



NORTH TAHOE PUBLIC UTILITY DISTRICT

DATE: August 8, 2023

ITEM: H-1

FROM: Office of the General Manager

SUBJECT: Water and Wastewater Utilities Cost-of-Service Study Workshop

RECOMMENDATION:

Receive a presentation from Shawn Koorn of HDR Engineering and provide discussion and feedback on the District's Cost-of-Service Study. No action by the Board of Directors is agendized for this item.

DISCUSSION:

The District is nearing the end of the current five-year rate period and has undertaken a new Cost-of-Service Study to assess the District's utility rates relative to its projected costs over the next five-year period. This next step in the District's ongoing "rate maintenance" effort is consistent with industry best practices, Board discussion during the previous Cost-of-Service Study, and the priorities established for the Fiscal Year 23/24 Operating Budget and the District's new five-year Strategic Plan. Further, the priorities established by the Board of Directors in the District's five-year Capital Improvement Plan are dependent on the ability of utility rate revenue to fund them.

At the September 13, 2022 meeting, the Board of Directors authorized a contract with HDR to execute the Cost-of-Service Study for the next five-year period. Since that time, staff has been working with HDR on the data-gathering phase of the project. This workshop serves as the kick-off of the study effort with the Board of Directors.

At the March 14, 2023 meeting, the Board of Directors received a presentation from Shawn Koorn of HDR Engineering, providing feedback and initiating the Cost-of-Service Study.

At the June 13, 2023 meeting, the Board of Directors received a presentation from focusing on the proposed escalation factors utilized by the cost-of-service model over the five-year study period as well as potentially transitioning the State/Federal Mandate Fee into the System Replacement Fee within the rates.

At the July 19, 2023 special meeting, the Board of Directors received a presentation focusing on reviewing key Wastewater assumptions, including capital funding and the allocation of General & Administrative costs to fully reflect the operational and maintenance costs associated with each of the enterprises.


This workshop will focus on reviewing key Water assumptions, including capital funding and allocation of General & Administrative costs to fully reflect the operational and maintenance costs associated with each of the enterprises.

STRATEGIC PLAN ALIGNMENT:

Goal 3: Enhance District governance and partnerships – Objective B: Ensure financial sustainability of the District – Tactic 2: Complete and implement new Five-year Rate Structure – Activity a: Engage a consultant to conduct a cost-of-service study; and – Activity b: Assemble internal support team with an identified sponsor; and – Activity c: Staff recommendation presented to Board for consideration and adoption in compliance with California Proposition 218 requirements.

ATTACHMENTS: Cost-of-Service Study PowerPoint Presentation

REVIEW TRACKING:

Approved By: 
Bradley A. Johnson, P.E.
General Manager/CEO



North Tahoe Public Utility District Review of Key Water Assumptions

August 8, 2023

Overview of the Presentation

- Overview of Setting Cost Based Rates
- Review prior rate study goals and outcomes
- Prior Key Assumption Discussions
- Review of Key Water Assumptions
 - Capital Funding Analysis
 - Integration of G&A costs
- Next Steps



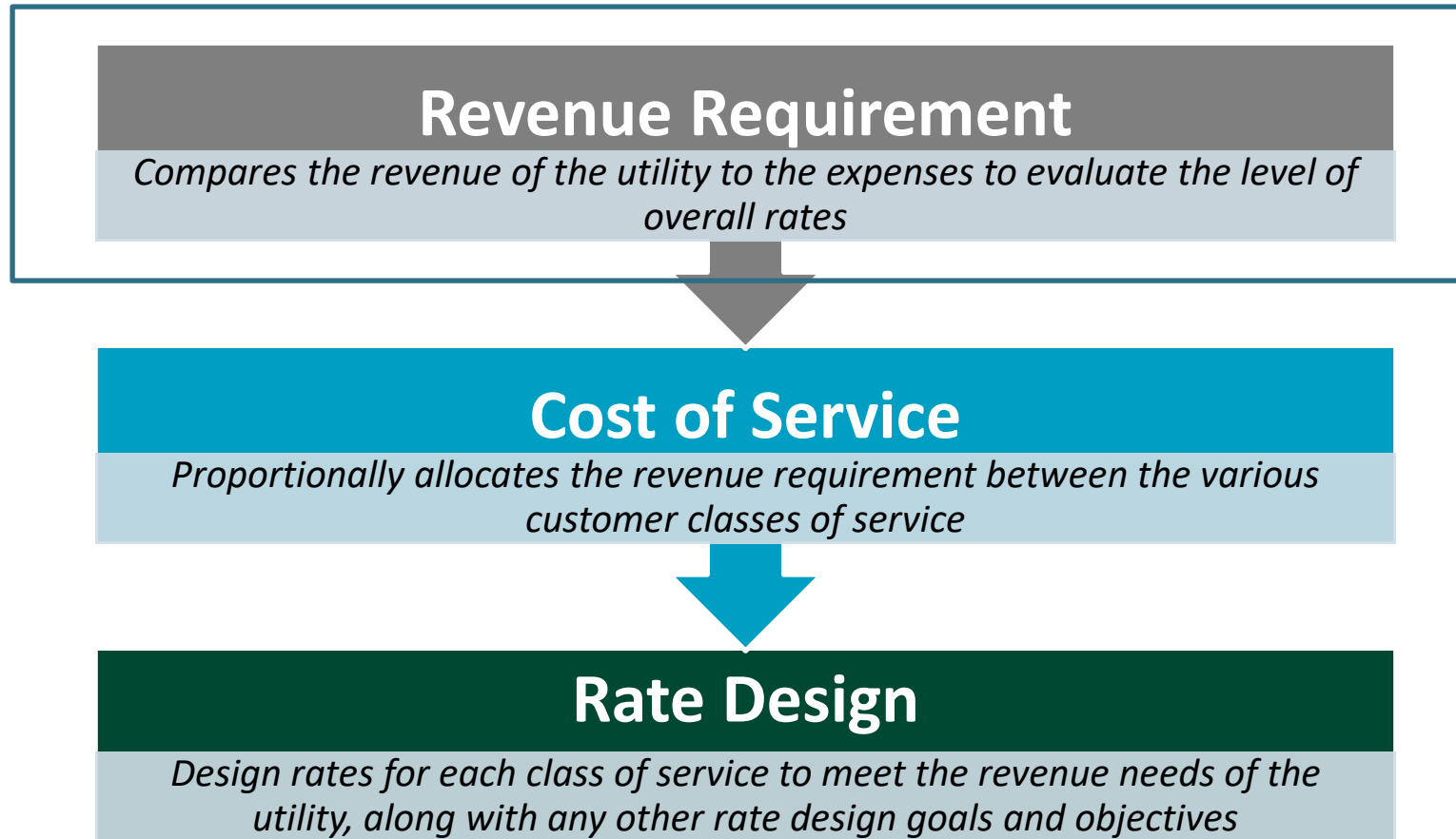
Purpose of the Study

- Develop an analysis to financially sustain the District's water and wastewater infrastructure
 - Proposed rates for the next five-year rate setting period
- Reflect prudent financial planning criteria
 - Maintain target debt service coverage (DSC) ratio
 - Adequate rate funding of capital infrastructure
 - Meet target reserve balances
- Develop the analyses using generally accepted methodologies and the District's system and customer characteristics
- Meet the intent of the requirements laid out in Proposition 218
 - Develop proportional and cost-based rates
 - Provide administrative record

