CITY OF HARRISBURG℠

WATER RATE DESIGN
&
REVENUE ADEQUACY EVALUATION
RESULTS AND RECOMMENDATIONS

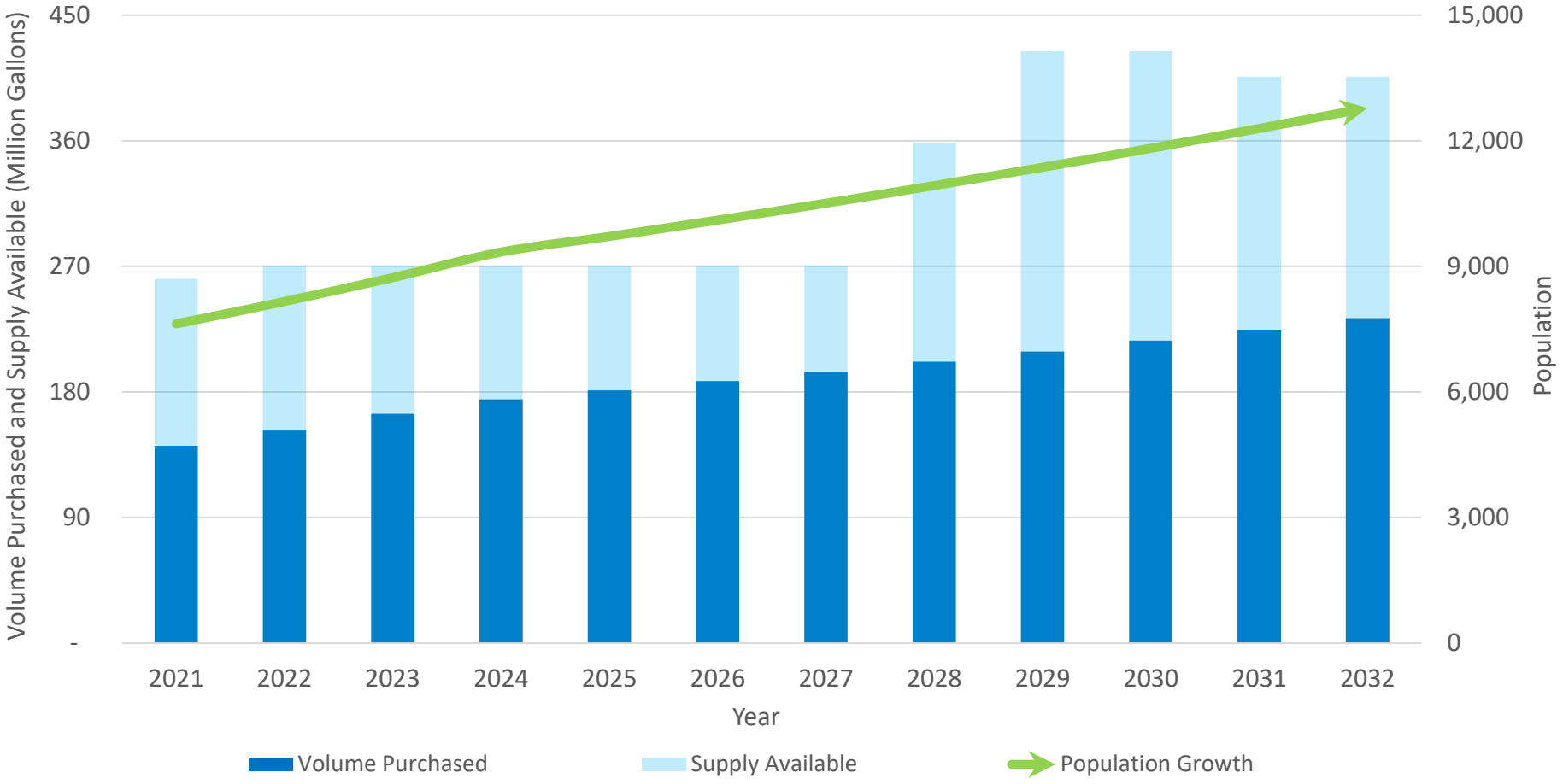
AE2S NEXUS The Financial Link

May 18th, 2021

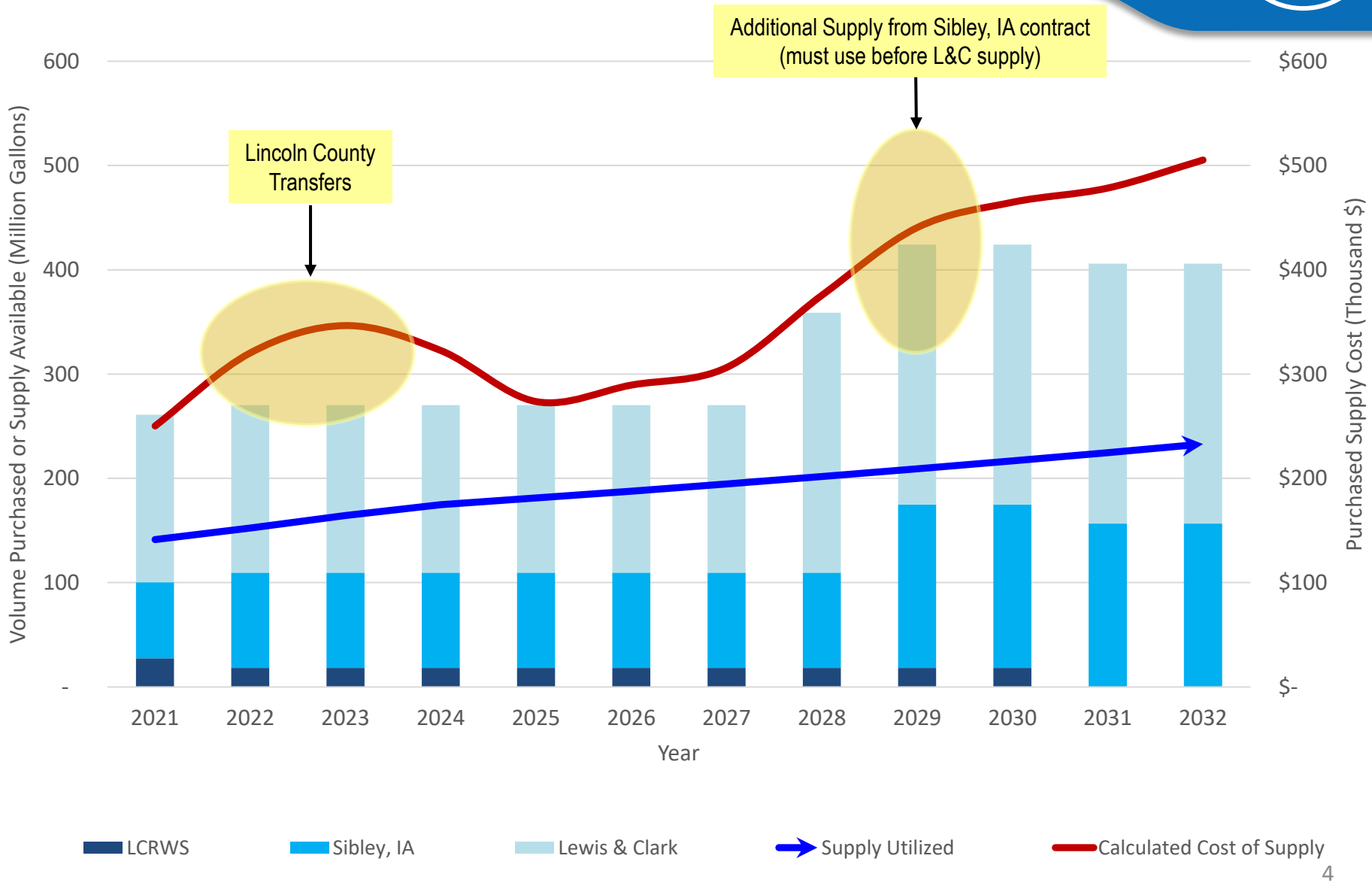
AGENDA

- Review Expectations of Water Utility through Year 2032
- Outline Goals to Maintain a Healthy Water Utility:
  - Meet Debt Service Coverage (DSCR)
  - Maintain Cash Reserve
  - Encourage Responsible Water Use through Justified Price Signals
  - Focus on Rates that Achieve Full Cost Recovery (FCR)
  - Limit Bill Impacts and Burden of Growth to Existing Customers
- Review Recommendations

