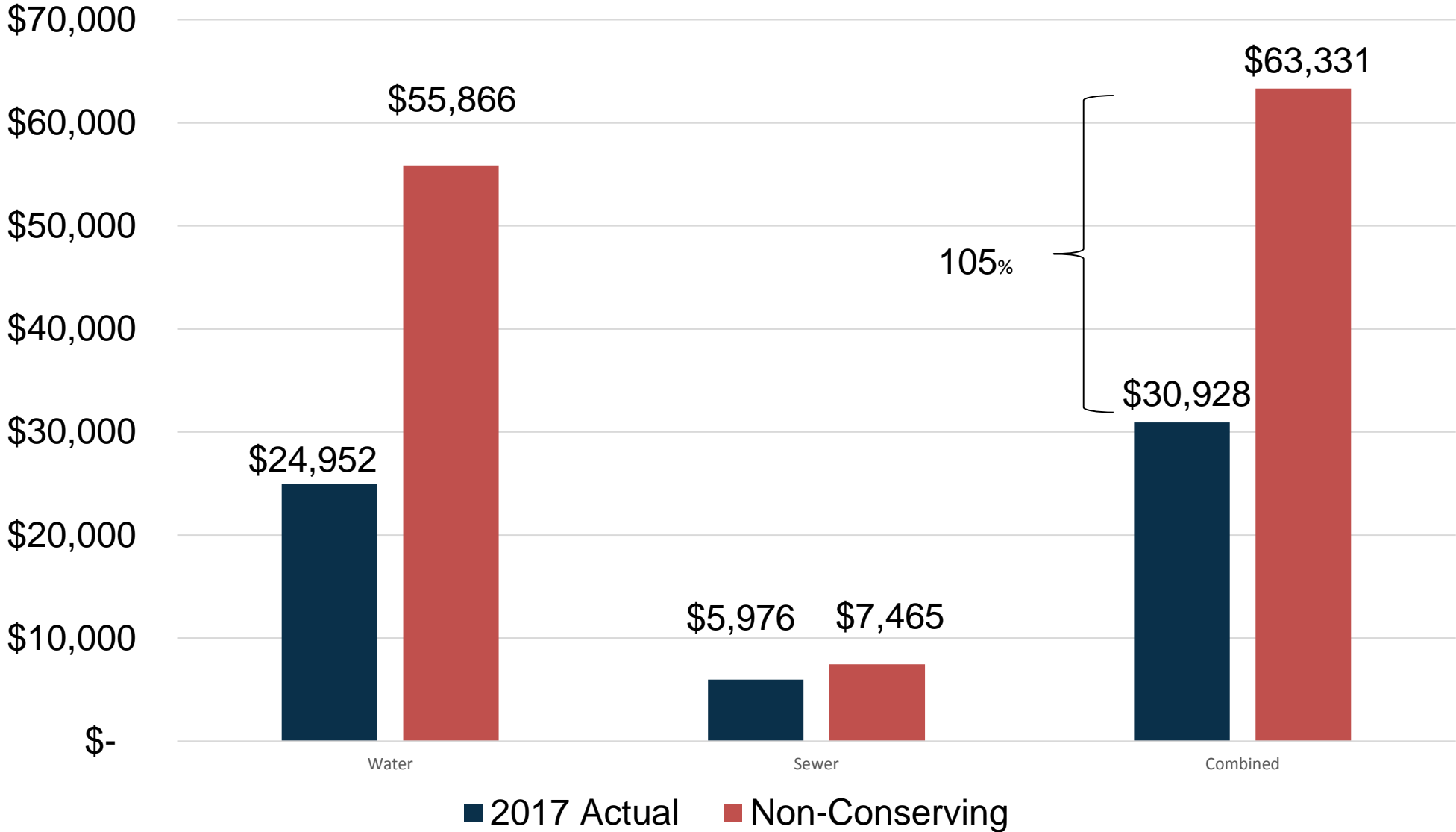
FINANCING INFRASTRUCTURE PROJECTS

- ▶ 20-30 year terms for projects with adequate lifespans
 - ▶ 3.5% to 5% interest
 - ▶ Rates pay for debt
 - ▶ Debt issuers want payments tied to more secure revenues
 - ▶ Increases rates
 - ▶ Growth pays for growth vs. Generational equity
- 