Proposition 218 – Setting Cost-Based Rates

- Proposition 218 is a California constitutional amendment designed to protect taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent
- Proposition 218 is not prescriptive in defining a “cost-based” rate
- In part, Proposition 218 requires
 - Fees shall not exceed the **reasonable cost** of providing the service
 - Fees shall not exceed the **proportional cost** of providing the service
- Cost of service analysis results (unit costs) are the foundation of the proposed rates
 - Nexus between cost to provide service (expenses) and rates (fixed and variable) charged to customers (revenues)

Developing Cost-Based Rates



Revenue Requirement Goals and Objectives

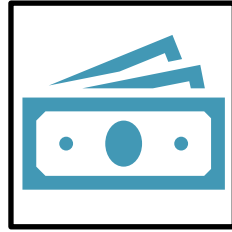


Adequately fund annual operating costs

Costs continue to increase since the last rate study

District has also been impacted by recent inflationary trends

Balance the impacts of funding General and Administrative (G&A) costs supporting each utility (balancing use of property tax revenues)

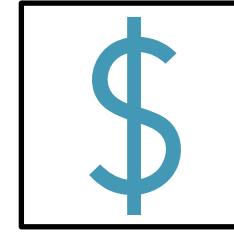


Providing sufficient capital funding for

Necessary system improvements

Annual renewal and replacements

Use of property tax revenues



Cost-Based Rates

Balance the impacts to rates to adequately fund annual O&M and capital improvement needs

Ensure adequate debt service coverage ratios

Maintain prudent reserve levels

Develop proposed rates for next five years (FY 24/25 – FY 28/29)

Overview of the Revenue Requirement

Compares utility revenues to expenses

- Determines if revenue (rate) adjustments are necessary

Uses prudent financial planning criteria

- Adequate funding of renewal and replacements
- Maintaining sufficient ending reserve balances

Reviews a specific time period

- Typically a five-to-ten-year period
- Rates are established for a five-year period

Utility is analyzed on a “stand-alone basis”

- No transfer of funds from other District funds
- Rates need to support operations and capital

Utilizes the “cash basis” methodology

- Generally accepted method for municipal utilities

Prior Rate Study Goals and Outcomes

- Established the G&A fund
 - Property tax funds annual overhead costs
 - Previously included in water and wastewater (primarily wastewater)
 - Transitioned wastewater O&M funding away from property tax funding
- Further supported recreation and parks funding through property taxes
- Developed an initial target for capital renewal and replacement funding across all funds
 - Rate funded capital for water and wastewater
 - Property tax funding for other funds
- Updated the water and wastewater rate structure to proportional cost-based levels
 - Established a revised tiered water rate structure
- Updated the water and wastewater connection fees to cost based levels

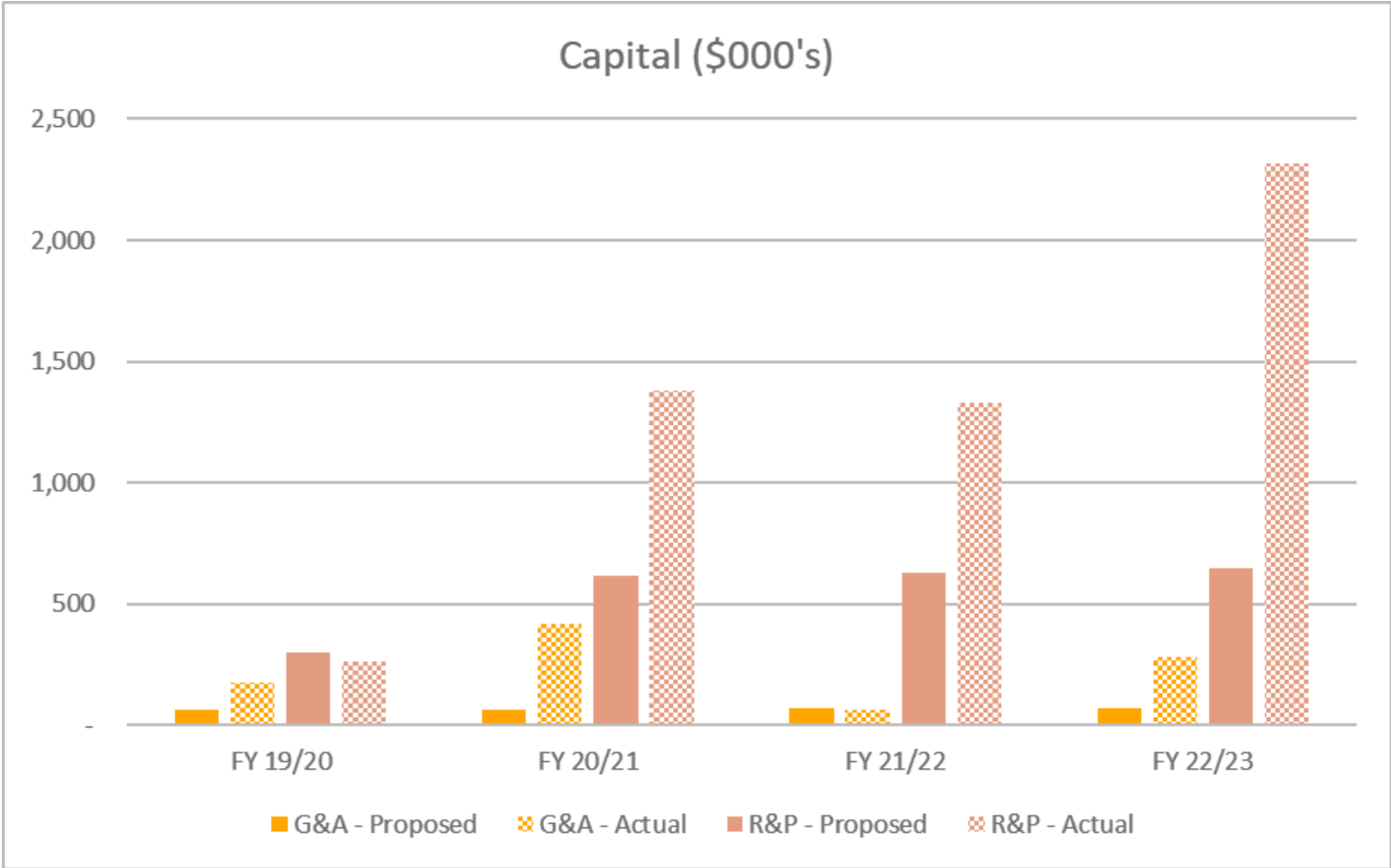
Prior Rate Study Goals and Outcomes (Cont'd)

