CONSERVATION LIMITS RATE INCREASES FOR COLORADO UTILITY

EMAND REDUCTIONS OVER 30 YEARS HAVE DRAMATICALLY EDUCED CAPITAL COSTS

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WaterDM
DEMAND MANAGEMENT

WESTMINSTER

- 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.

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

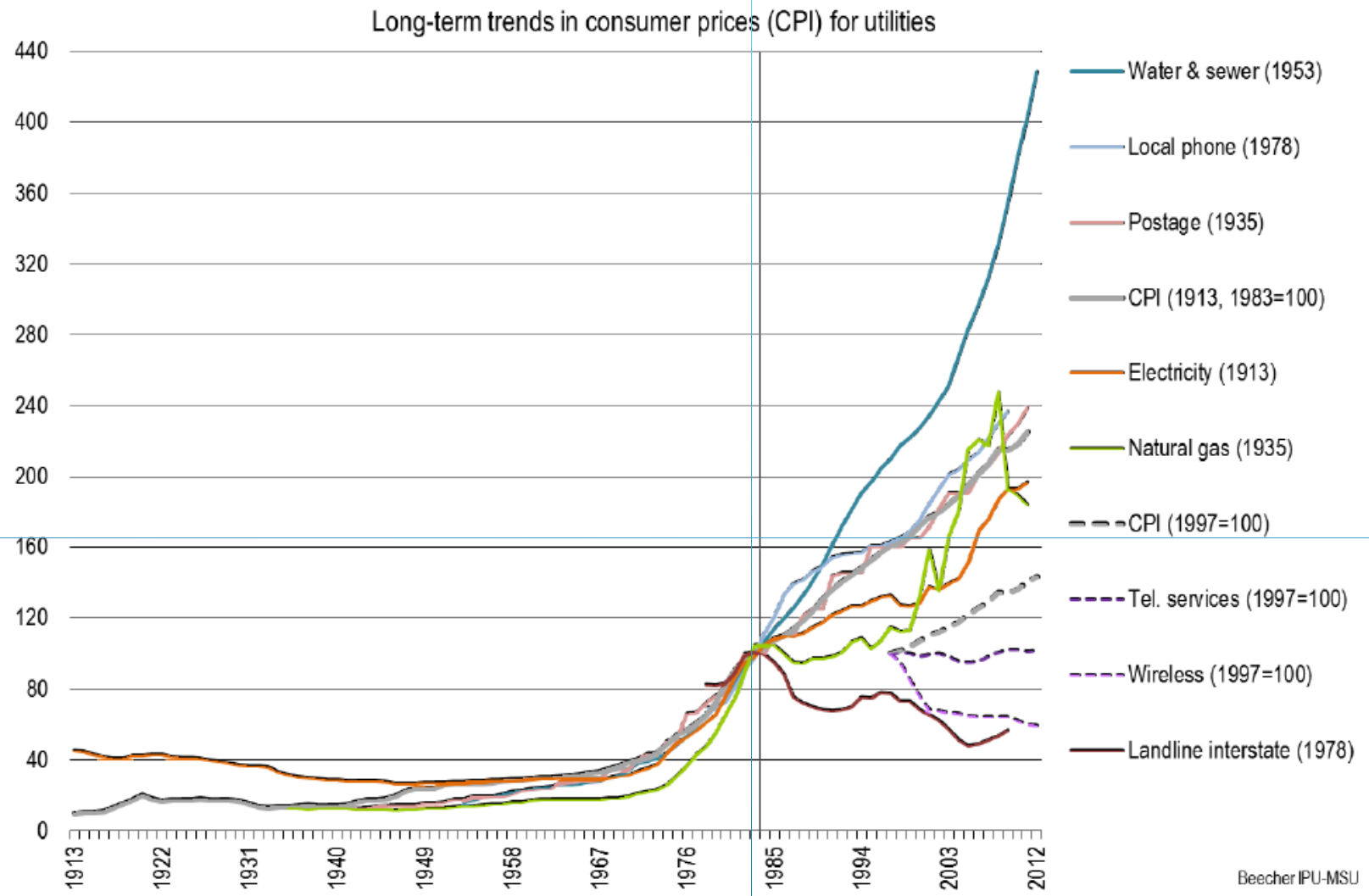

Exhibit 1. Long-term trends in the Consumer Price Index (CPI) for utilities (1913-2012).
The index is set to 100 for 1982-1984 except for telephone and wireless services, where the index is set to 100 for 1997. Date () indicates start of series.