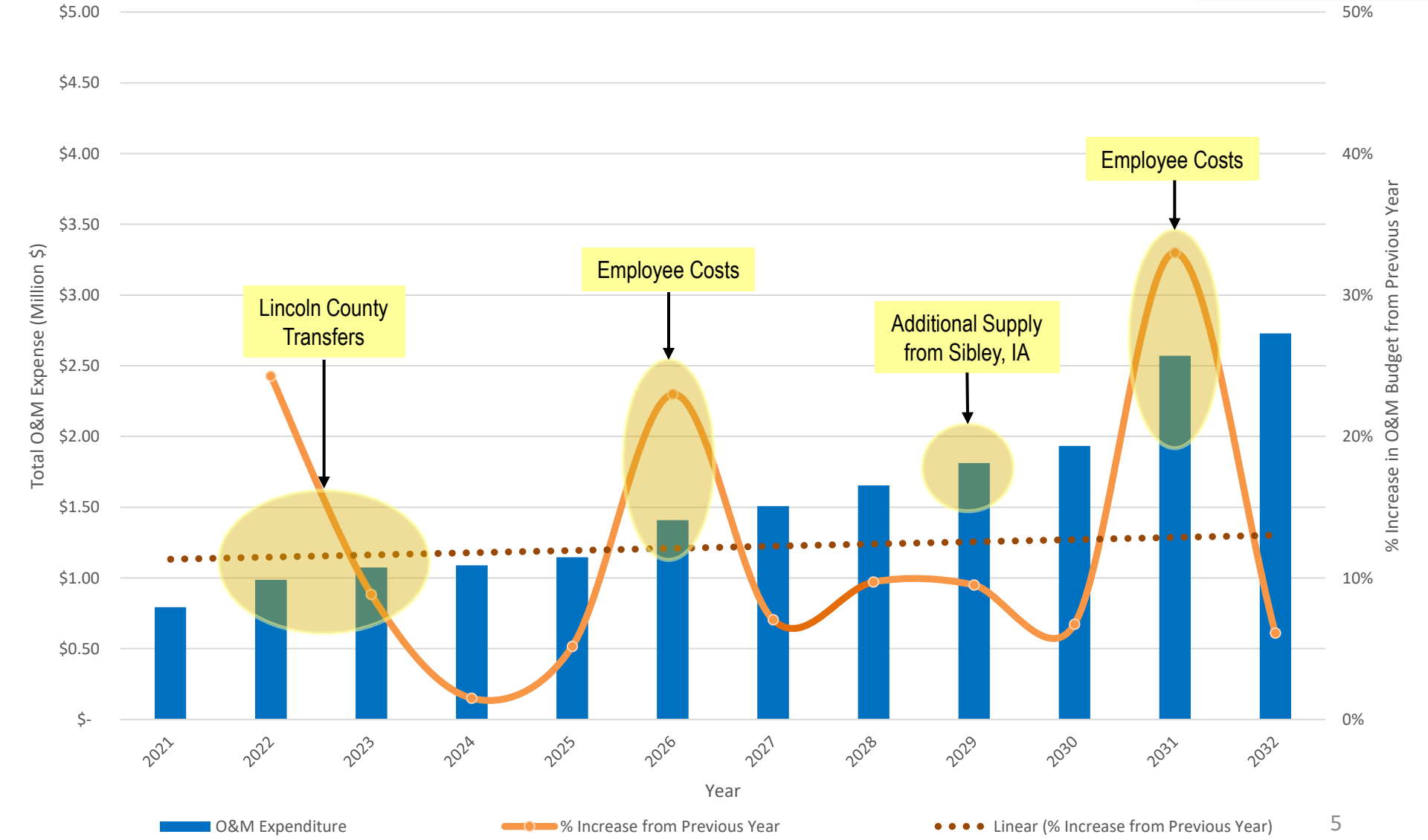
POPULATION & FLOW GROWTH



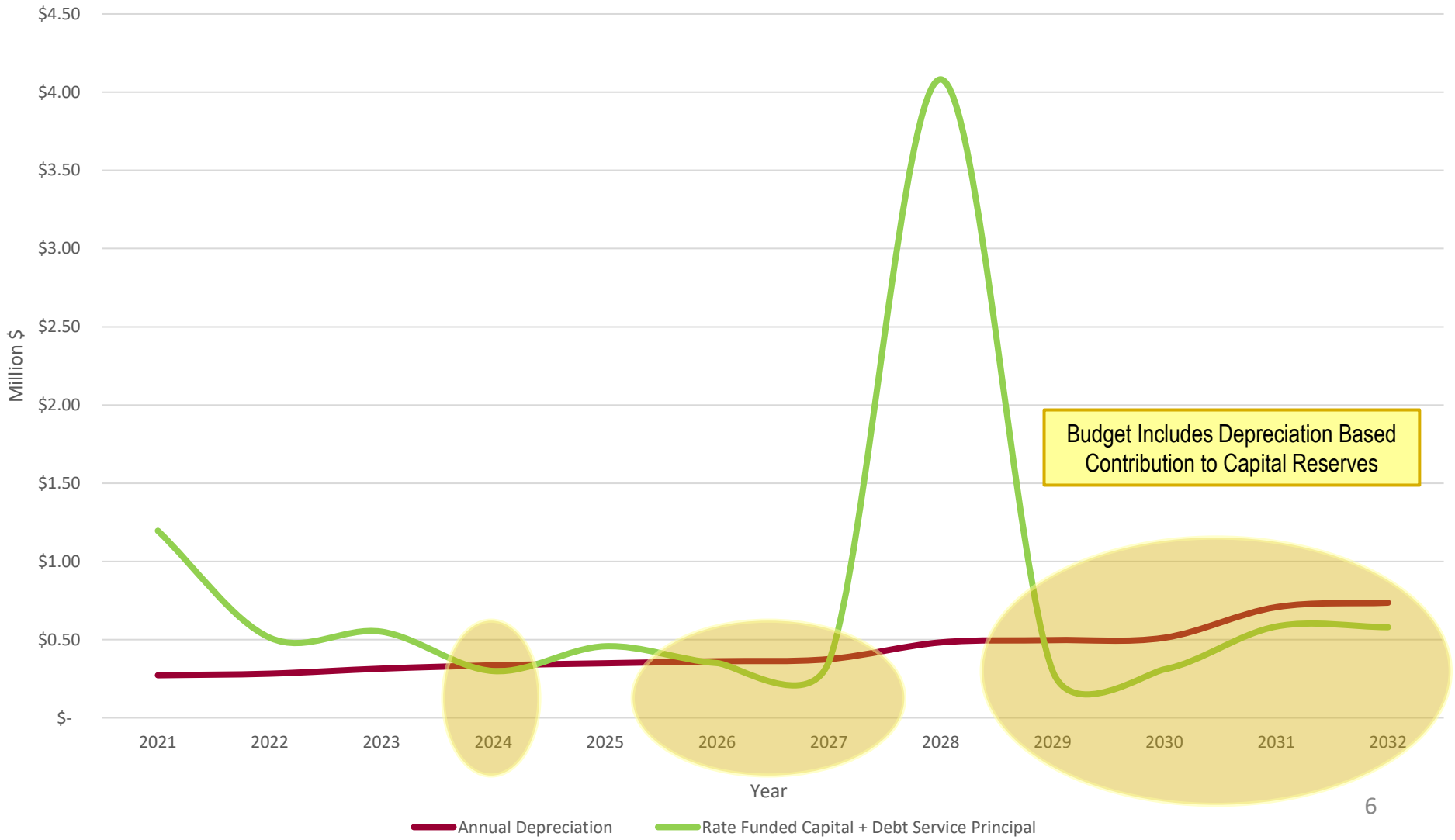
SUPPLY UTILIZED AND PURCHASE COST



O&M EXPENDITURES

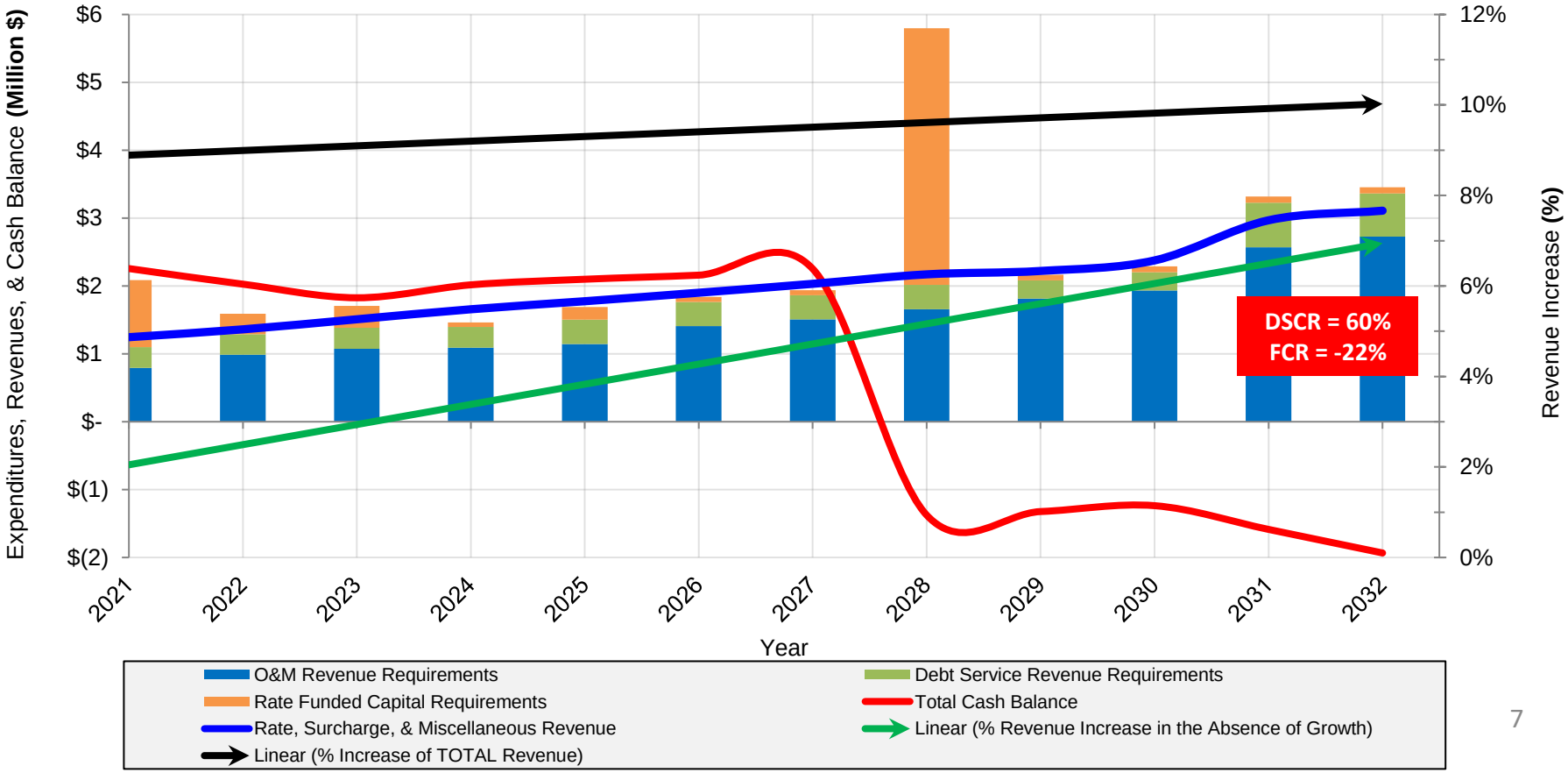


CAPITAL INVESTMENTS & DEPRECIATION

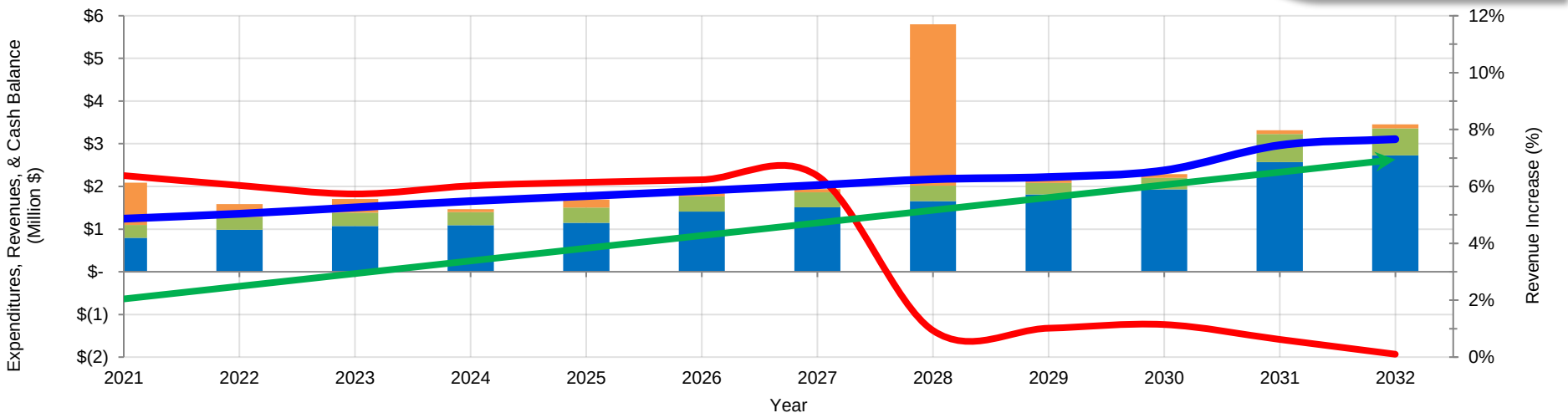


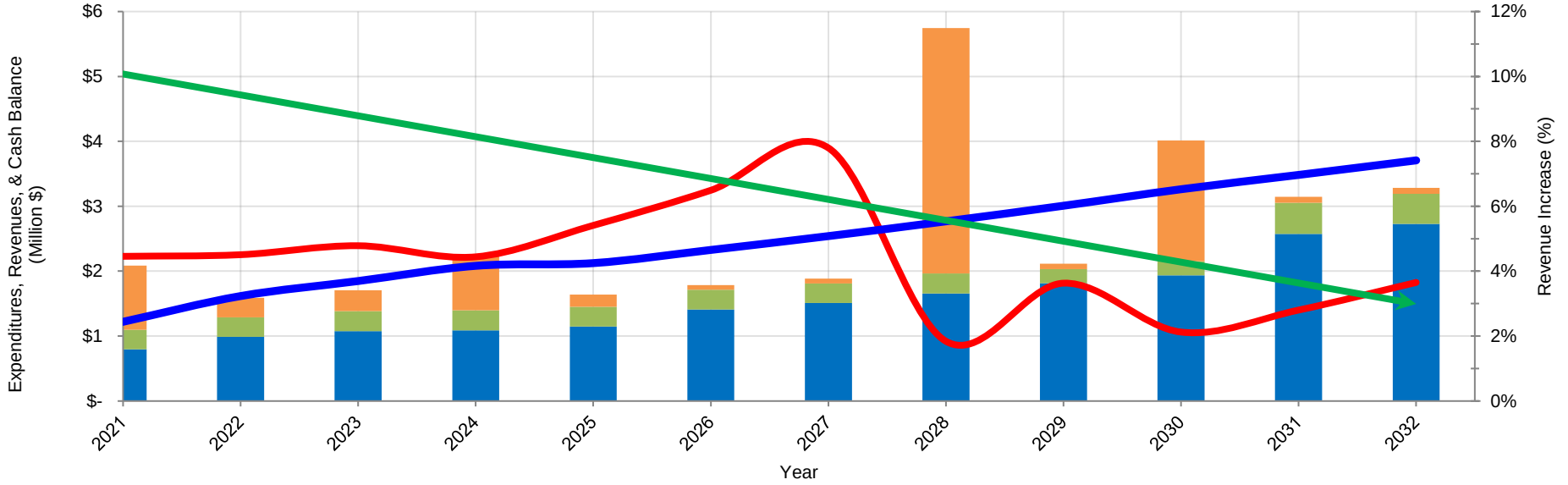
CHALLENGES IF…

1. Increase rates to keep up with inflation only
2. Cash Fund Lewis & Clark - Phase 2 Related Costs
3. Debt Fund Southeast Area Improvements – Phase 1, and 3rd Water Tower
4. Do not increase Water Hookup Fee