- Resulted in a rate transition plan that was adopted by the Board through a Proposition 218 process

	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Water Avg. Bill @ 6,000 gal.	\$65.30	\$78.23	\$80.10	\$81.71	\$83.41	\$85.14
Water % System Adjustment	--	0.0%	2.5%	2.0%	2.0%	2.0%
Wastewater Avg. Bill	\$19.14	\$32.96	\$41.19	\$44.17	\$47.95	\$51.86
Wastewater % System Adjustment	--	90.0%	22.0%	9.0%	9.0%	9.0%

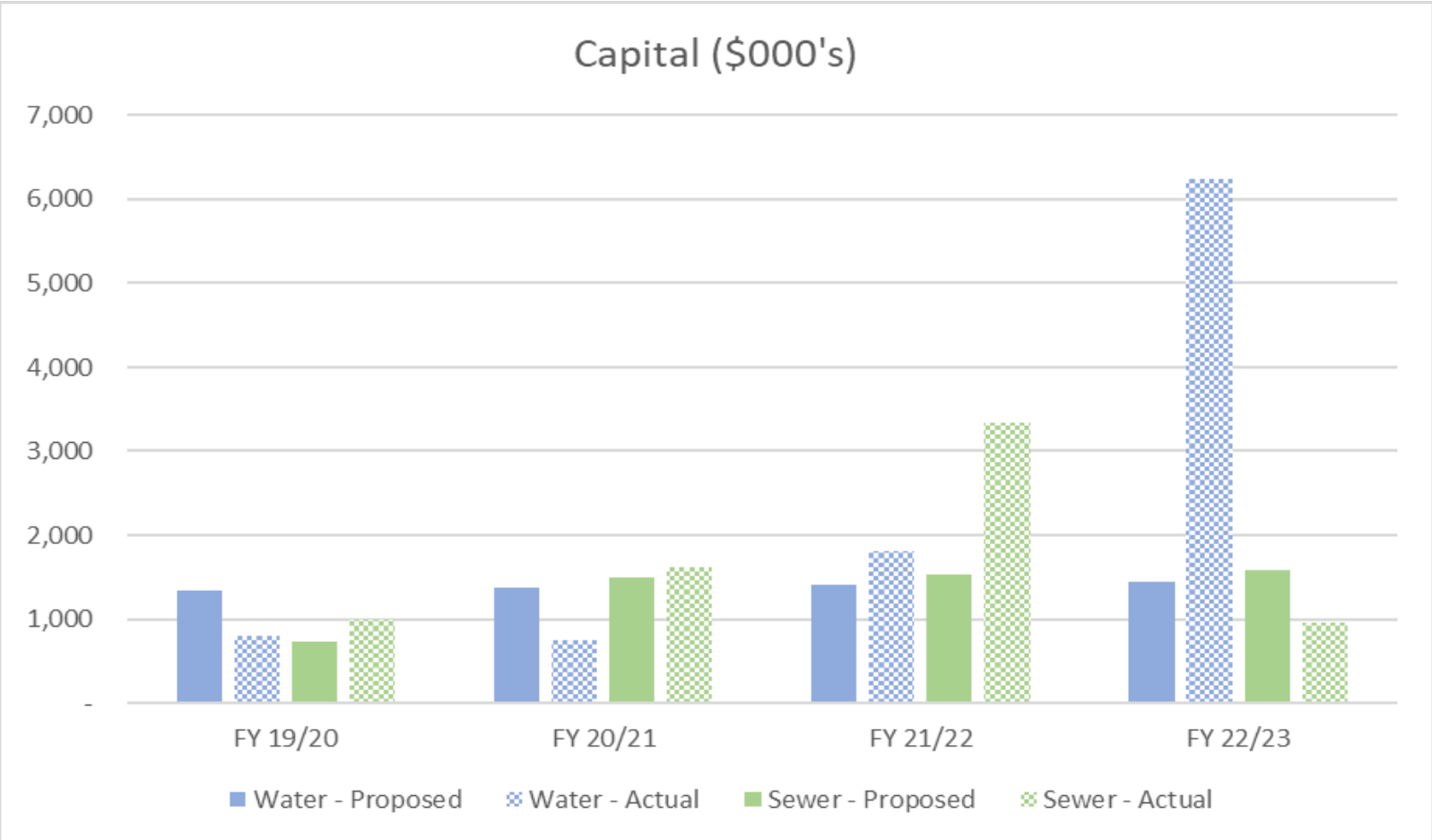
Prior Rate Study Goals and Outcomes (Cont'd)

- Comparison of rate study proposed and actual capital expenditures (including grants and reserves) – G&A and Recreation and Parks



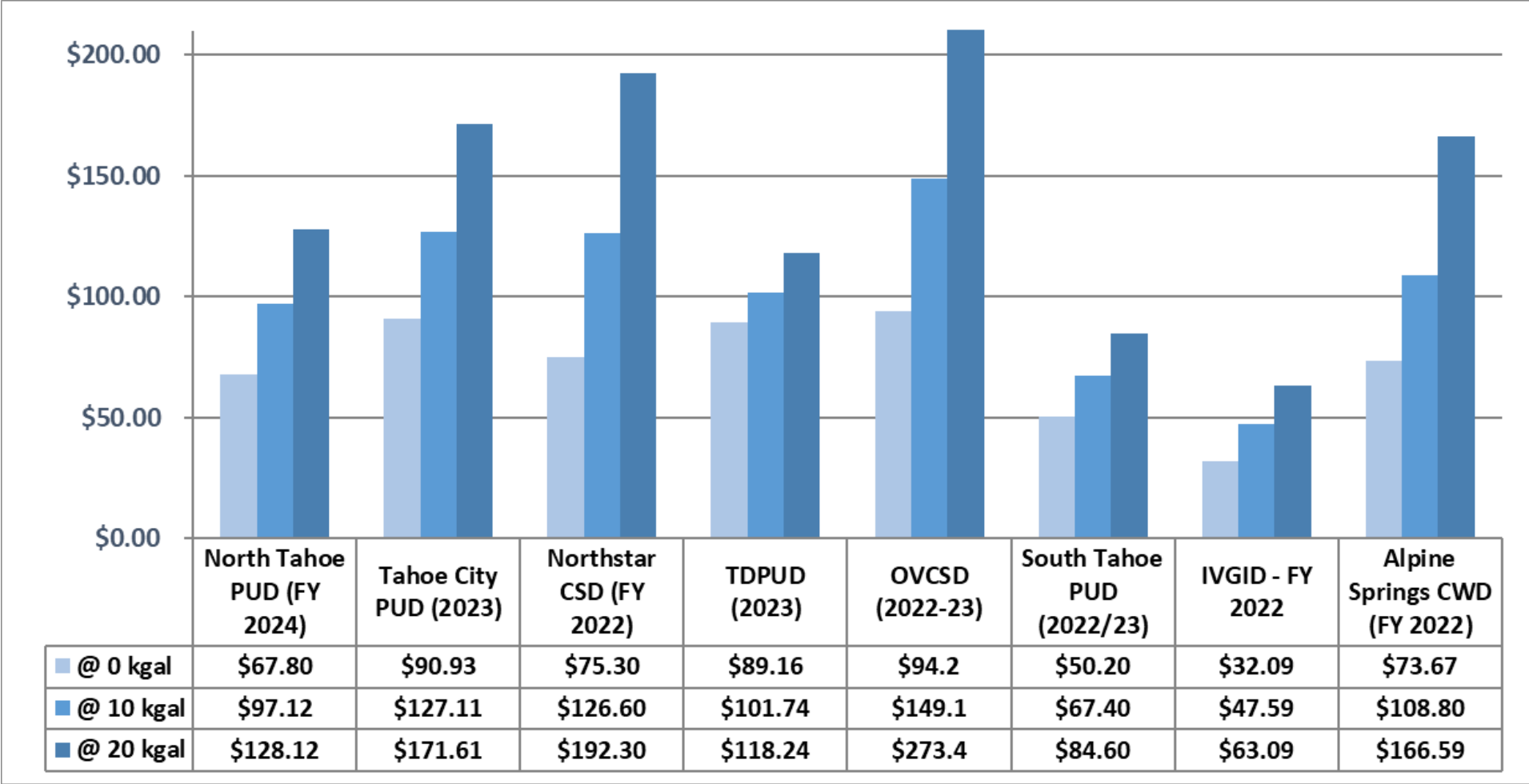
Prior Rate Study Goals and Outcomes (Cont'd)