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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 80% in tap fees and 95% in rates compared to what they would have been without conservation.

ESTMINSTER'S AVOIDED COST ANALYSIS

OJECT DESCRIPTION

s a result of conservation, Westminster's citywide per apita water use has been reduced 21% since 1980.

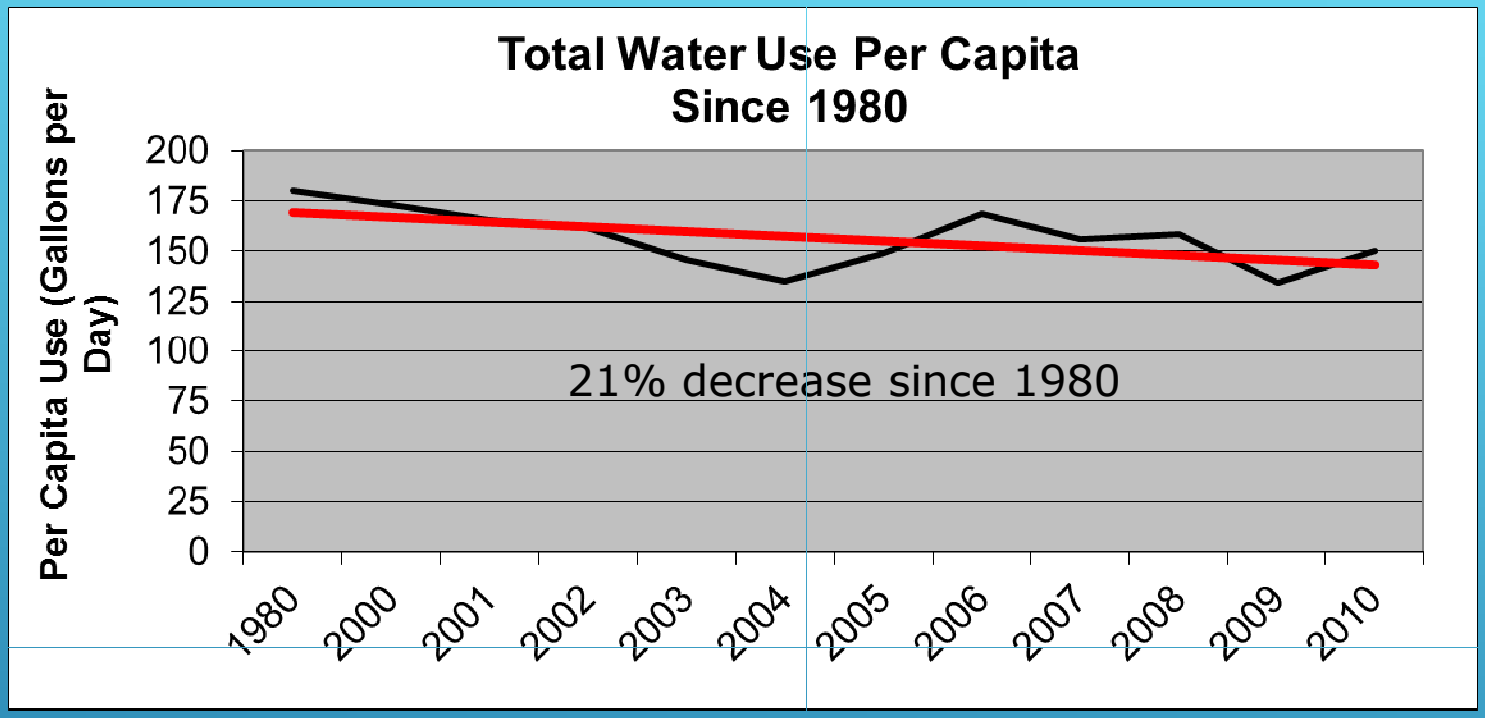
ince 1980 (32 years) rates have increased while vater use has gone down per SFD home

- Annual water cost increase per home =

  22% 1980 to 2012 in 2012 dollars

- 0.7% increase per year

taff researched the effect on rates and tap fees since 1980) had no conservation measures been mplemented.