MANAGING CHALLENGES THROUGH PROACTIVE RATE & RESERVE STRATEGY

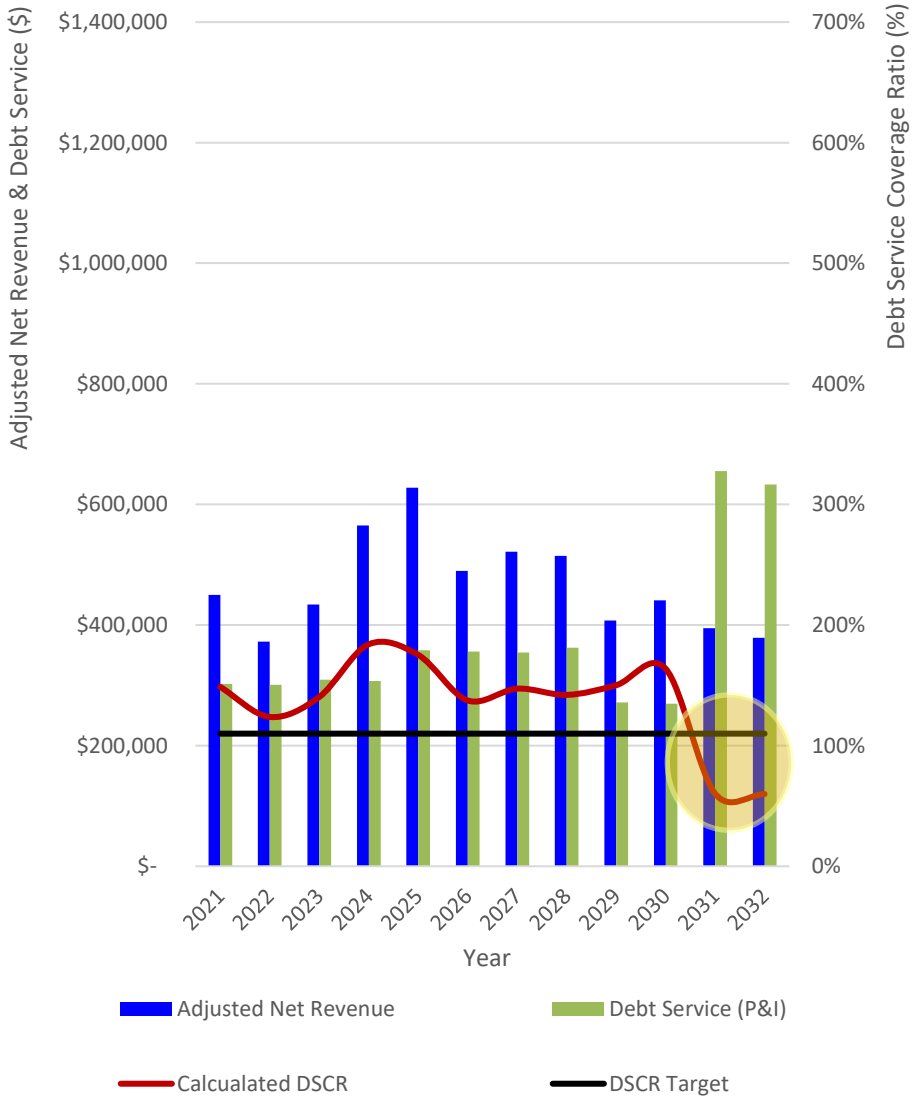




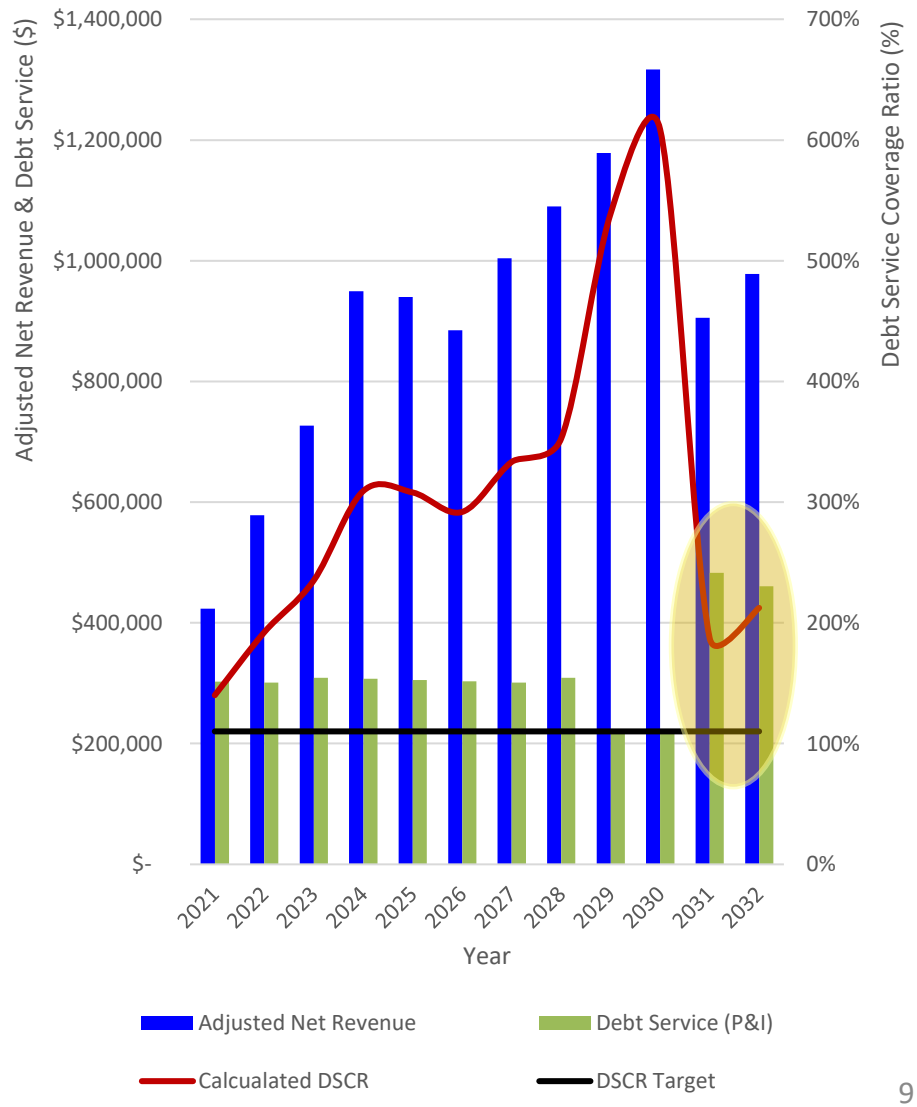
DEBT SERVICE COVERAGE RATIO (DSCR)

Adjusted Net Revenue / Debt Principal & Interest ≥ 110%

Current Capital Funding & Rate Strategy



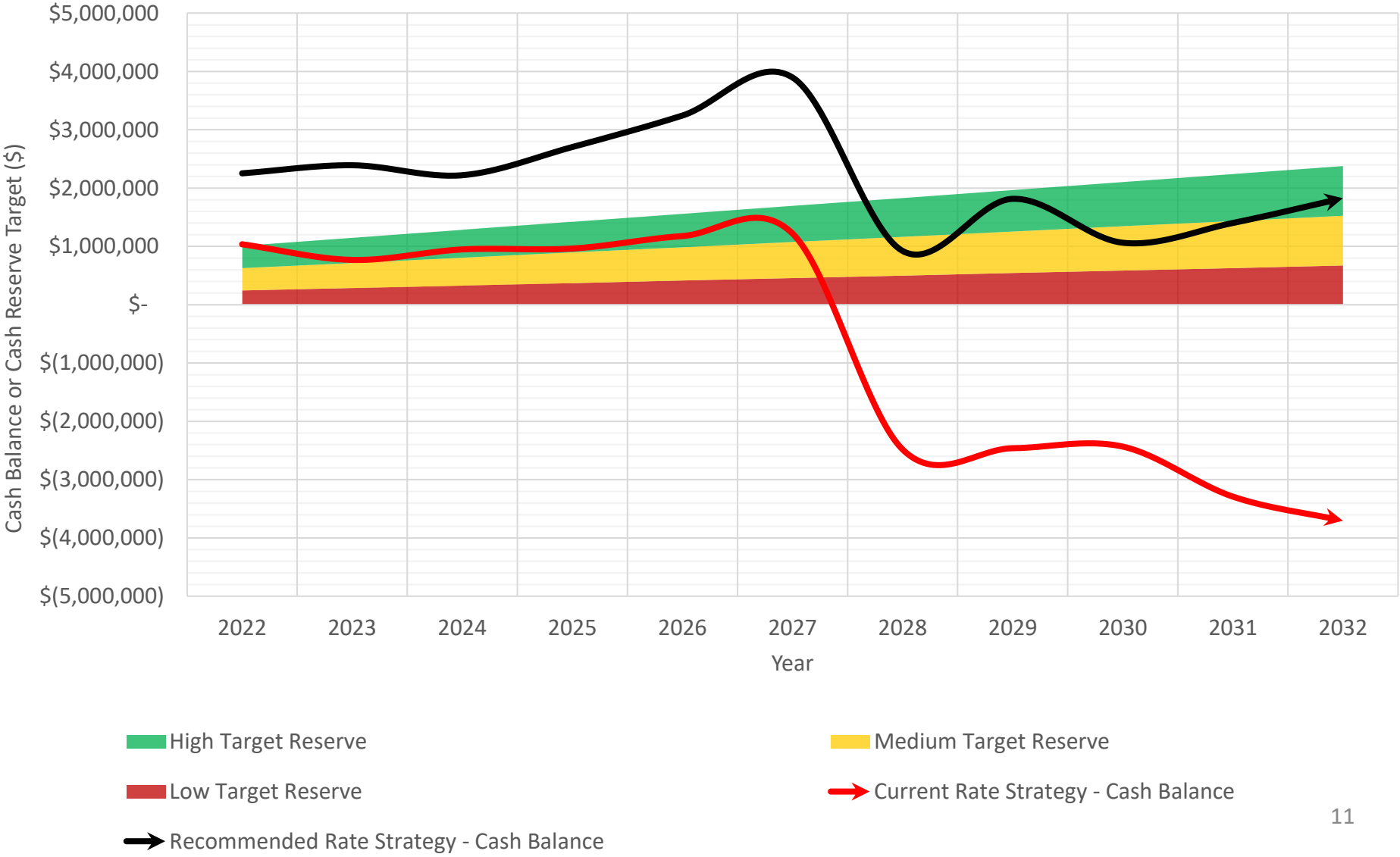
Recommended Capital Funding & Rate Strategy