- Comparison of rate study proposed and actual capital expenditures (including grants and reserves) – Water and Wastewater



Water Utility Rates

Local Residential Bill Comparison

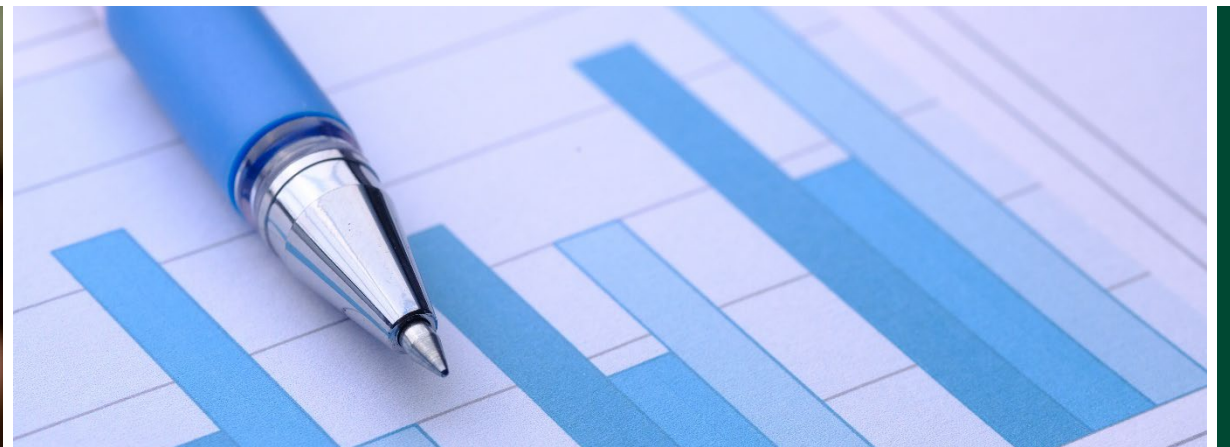


Prior Key Assumption Discussion

- June 13, 2023 Board Discussion
 - State/Federal Mandate Fee combined with capital charge for proposed rates
 - Review and discussion of proposed escalation factors for Water and Wastewater
 - Annual O&M annual impact ranges from 6.5% in FY 2024-25 declining to 5% in FY 2028-29
- July 19, 2023 Board Discussion
 - Wastewater key assumptions
 - Capital funding approach
 - G&A funding scenarios
 - » Continued funding through property tax revenues
 - » Wastewater allocated G&A funded through wastewater revenues (rates)

Key Assumptions – Board Feedback and Direction

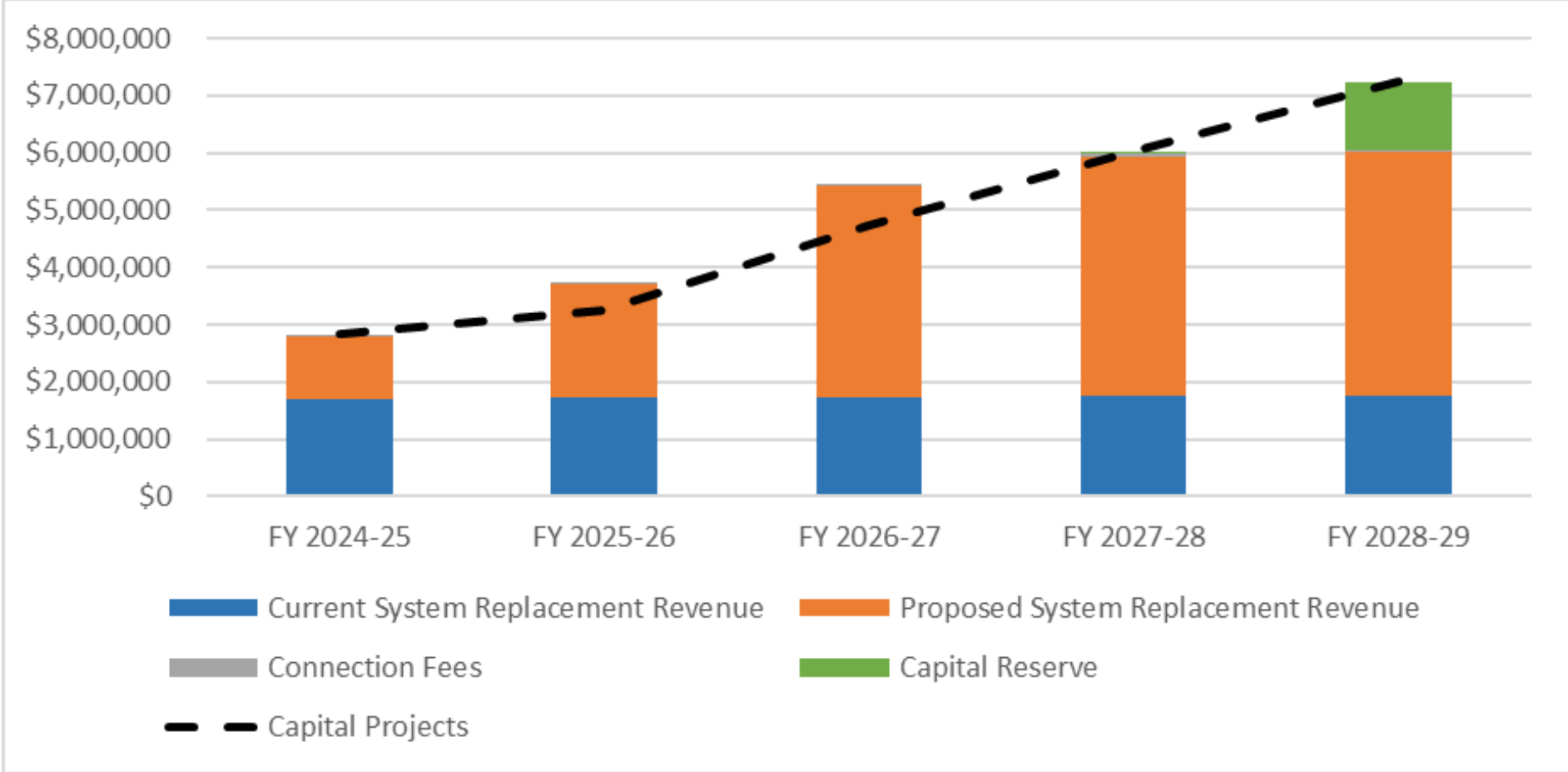
- Water Capital plan funding scenarios and alternatives
- Water funding of allocable G&A expenses