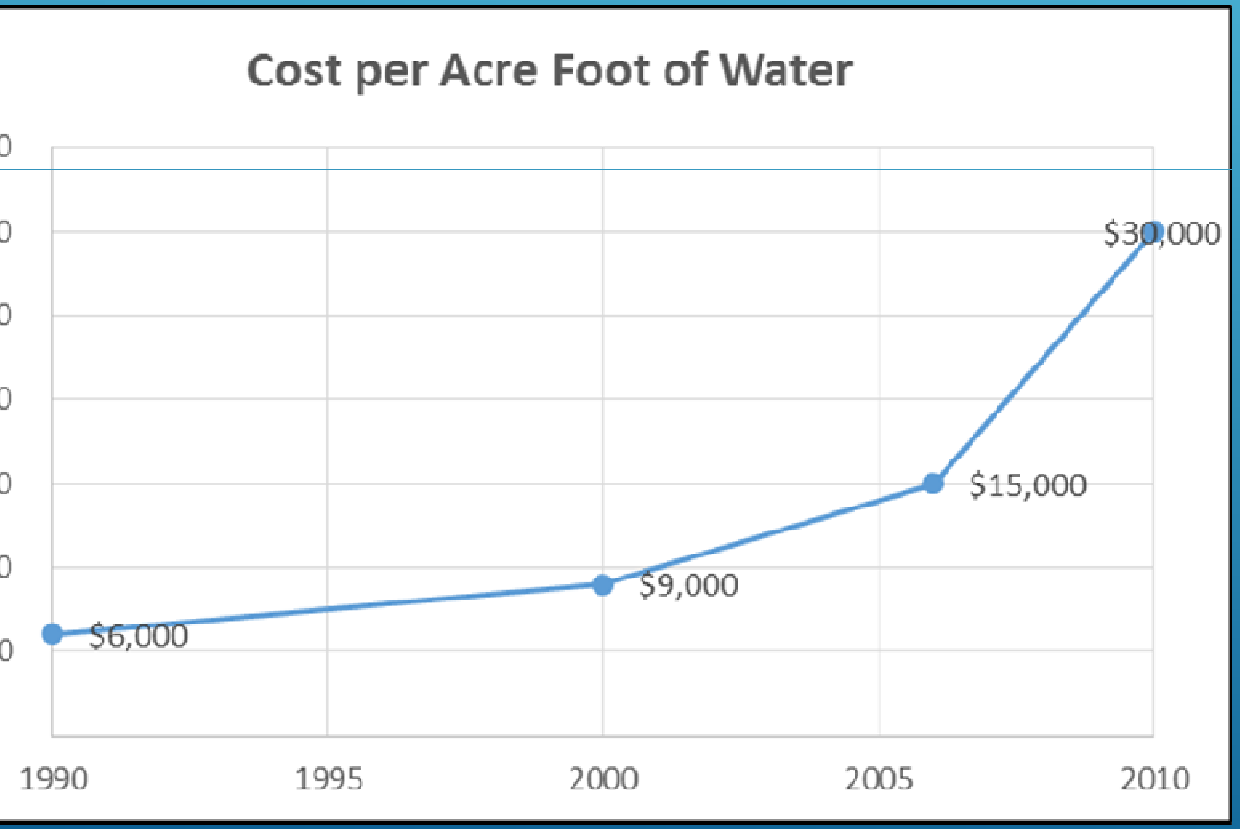
- Conservation practices have reduced water use.
  - National plumbing codes
  - Conservation programs 1980 to present
  - Billing structure
- Benefits to Westminster
  - Residents
  - Businesses