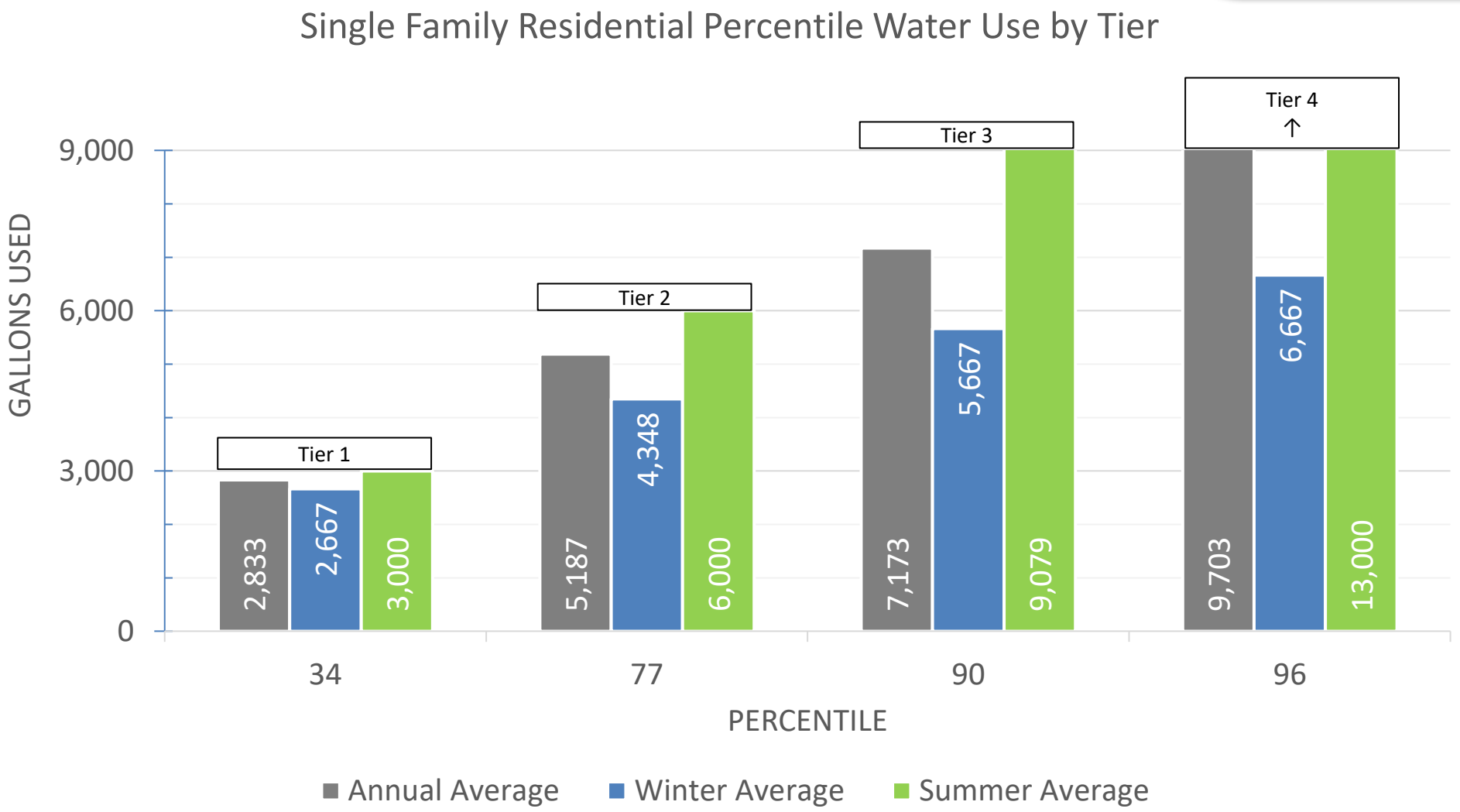
RESERVE TARGET GOALS & PHILOSOPHY

Reserve Type	Justification	Targets		
		Low	Medium	High
O&M	Days of O&M	90	180	270
Debt Service	% Debt P&I	0%	25%	50%
Capital	% of Average Rate Funded Capital (outlier years not included)	0%	25%	50%

BENEFIT TO CASH BALANCE - RESERVE COMPONENT BUILT IN TO RATES



REVIEW OF CURRENT TIER STRUCTURE



DEFINING RESPONSIBLE WATER USE

Tier Characteristic	Tier Cap (gallons/month)
Essential Use - Small Family/Elderly	3,000
Essential Use - Typical Family	6,000
Responsible Lawn Watering – Normal Rainfall Year	Typical Family Essential Use + 12,000 = 18,000
Excessive Use	> 18,001

Calculation of Responsible Lawn Watering based on:

- Median & Average Single-Family Residential Lot Size (0.22 to 0.25 Acres)
- Assumes 3.75” of rain per month June through September (historical average for Harrisburg)
- Assumes 1” precipitation (rain + sprinkling) per week to maintain good lawn color and growth

Reference: David Chalmers (former Professor & SDSU Extension Turfgrass Associate). Summer Lawn Care: Mowing, Weeds & Water, Summer Lawn Care: Mowing, Weeds & Water (sdstate.edu). February 15th, 2019.

PRICE SIGNAL COMPARISON

Tier Characteristic	Current Rate Strategy			Recommended Rate Strategy Beginning in Year 2022		
	Cap *gal/mo.*	Ratio	% of Accounts *Summer Average*	Tier Cap *gal/mo.*	Ratio	% of Accounts *Summer Average*
Essential Use (Small Family/Elderly)	3,000	1.00	35%	3,000	1.00	35%
Essential Use (Typical Family)	6,000	3.78	43%	6,000	1.50	43%
Responsible Lawn Watering – Normal Rainfall Year	9,000	2.56	13%	18,000	2.50	21%
Excessive Use	> 9,001	1.59	10%	>18,001	4.00	1%

RATE DESIGN FOCUS → FULL COST RECOVERY

Revenue Requirements

(What your rates and other steady revenues need to do for you)