Water and Sewer Rates Comparison 2018 vs Non-Conserving



Single Family Water and Sewer Tap Fees Comparison 2018 vs Non-Conserving



CONSERVATION

- ▶ Rebate programs 2003-2012
 - ▶ Toilets – Clothes Washers – Urinals
 - ▶ Landscape Regulations -2004
 - ▶ Limited turf areas
 - ▶ Irrigation audit
 - ▶ Weather based controllers
 - ▶ Soil amendment inspection
 - ▶ Funded staff
 - ▶ Conservation based tap fees
 - ▶ Linking water supply with Comprehensive Plan
 - ▶ WaterSense Fixtures (Colorado State Regulation)
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RATES OVER TIME

1954-1992

- ▶ Winter/Summer
- ▶ Summer Less Expensive

1993-2005

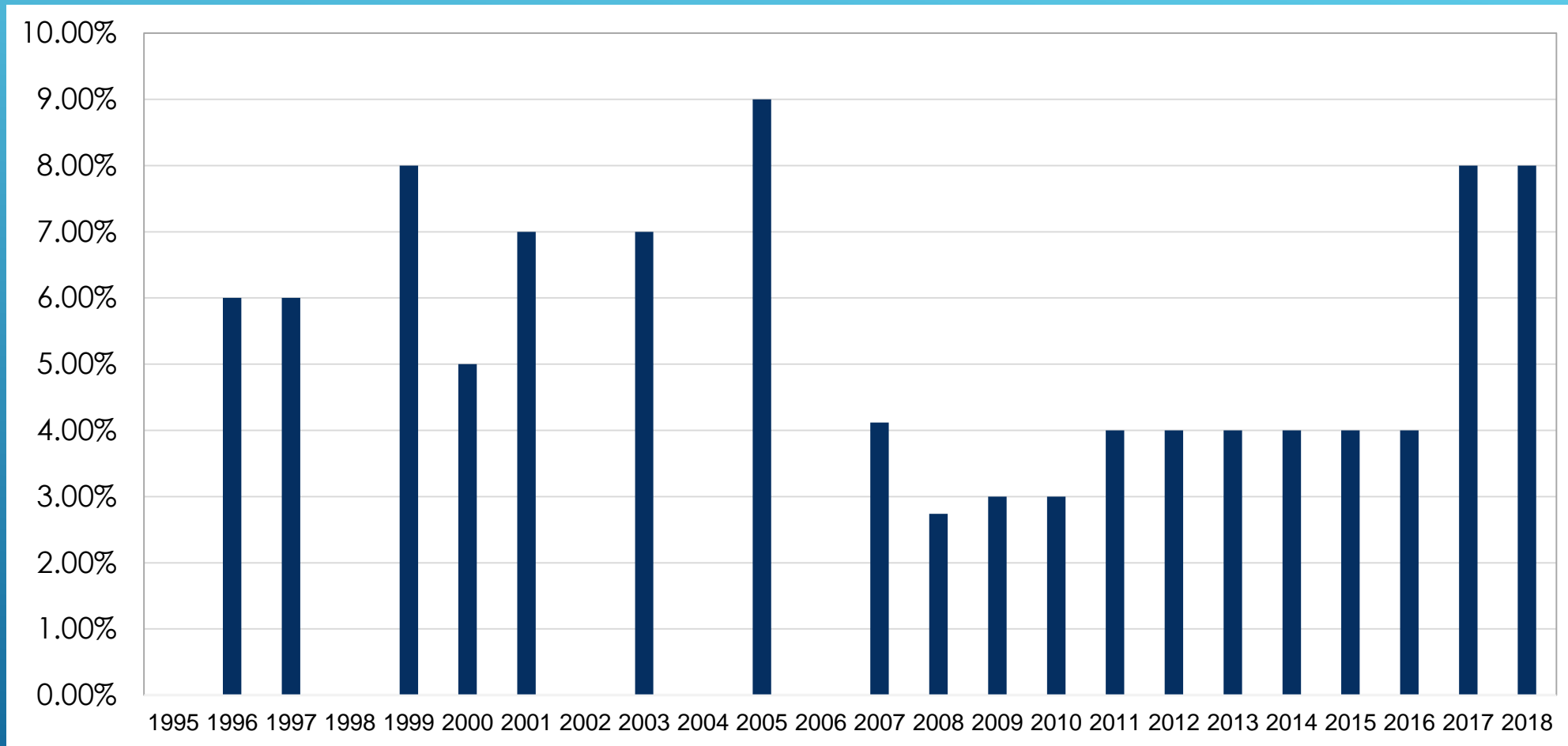
- ▶ 3 tiers
- ▶ 1st tier “Lifeline”