Water Capital Funding Plan

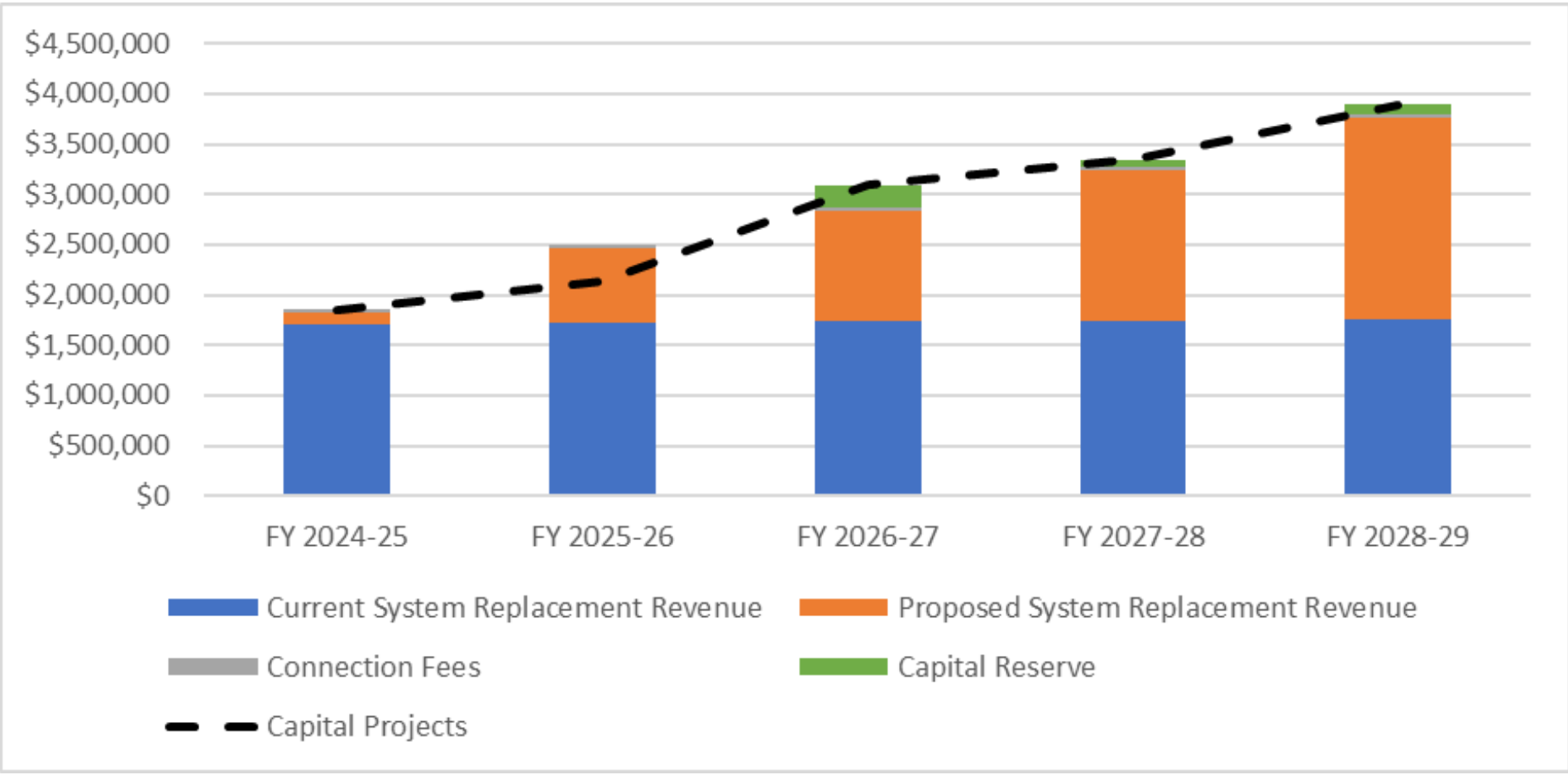
- Current five-year CIP averages \$4.8 million per year (FY 24/25-FY 28/29), reduces in following years
 - Reflects priority projects and timing
- Developed a capital funding approach with funding from:
 - Annual funding through system replacement revenue (e.g., capital charge)
 - Additional funding needs system replacement revenue (increased charge)
 - Annual connection fee revenues
- Results in a proposed increase in the system replacement charge (capital)
 - Reflects current and future level of capital funding needs (e.g., \$1.7M vs \$3.5M)