O&M Expenditures

+

Capital Expenditures

where

Debt Principal

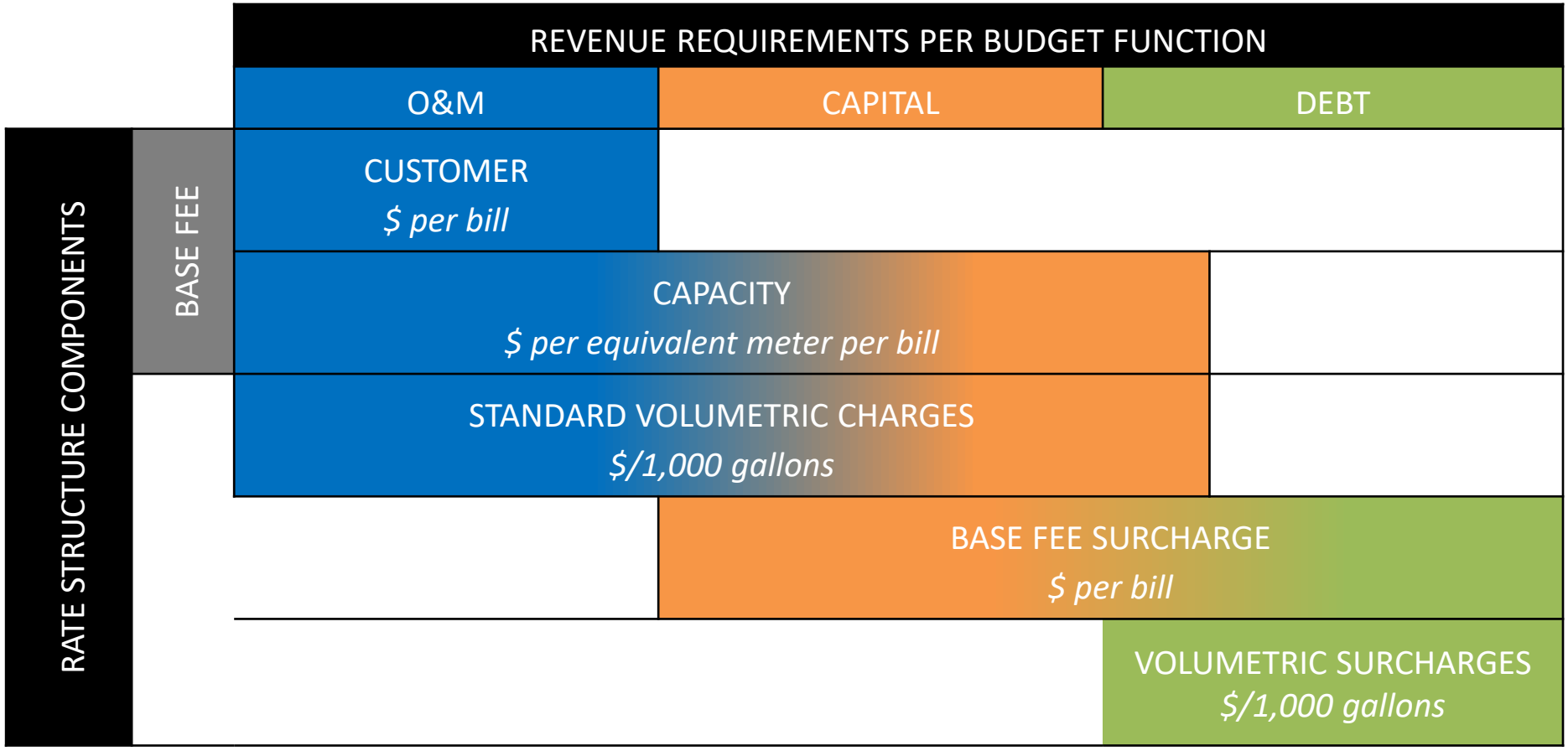
+

Rate Funded CIP/Reserves

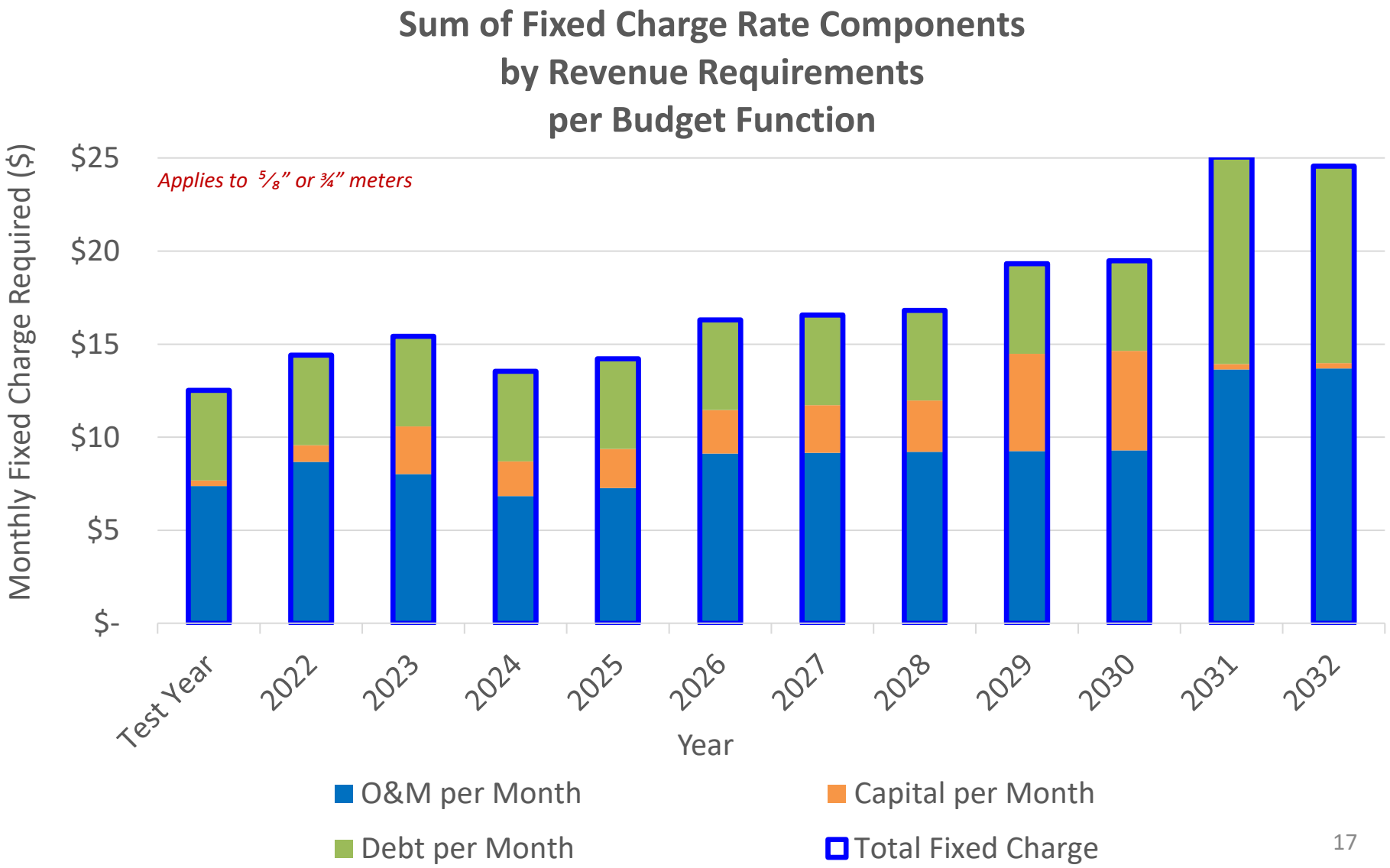
should be

≥ Annual Depreciation

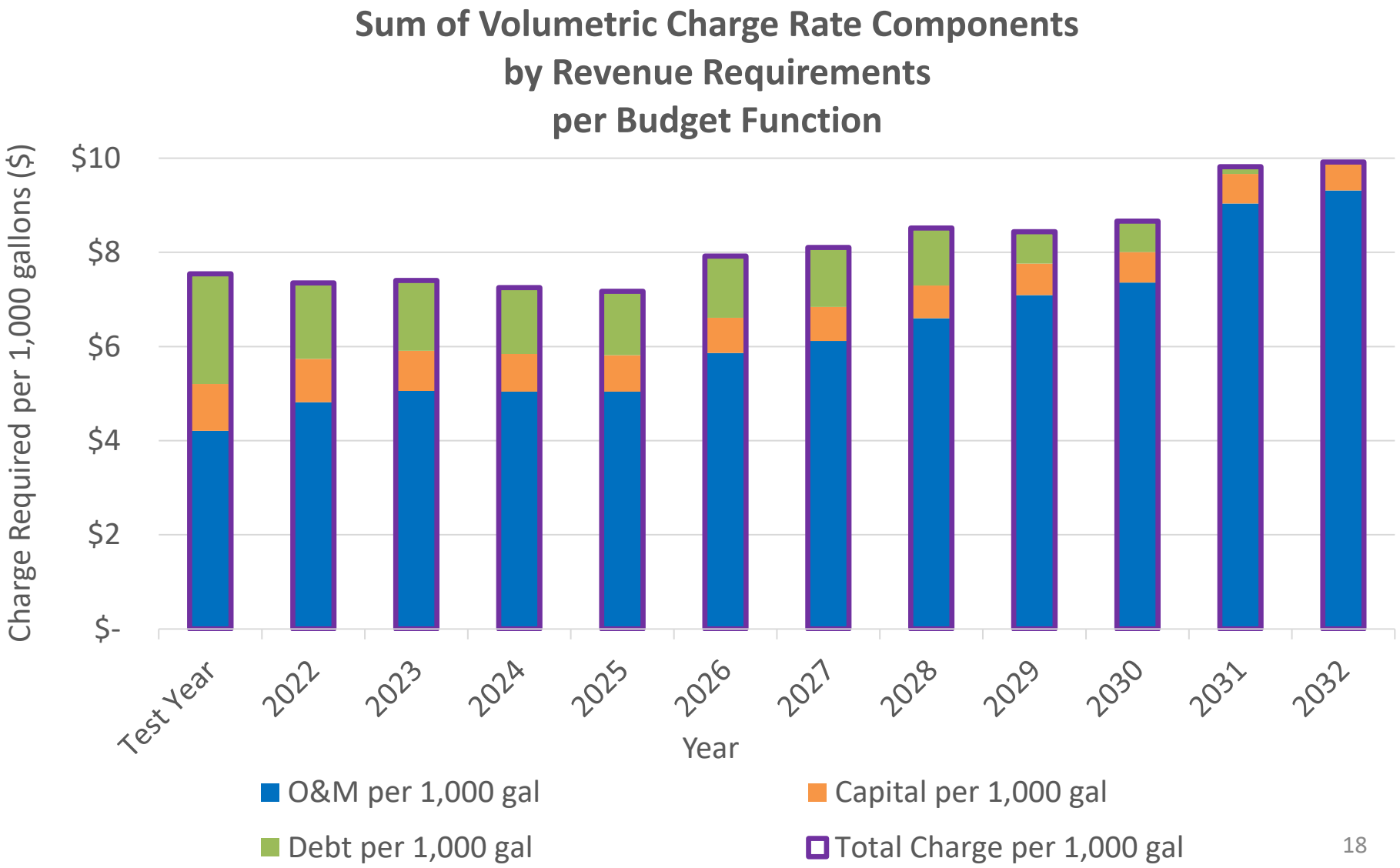
FULL COST RECOVERY



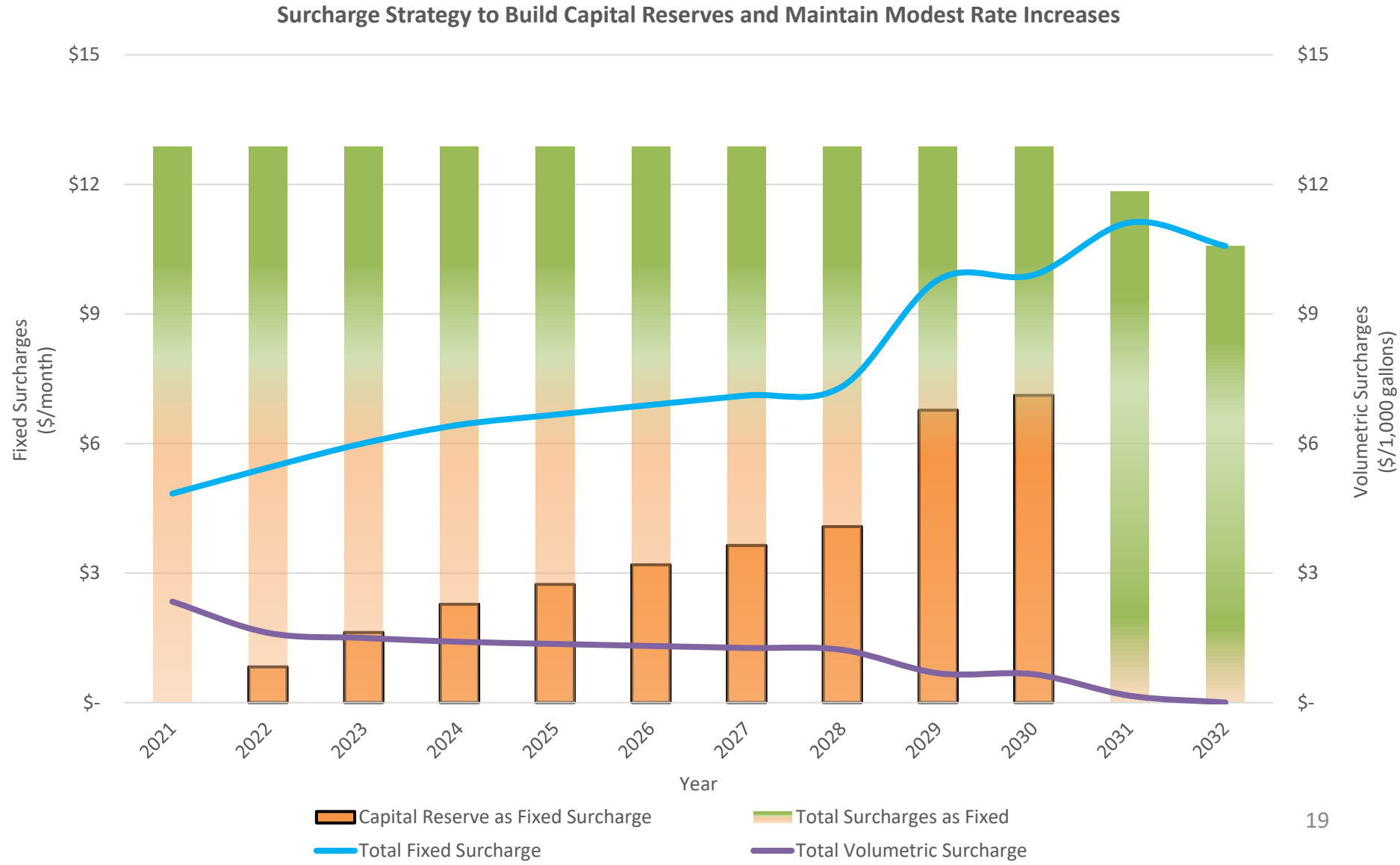
FIXED CHARGE RATE DESIGN



VOLUMETRIC CHARGE RATE DESIGN



SURCHARGES - CAPITAL RESERVE STRATEGY



2022 RECOMMENDED RATE STRUCTURE

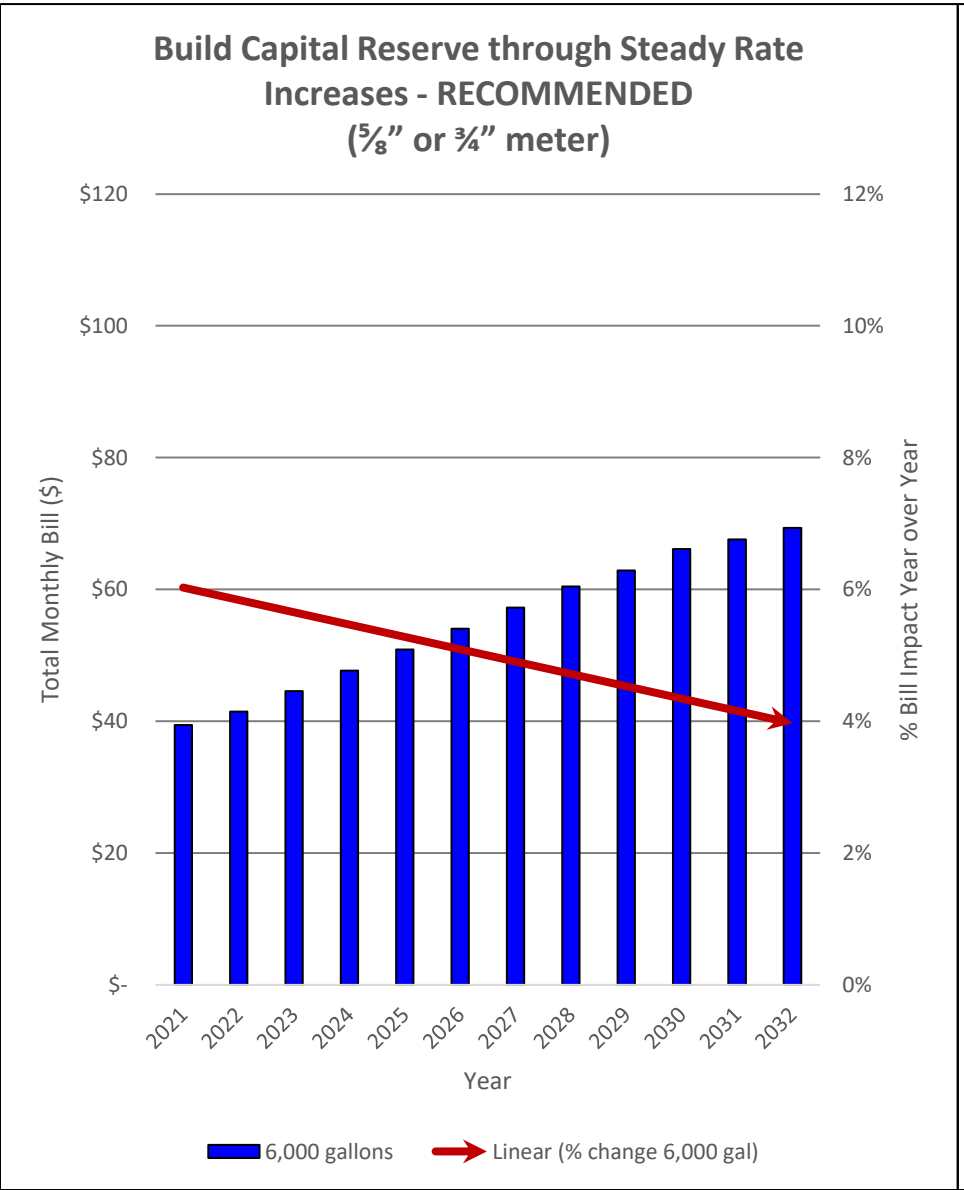
FIXED CHARGES			
Meter Size	**2022 Expected Meter Count**	**$/month**	**$ ↑ or ↓ from current**
⅝" & ¾"	2,448	$8.97	+$1.31
1"	9	$13.80	+$3.06