2006-2018

- ▶ System generally developed for buildout
- ▶ R & R and growth through tap fees

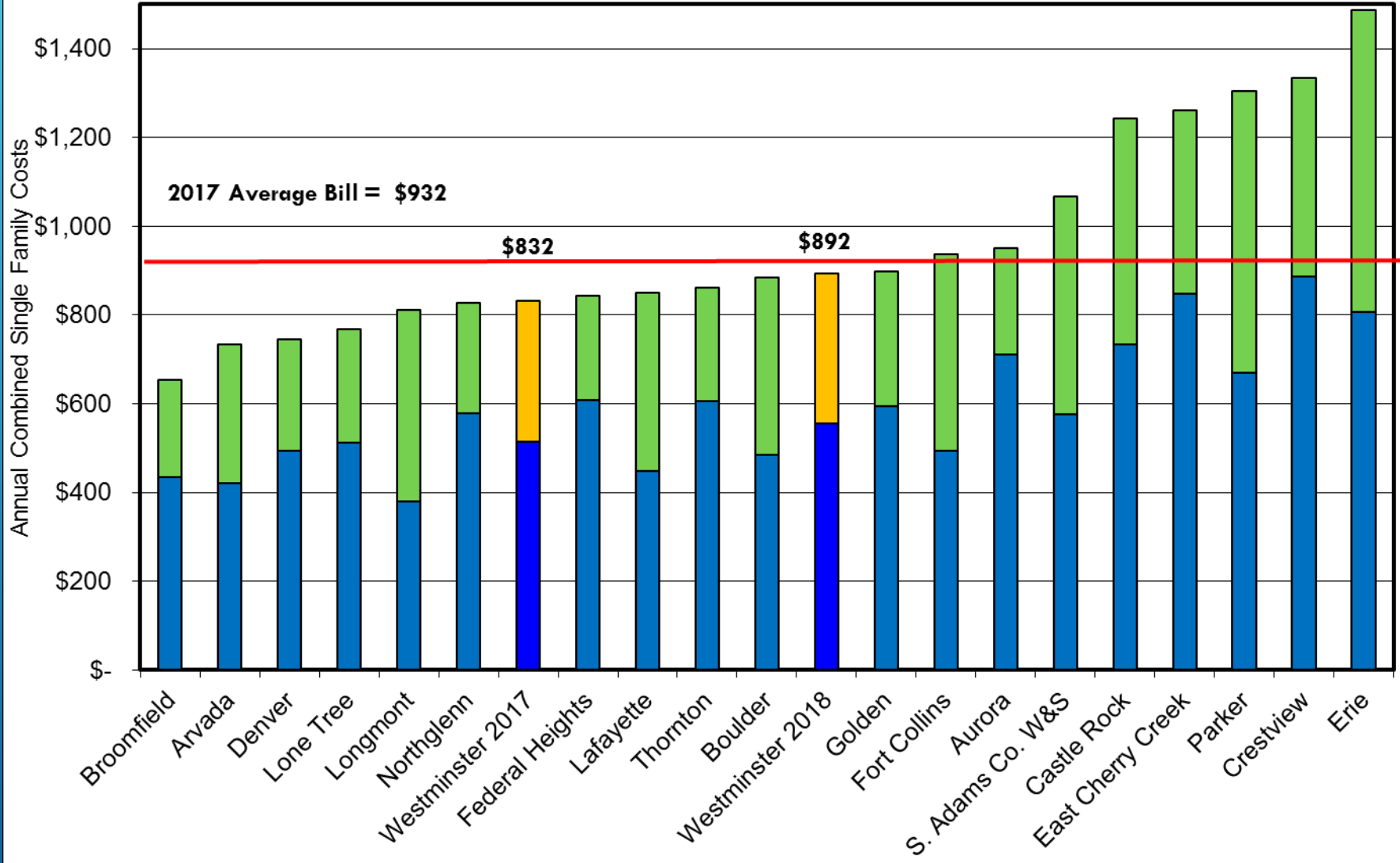
Future

- ▶ Additional Tiers
- ▶ Tap Fee surcharge




2017 Regional Single Family Annual Combined Bill with 2017-2018 Westminster Rate Increases

■ Wastewater
■ Water




RATE COMMUNICATIONS

- ▶ Started to feel rate increase stress in 2017-2018 cycle
 - ▶ 8% water 6% sewer
 - ▶ Trying to get out ahead of the 2019-2020 cycle
 - ▶ Direct mailers
 - ▶ Quarterly articles
 - ▶ Focused on understanding our system
 - ▶ Ongoing Value of Water campaign
 - ▶ Include level of service discussions
 - ▶ More to do
- 

WATER AND WASTEWATER RATE STUDY

- ▶ Data based Utility
 - ▶ Comprehensive infrastructure study
 - ▶ 10,000 staff hours initial site visits
 - ▶ 2,500 hours update 2017
 - ▶ Detailed usage data

 - ▶ Biggest Challenges
 - ▶ Infrastructure R&R driving future increases
 - ▶ Use reductions from rising rates
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SUMMARY

- ▶ 1980 citywide water use = 28% higher than current use.
 - ▶ Increased water use would have required:
 - ▶ Acquisition of additional water resources
 - ▶ Expansions of the water and wastewater treatment facilities
 - ▶ Resulting in:
 - ▶ Increased rates
 - ▶ Increased tap fees
 - ▶ No additional revenue to the City
- } Residents/Businesses

Reduced water use (conservation) has resulted in savings in both resource and infrastructure costs.

Each utility is unique; Your mileage may vary

THANK YOU.

QUESTIONS?

Stu Feinglas, Senior Analyst, City of Westminster



WESTMINSTER

IMPACTS TO CITY: INFRASTRUCTURE & WATER RESOURCES COSTS

Additional WTF capacity	52 MGD total \$2,500,000/MG \$130,000,000