CONSERVATIVE SCENARIO ASSUMPTIONS
HYPOTHETICAL ROLLBACK OF CONSERVATION MEASURES

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

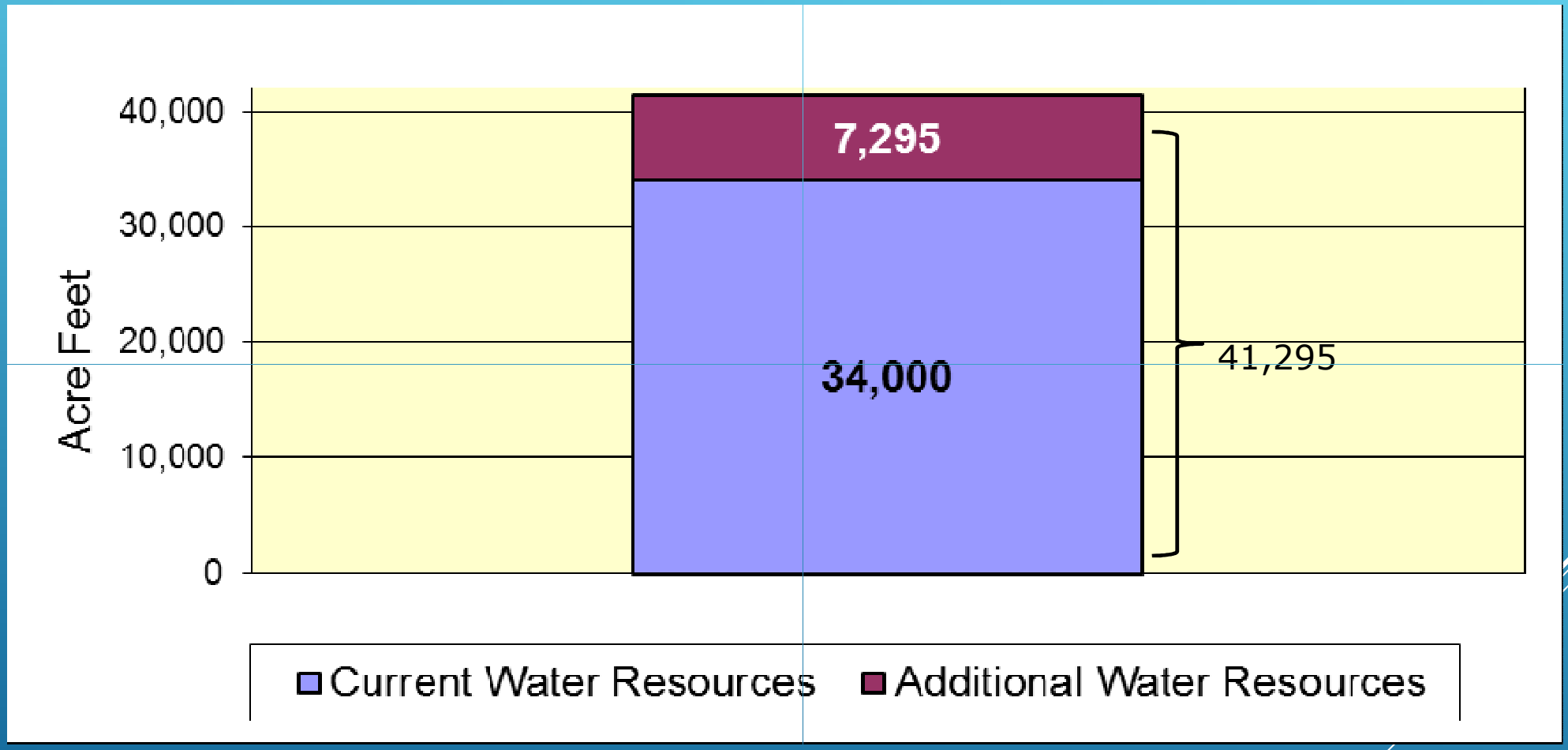
CONSERVATIVE SCENARIO ASSUMPTIONS

ncreased regional water demands would have placed tress on limited supply of South Platte basin water, which vould have resulted in:



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

MPACTS ON DEMAND & WATER RESOURCES AT BUILDOUT

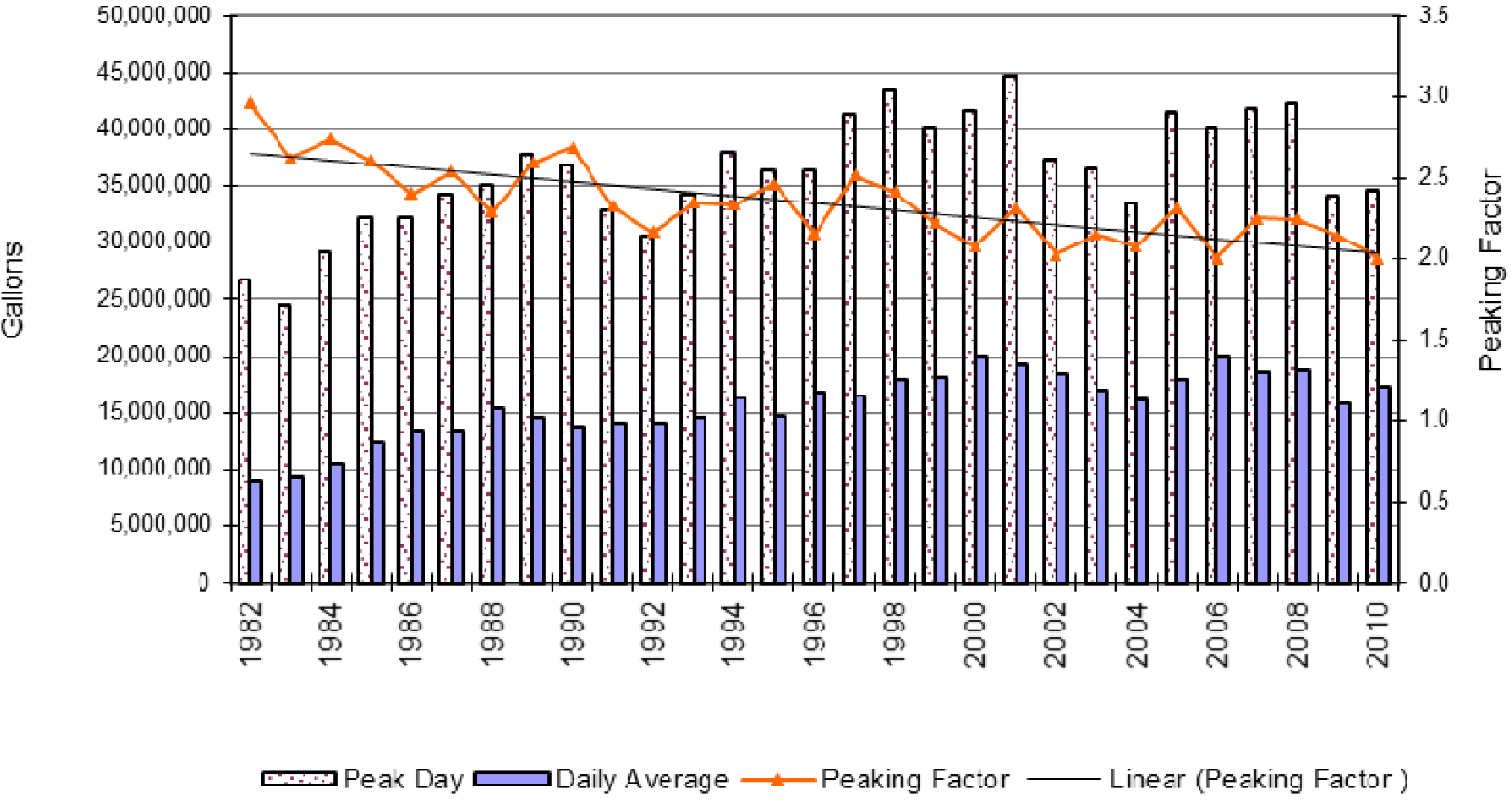


Cost: 7,295 AF * $30,000/Acre-Feet = $218,850,000

Does not include debt costs

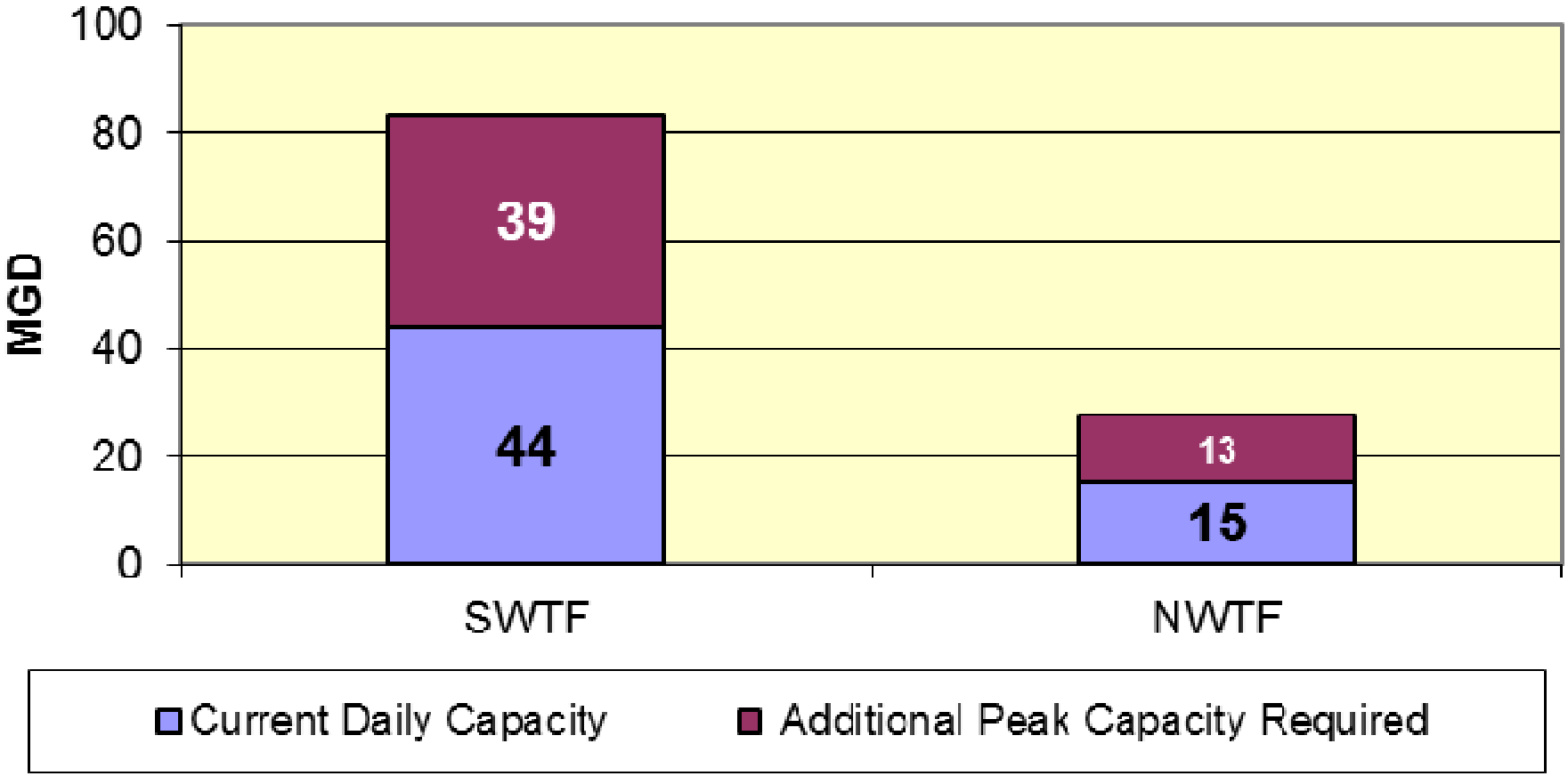
Potable Water Production

Peak Day, Daily Average, Peaking Factor



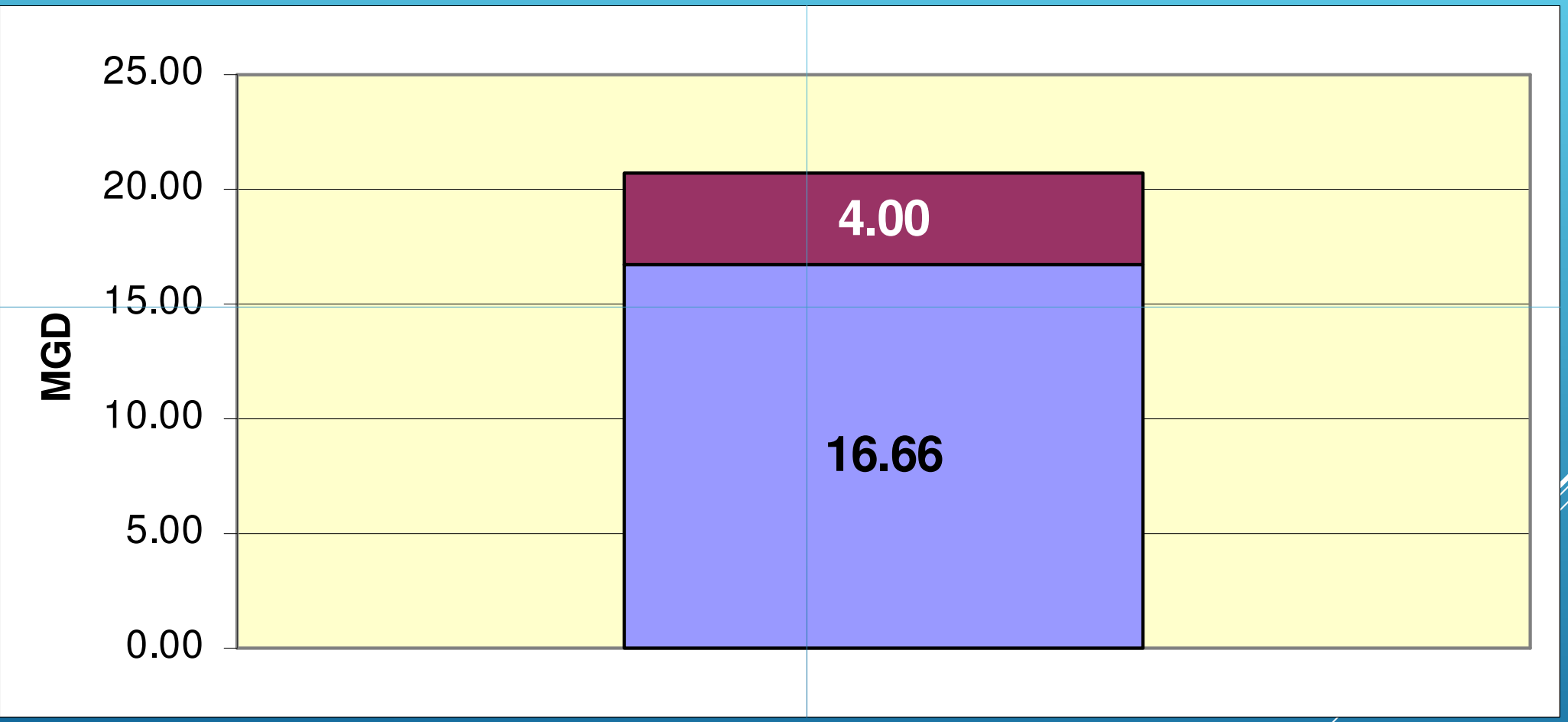
PACTS TO WATER TREATMENT INFRASTRUCTURE A
ILDOUT

Total peak day = 111 MGD



Cost: 52MGD * $2,500,000/MGD = $130,000,000

PACTS TO WASTEWATER TREATMENT FRASTRUCTURE AT BUILDOUT



Cost: 4 MGD * $5,000,000/MGD = $20,000,000

MPACTS TO CITY:
NFRASTRUCTURE & 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

nue Source:	Rates
for:	O&M
	R&R
	Debt Service