1.5"	32	$25.86	+$1.76
2"	71	$40.34	+$5.09
3"	5	$74.13	+$4.30
4"	1	$122.40	-$11.54

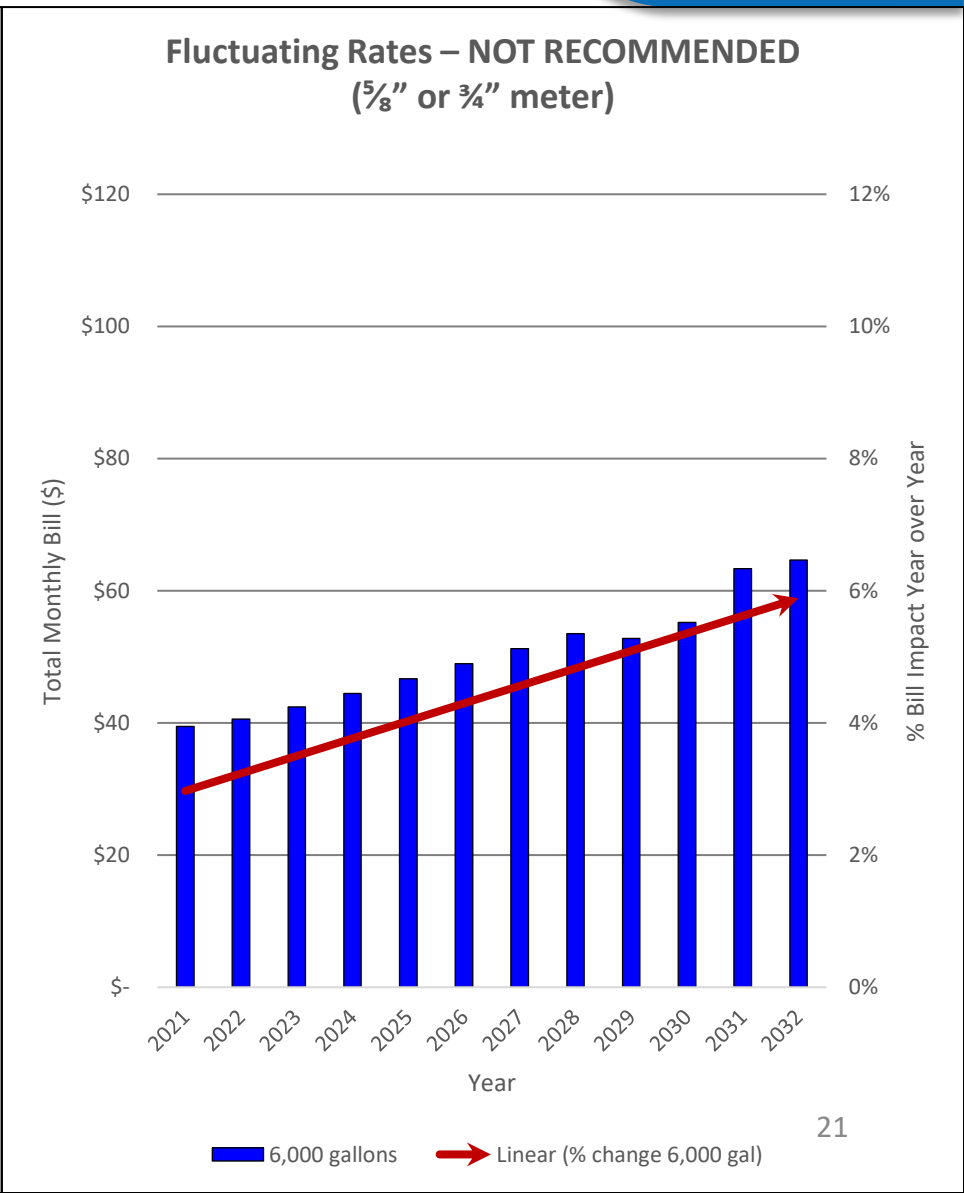
Fixed Surcharges	**$/month**	**$ ↑ or ↓ from current**
WSC-04	$4.61	-$0.23
Capital Reserve	$0.83	+$0.83

VOLUMETRIC CHARGES			
Tier	Tier Cap (gal/month)	$/1,000 gal	$ ↑ or ↓ from current
Tier 1	3,000	$2.31	+$1.41
Tier 2	6,000	$3.47	+$0.07
Tier 3	18,000	$8.68	-$0.01
Tier 4	>18,001	$34.72	+$20.87
All Flow	None	$4.45	+$0.81

Volumetric Surcharges	**$/1,000 gal**	**$ ↑ or ↓ from current**
WSC-02	$0.69	-$0.30
WSC-03	$0.93	-$0.42

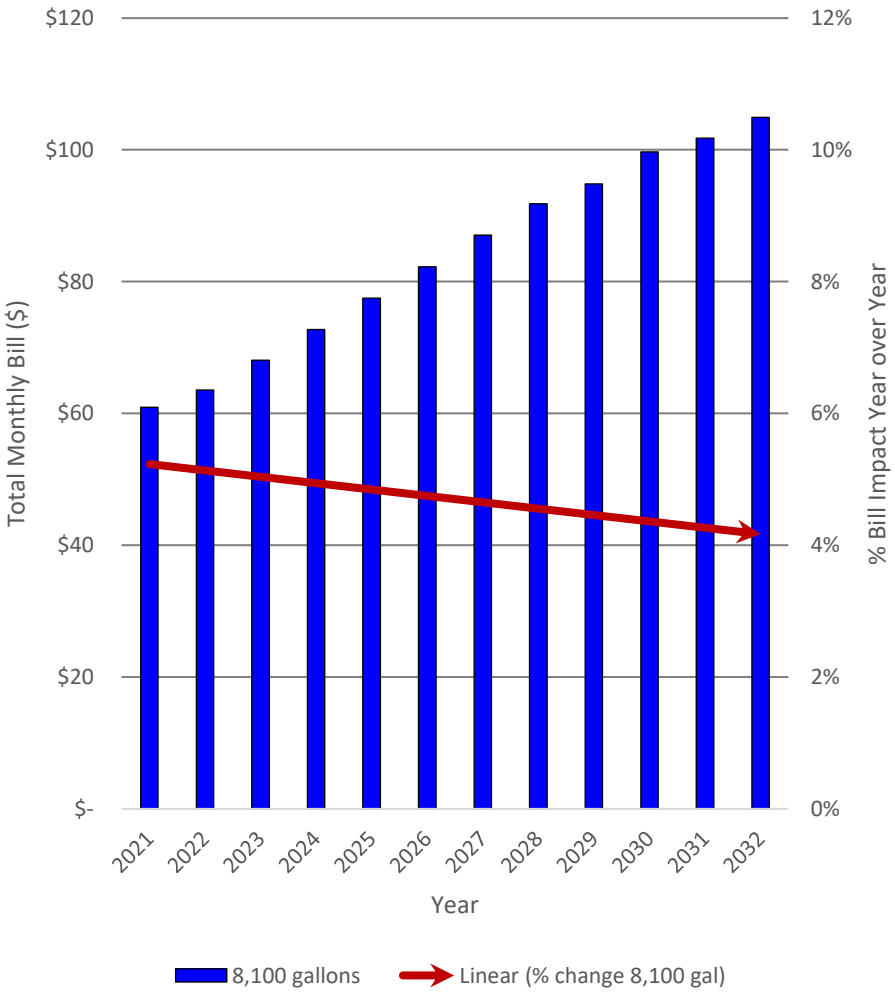
LIMITING BILL IMPACTS: SINGLE-FAMILY RESIDENTIAL