Alternative 1 – Current 5-Year Capital Plan



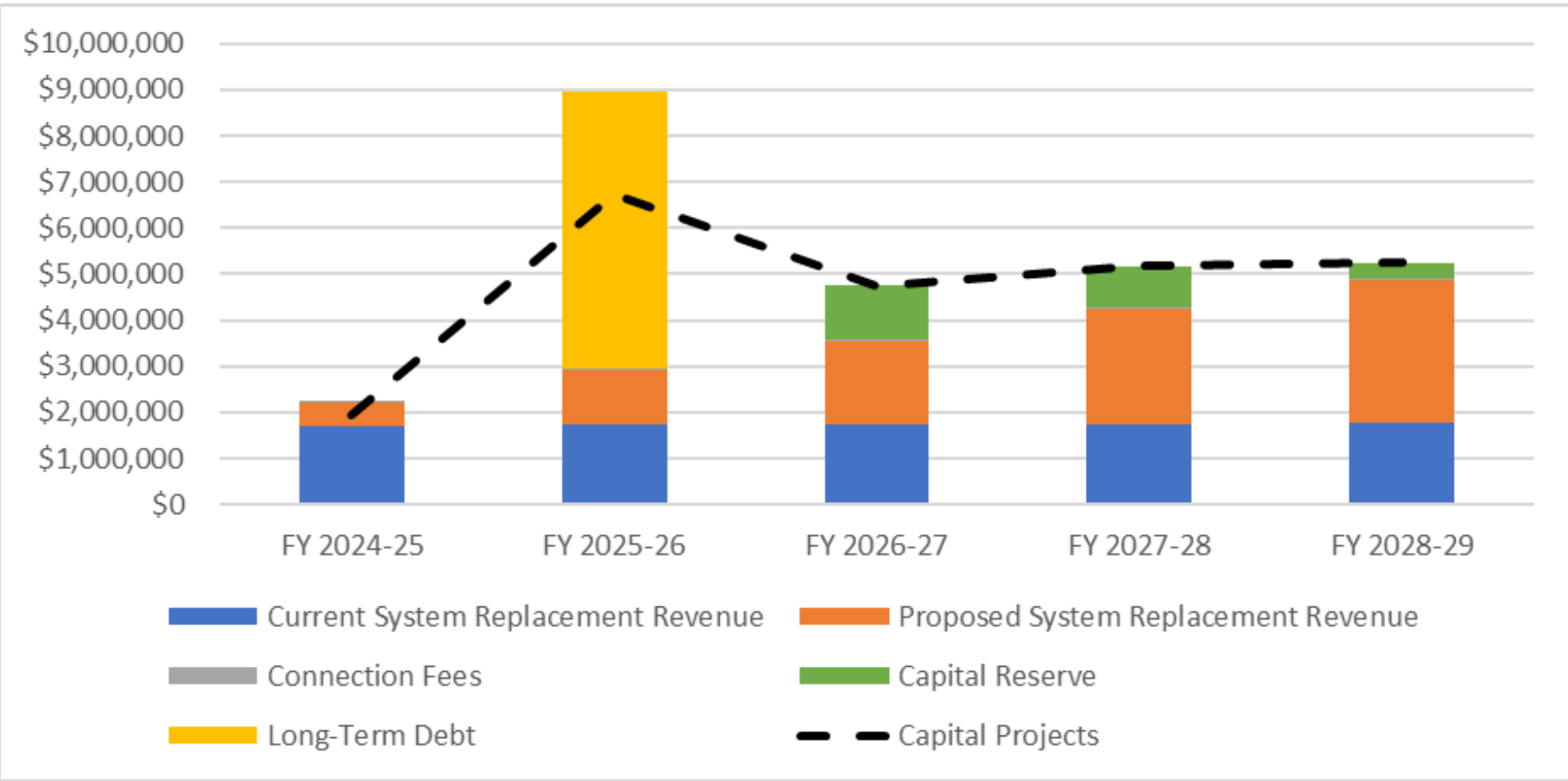
Alternative 1	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5-Year CIP	32%	15%	15%	12%	2%

Alternative 2 – Spread Over 10-Year Period



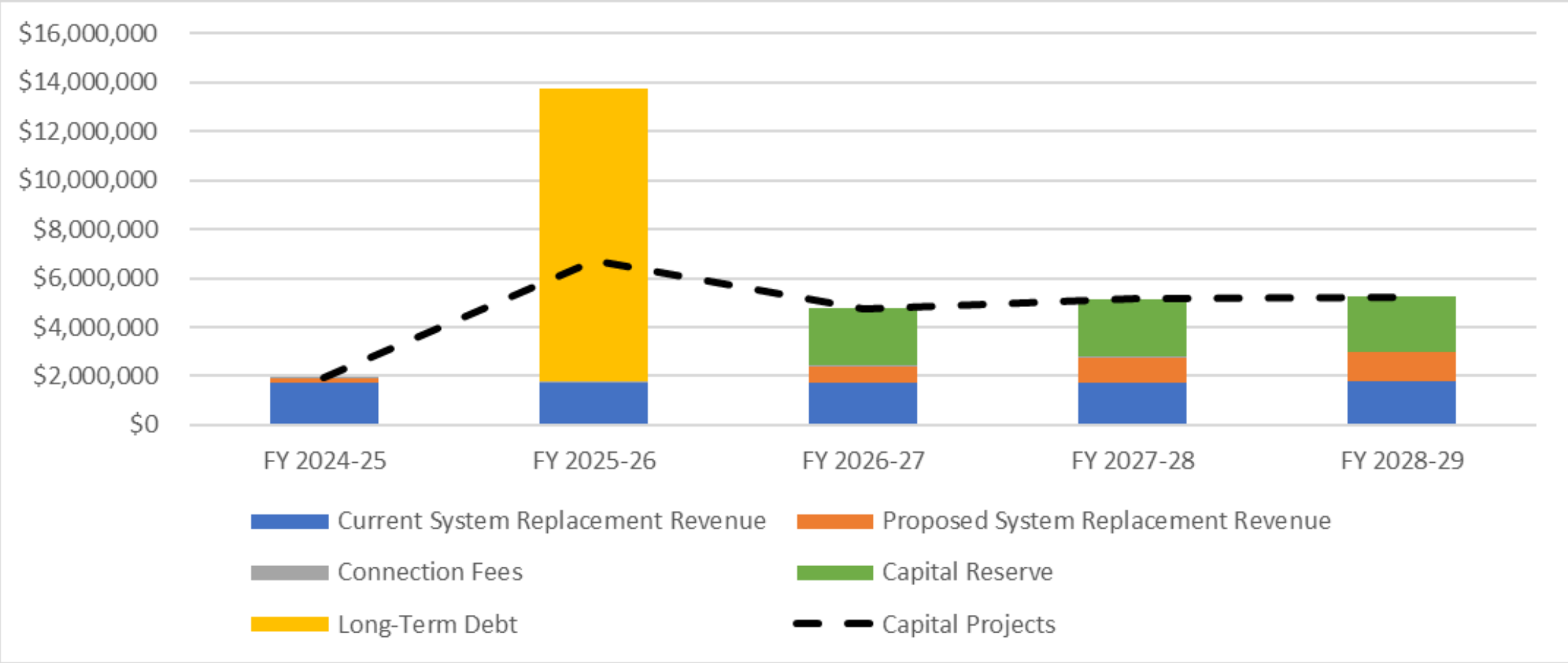
Alternative 2	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
10-Year CIP	9%	9%	9%	9%	9%

Alternative 3 – \$6 M of Long-Term Borrowing



Alternative 3	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
\$6M of Borrowing	20%	15%	11%	11%	9%

Alternative 4 – \$12 M of Long-Term Borrowing



Alternative 4	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
\$12M In Borrowing	13%	10%	10%	10%	4%