Revenue Source:	Tap Fees
Pays for:	New Infrastructure
	New Water Resour
	R&R

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

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

MPACT TO RESIDENTS/BUSINESSES:
INGLE FAMILY TAP FEES

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

SUMMARY

'80 citywide water use = 21% higher than current use.

creased water use would have required:

- Acquisition of additional water resources
- Expansions of the water and wastewater treatment facilities

esulting in:

- Increased rates
- Increased tap fees
- No additional revenue to the City

} Residents/Businesses

educed water use (conservation) has resulted in avings in both resource and infrastructure costs, aving residents and businesses 80% in tap fees and 5% in rates.

CONCLUSION

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.

HANK YOU.

QUESTIONS?

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WESTMINSTER

IMPACTS OF HIGHER WATER USE

Impacts to the City:

- Acquisition of additional water resources
- Increasing treatment facility capacities (water & wastewater)
- Increased annual operating costs

Impacts to residents & businesses:

- Increased tap fees
- Increased rates

EAK DAY FACTORS AND USE

2010 average to peak day factor is 2.1

1980 average to peak day factor was 3

Conservation has reduced the peak day factor (irrigation patterns)

2010 buildout 34,000 AF =30.35 MGD average x 2.1 =64 MGD pe

1980 buildout 41,295 AF =36.87 MGD average X 3 =111 MGD pea