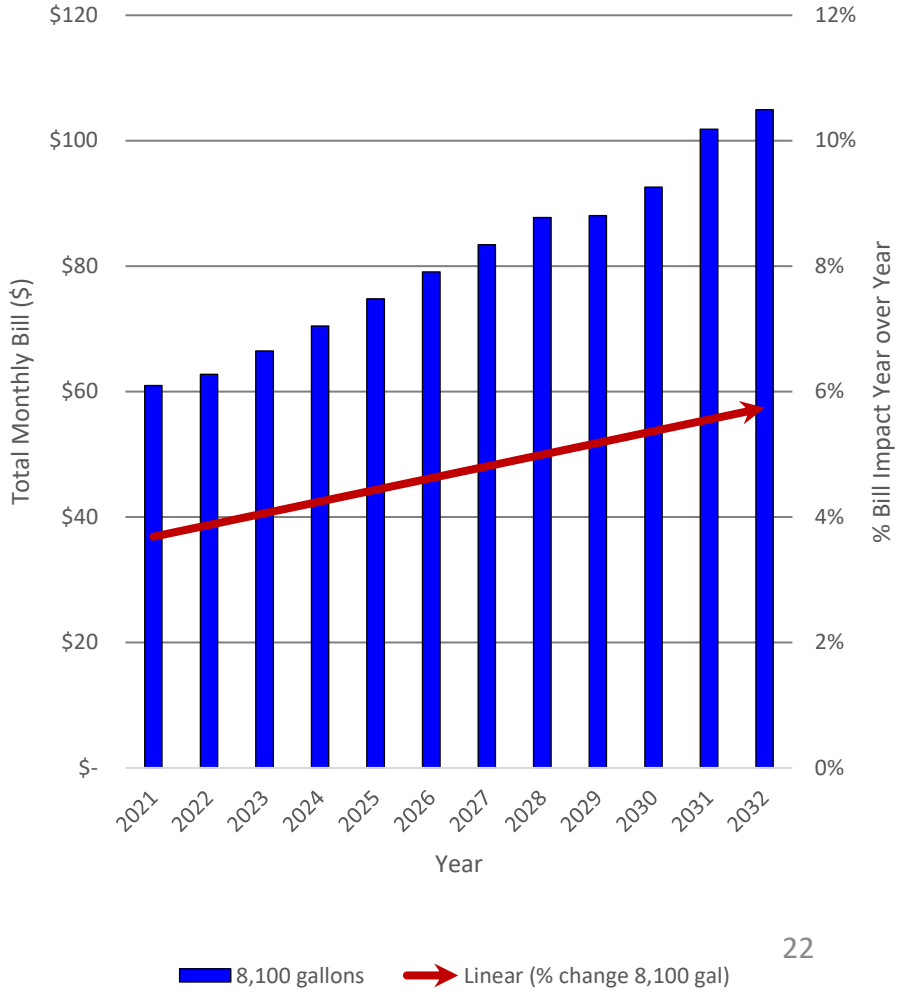


LIMITING BILL IMPACTS:
MULTI-FAMILY RESIDENTIAL / COMMERCIAL / INDUSTRIAL

Build Capital Reserve through Steady Rate Increases – RECOMMENDED (⅝" or ¾" meter)



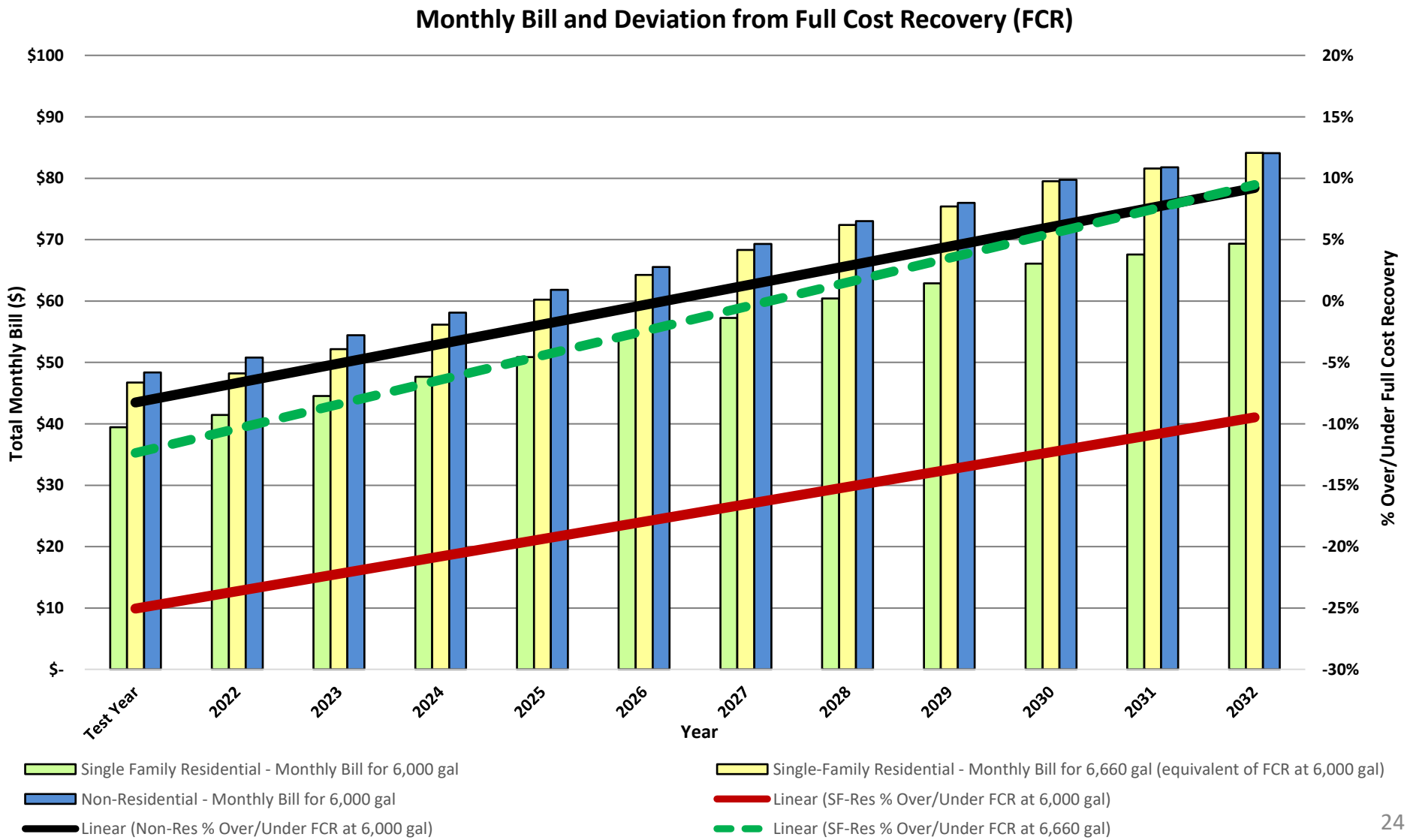
Fluctuating Rates – NOT RECOMMENDED (⅝" or ¾" meter)



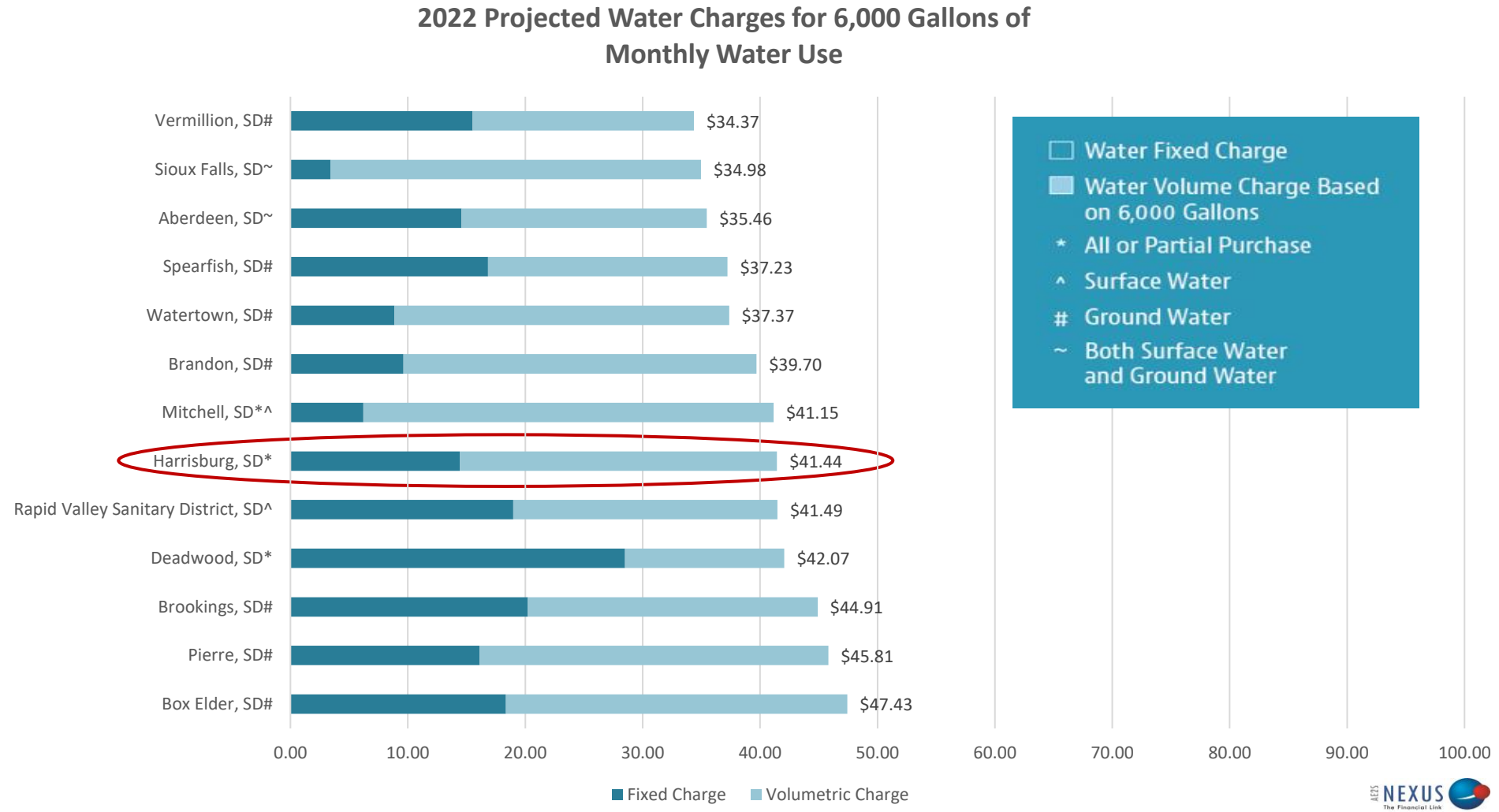
CHANGES IN 2022 TO COMMON BILLS

User Class	Common Monthly Usage (gallons)	2022 Monthly Bill	$ ↑ or ↓ from current
Single-Family Residential - ⅝" & ¾" meter	3,000	$26.19	+$3.97
Single-Family Residential - ⅝" & ¾" meter	6,000	$41.44	+$2.00
Single-Family Residential - ⅝" & ¾" meter	9,000	$72.33	-$0.20
Multi-Family Residential - 1.5" meter	10,250	$93.47	+$3.24
Commercial/Industrial/School - ⅝" & ¾" meter	7,800	$61.72	+$2.58