Summary of the Water Capital Funding Plan Alternatives

Alternative	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1. 5-Year CIP	32%	15%	15%	12%	2%
2. 10-Year CIP	9%	9%	9%	9%	9%
3. \$6 M Borrowing	20%	15%	11%	11%	9%
4. \$12 M Borrowing	13%	10%	10%	10%	4%

Overview of G&A Costs

- G&A costs are overhead costs that support the entire District operations
 - Management, Accounting, Engineering, Information & Operational Technology, etc.
- G&A costs are essential to, and support, Water, Wastewater and Recreation & Parks operations
- G&A costs are generally allocated to the different departments or enterprise funds to be paid for by operating revenue (e.g., Water and Wastewater Rates)
- FY 2023-24 District-wide G&A costs are \$4.8 million
- Currently the District uses Property Tax to pay for the District's G&A

Summary of the G&A Cost Allocation

- Developed an allocation approach primarily based on operating expenses
- Results in the following allocation of G&A cost

Total	Water	Wastewater	Recreation
\$4.8m	\$1.7m	\$1.6m	\$1.3m
100.0%	37%	36%	27%

- To fully represent the O&M costs of each enterprise, the enterprise's share of G&A costs should be allocated
- **It is then a Board policy discussion/decision to use property tax revenue or rate revenues to fund the G&A portion of each enterprise**

Review of Preliminary System Revenue Impacts

- Developed two alternatives for funding water G&A costs
 - Property tax allocated to water to fund G&A costs (prior scenarios)
 - Five-year phase-out of property tax funding to transition G&A costs to water rate funding
- Phasing can be revised further based on Board input
- Developed each alternative for each capital funding scenario
 - With the exception of the \$6M borrowing approach

Alternative	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5. 5-Year CIP – Phased G&A	40%	20%	20%	15%	4%
6. 10-Year CIP – Phased G&A	17%	17%	13%	13%	13%
7. \$12 M Borrowing – Phased G&A	22%	16%	16%	12%	8%

Comparison of the Scenarios

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1. 5-Year CIP – No G&A	32%	15%	15%	12%	2%
2. 10-Year CIP– No G&A	9%	9%	9%	9%	9%
3. \$6 M Borrowing– No G&A	20%	15%	11%	11%	9%
4. \$12 M Borrowing– No G&A	13%	10%	10%	10%	4%
5. 5-Year CIP – Phased G&A	40%	20%	20%	15%	4%
6. 10-Year CIP– Phased G&A	17%	17%	13%	13%	13%
7. \$12 M Borrowing– Phased G&A	22%	16%	16%	12%	8%

Additional Alternative – Use of Available Property Tax with Phase in of G&A

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1. 5-Year CIP – No G&A	32%	15%	15%	12%	2%
2. 10-Year CIP– No G&A	9%	9%	9%	9%	9%
3. \$6 M Borrowing– No G&A	20%	15%	11%	11%	9%
4. \$12 M Borrowing– No G&A	13%	10%	10%	10%	4%
5. 5-Year CIP – Phased G&A	40%	20%	20%	15%	4%
6. 10-Year CIP– Phased G&A	17%	17%	13%	13%	13%
7. \$12 M Borrowing– Phased G&A	22%	16%	16%	12%	8%
8. 10-Year CIP– Phased G&A Plus Use of Property Tax \$'s	14%	14%	14%	14%	14%

Impacts to the G&A Fund

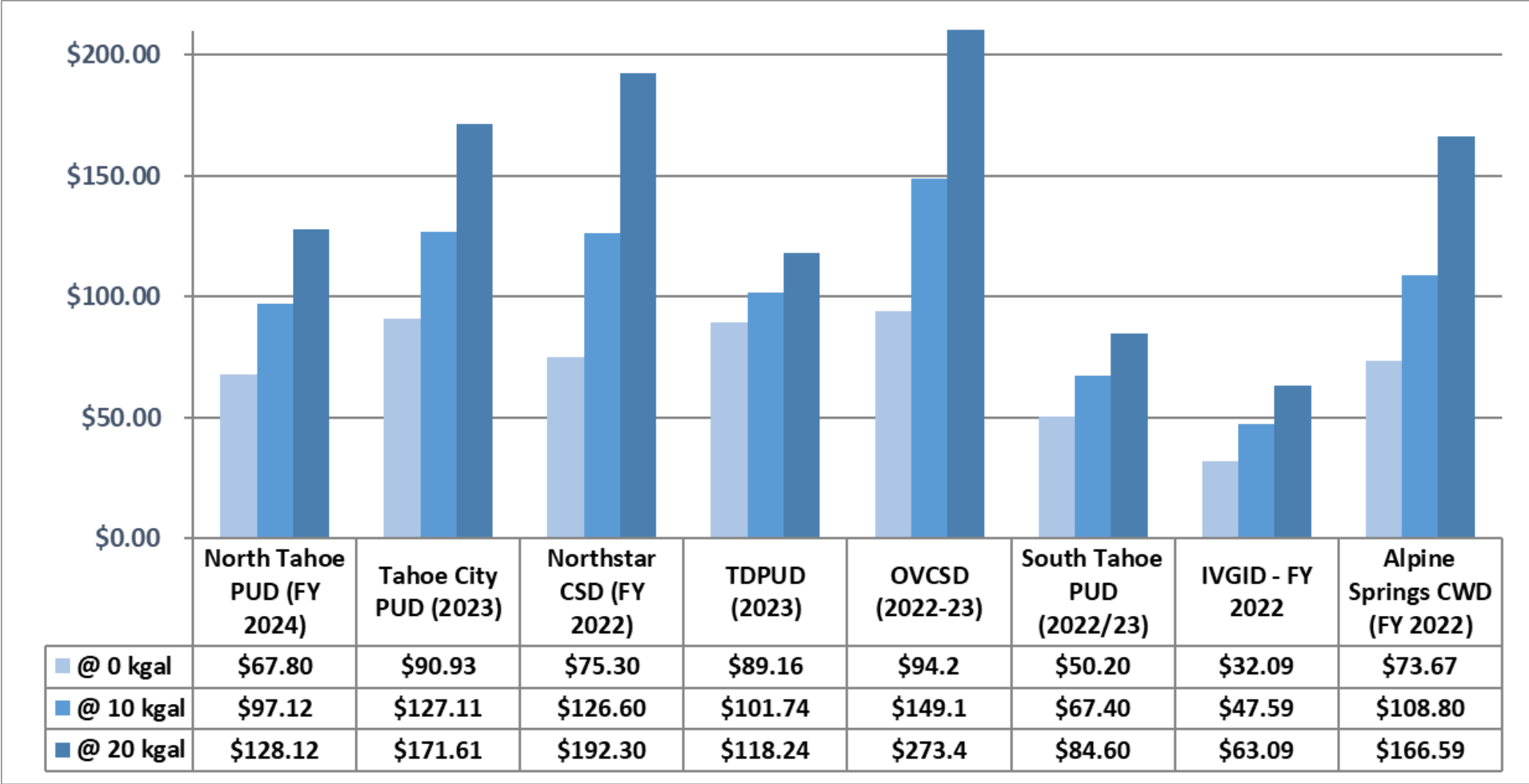
- Allocating G&A Wastewater O&M (rates) with a 5-year phase out of property tax support results in available property tax (PT) revenues