Additional WWTF capacity	4 MGD total \$5,000,000/MG \$20,000,000
Additional Water Resources	7,295 AF \$30,000 \$218,850,000
Interest (on debt funding)	\$223,106,000
Total Costs	\$591,956,000

IMPACTS TO CITY: OPERATING COSTS*

Additional annual operating cost of WTF	21% increase \$480,400
Additional annual operating cost of BDCWWTF & Metro	20% increase \$757,600
Total additional operating costs	\$1,238,000

** No Additional Personnel*

IMPACTS TO RESIDENTS AND BUSINESSES

2 SOURCES OF REVENUE/2 WAYS TO FUND ALL COSTS

Revenue Source: Rates

Pays for: O&M
R&R
Debt Service

Revenue Source: Tap Fees

Pays for: New Infrastructure
New Water Resources
R&R

IMPACT TO RESIDENTS: SINGLE FAMILY RATES –ANNUAL BILL (WATER & SEWER)

	<u>2012</u>	<u>Additional Charge</u>	<u>Total Annual SF Water/Sewer Bill</u>	<u>% Increase to 2012 Charge</u>
Water	\$410	\$561	\$971	137%
Sewer	\$245	\$63	\$308	26%
Total	\$655	\$624	\$1,279	95%

IMPACT TO RESIDENTS/BUSINESSES: SINGLE FAMILY TAP FEES

	<u>2012</u>	<u>Additional Charge</u>	<u>Total Annual SF Tap Fee</u>	<u>% Increase</u>
Water	\$16,325	\$16,086	\$32,411	99%
Sewer	\$4,904	\$866	\$5,770	18%
Total	\$21,229	\$16,952	\$38,181	80%

- ▶ Each water system is unique. Results from Westminster may not apply.
- ▶ Utilities can perform a similar analysis.
- ▶ The \$591 million dollar cost reveals the significant hardship associated with expanding supply and infrastructure today.
- ▶ The cost highlights the inherent value in our current infrastructure.
- ▶ **The cheapest water (by far) is the water we already have and the best way to keep rates and tap fees low is to conserve the water we already have.**

CONCLUSION