RESULTS OF FULL COST RECOVERY RATE DESIGN

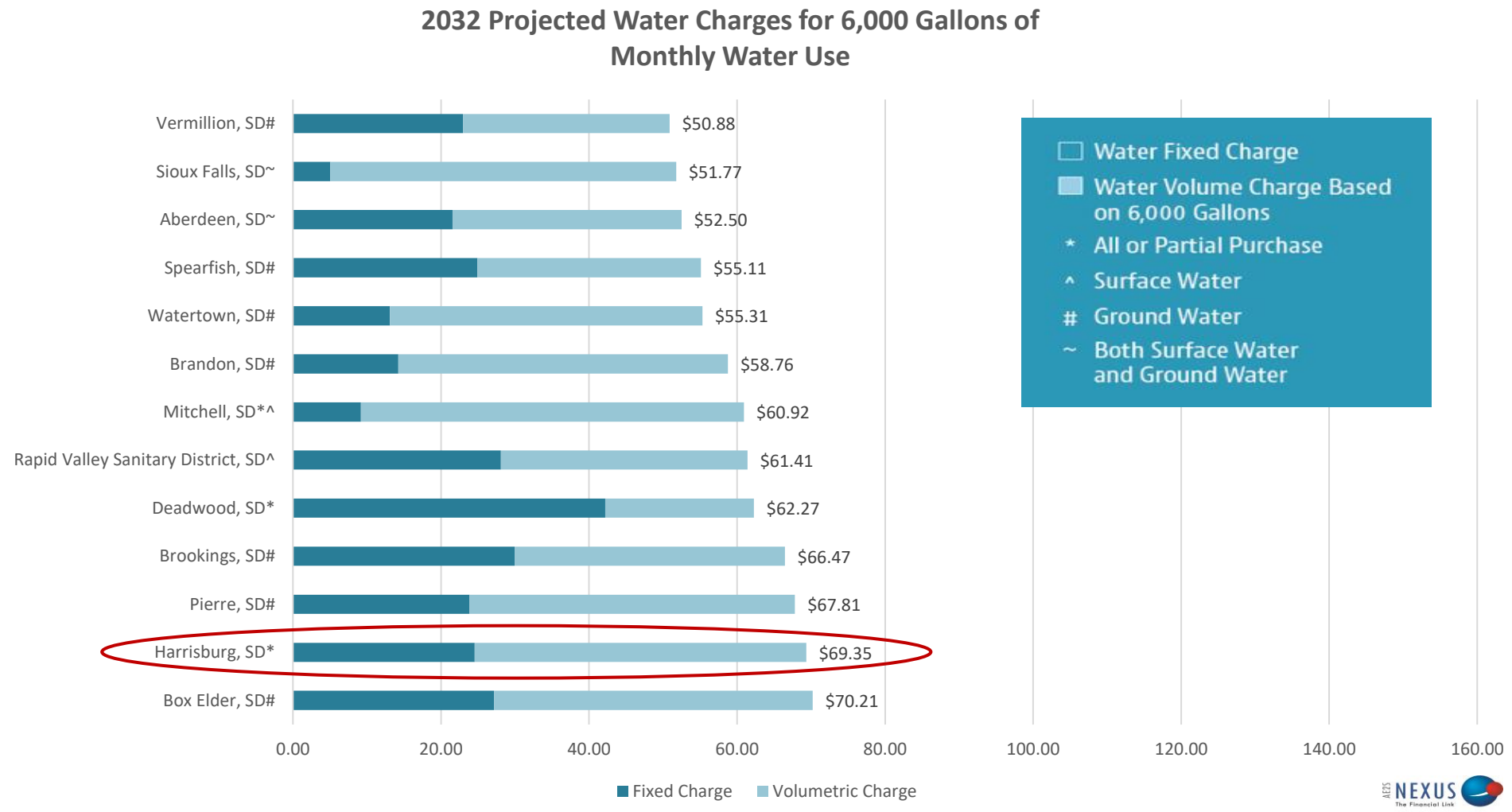


REGIONAL COMPARISON – YEAR 2022



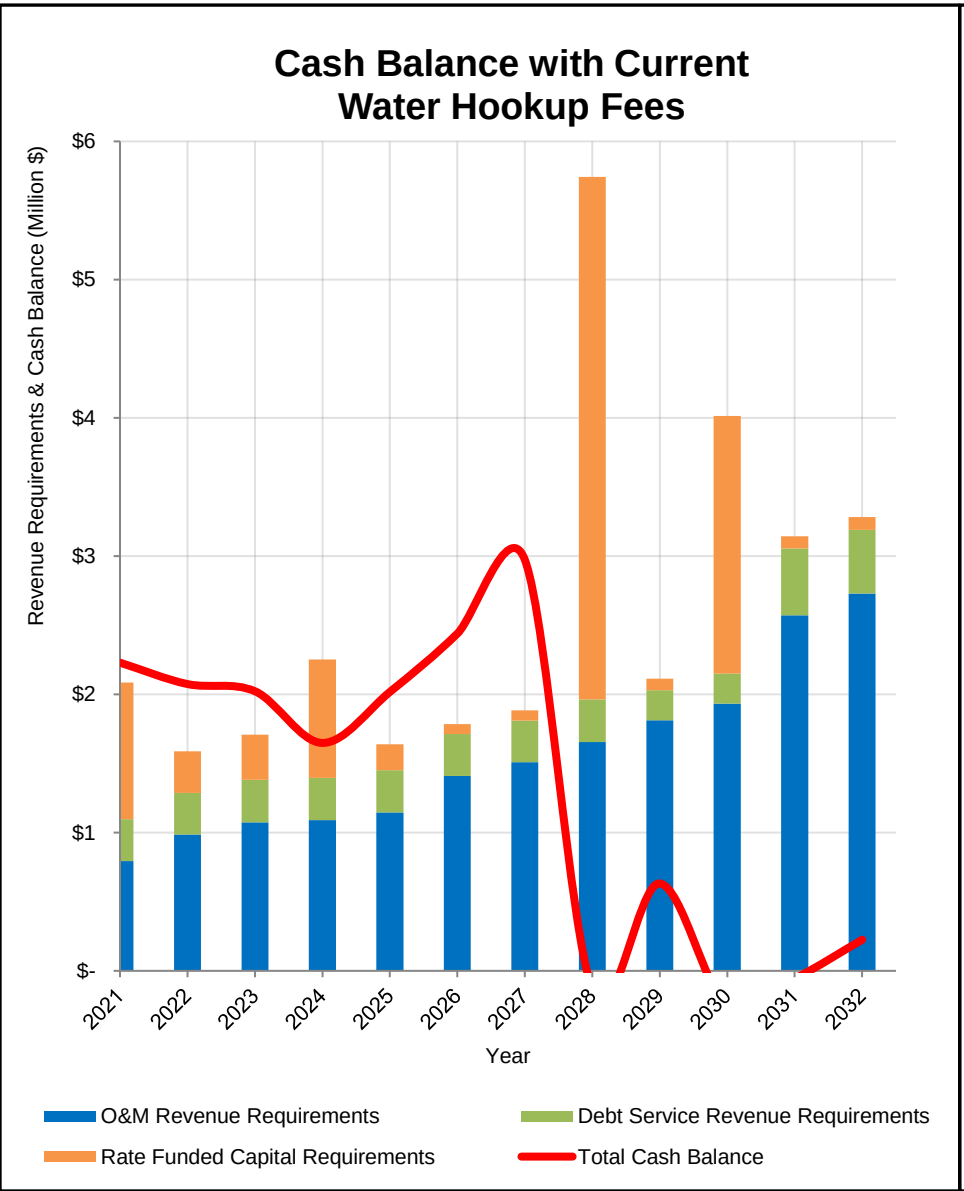
Assumes all communities implement an inflationary increase of 4% to 2021 rates for 2022. Harrisburg rate based on recommendations from 2021 rate study for 6,000 gallons of use for a single-family residential user.

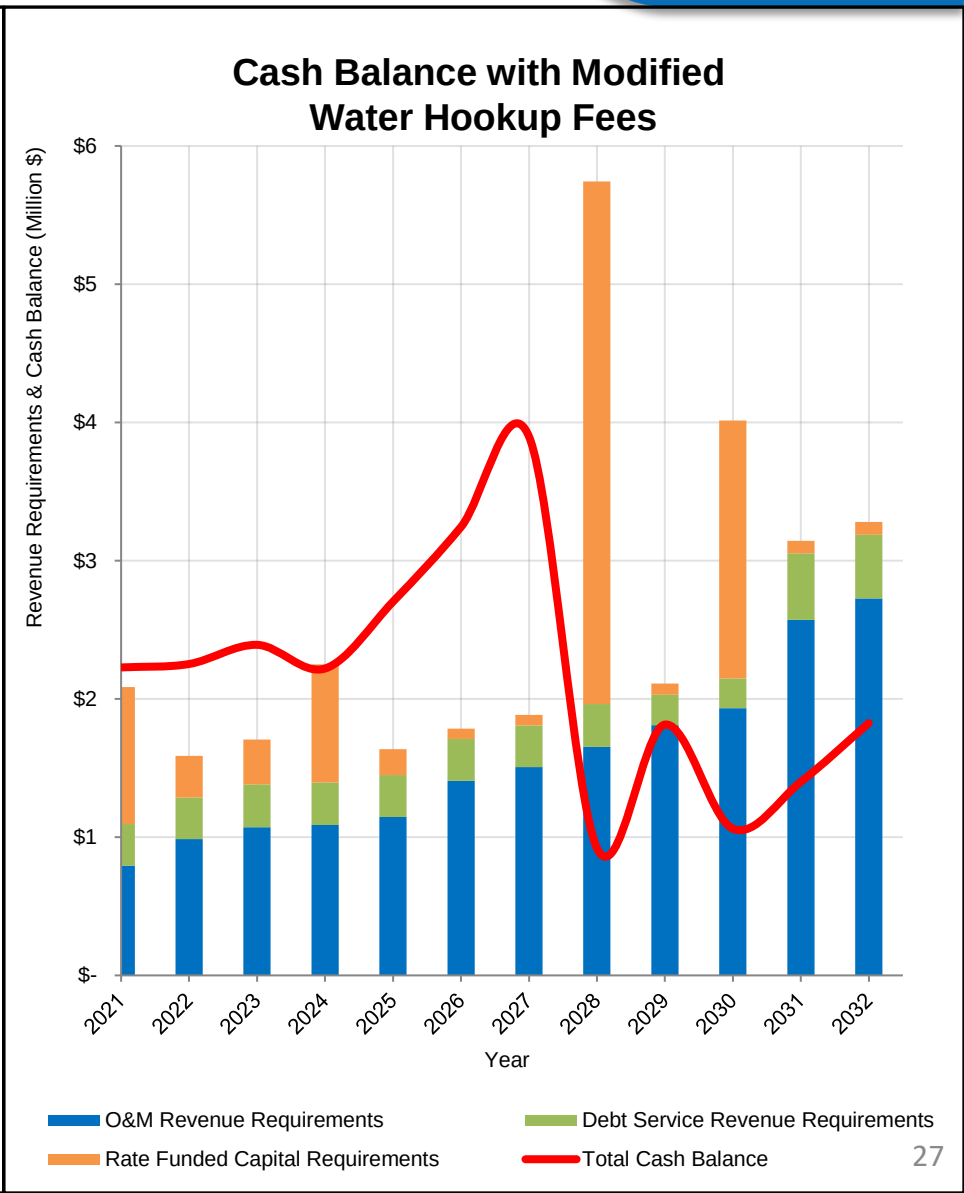
REGIONAL COMPARISON – YEAR 2032



Assumes all communities implement an inflationary increase of 4% to 2021 rates every year through 2032. Does not account for any future capital expenditures that may change rates by more than an inflationary adjustment. Harrisburg rate based on recommendations from 2021 rate study for 6,000 gallons of use for a single-family residential user.

WATER HOOKUP FEES





SUMMARY OF RECOMMENDATIONS

1. Consider a series of ~5% rate adjustments through 2032.
   - Model calculates each rate component for you annually.

2. Implement modified 4-Tier rate structure for single-family residential to promote responsible water use through definition of “Responsible Water Use.”

3. Focus on public education of new rate structure.

4. Implement modified water hookup fees in 2022.

5. Plan to cash fund:
   - Southeast Area Improvements - Phase 1
   - Lewis & Clark – Phase 2 related projects
   - 25% of 3rd Water Tower (~$1.8 Million to be generated from water hookup fees and capital reserve surcharge)

6. Review rates and revenue adequacy model annually.

Wrap-Up and Questions

QUESTIONS?

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