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Available Wastewater PT \$'s	\$361,410	\$722,821	\$1,084,231	\$1,445,641	\$1,669,436
Available Water PT \$'s	\$0	\$529,288	\$1,058,576	\$1,587,865	\$2,117,153
Use of PT \$'s for Final Water Alternative	\$0	\$0	\$0	(\$148,504)	(\$279,218)
Total Available PT \$'s	361,410	1,252,109	2,142,807	2,885,002	3,507,371

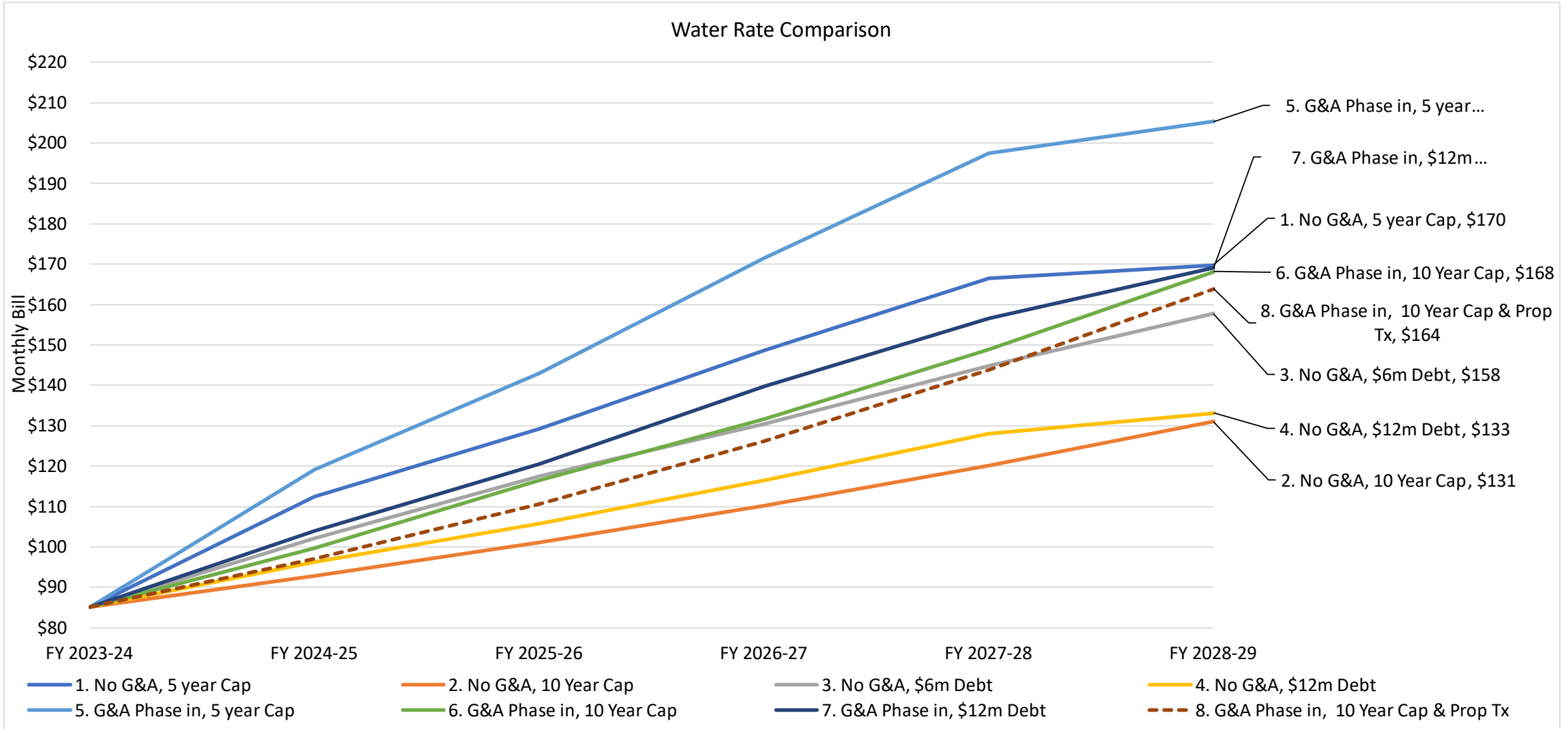
- Available property tax revenues can be used for:
 - Addressing Water capital needs (key assumption discussion)
 - Funding Recreation and Parks O&M and capital
 - Other Board prioritized projects/funding needs

Water Utility

Local Residential Bill Comparison



NTPUD Water Rate Alternative Comparison





Next Steps

Key assumption presentations and direction



Review draft revenue requirement analysis – based on policy discussion



Review draft cost of service and rate design analysis



Develop Final Study Recommendations

Tentative Project Schedule

- August 2023 review capital funding and G&A implications and preliminary study results
- September 2023 review rate design and connection fee alternatives
- October 2023 present study recommendations and rate design
- November 2023 set public hearing date, and develop public notice materials/information
- December 2023/January 2024 public hearing

Board Discussion



Study Goals and Objectives

- Review and update capital funding analysis
- Review general and administrative expense allocation
- Review fixed/variable revenue through rates
- Update the wastewater and water rates

Study Opportunities

- Evaluate alternatives for cluster meters (HOAs)
- Revise current non-residential wastewater rate (EDU basis) to a meter size basis (like water)
- Revise current non-residential wastewater connection fee (EDU basis) to a meter size basis (like water)
- Develop flat, unmetered, water rates for future potential use

Current Water Rates

	FY 2022-23	FY 2023-24
Single Family		
Fixed (\$/month)		
Base	\$34.85	\$35.55
System Replacement	29.96	30.58
State/Federal Mandate	1.62	1.67
0 -8,000 gallons	\$2.83	\$2.89
> 8,000 - 20,000 gallons	3.04	3.10
> 20,000 gallons	3.32	3.39

Tiers For Multi-Residential and Commercial Classes

Meter Size	Tier 1	Tier 2	Tier 3
3/4"	0 - 6,000 Gal	6,000 - 41,000 Gal	41,000 Gal & Greater
1"	0 - 11,000 Gal	11,000 - 46,000 Gal	46,000 Gal & Greater
1 1/2"	0 - 27,000 Gal	27,000 - 116,000 Gal	116,000 Gal & Greater
2"	0 - 41,000 Gal	41,000 - 134,000 Gal	134,000 Gal & Greater
3"	0 - 72,000 Gal	72,000 - 161,000 Gal	161,000 Gal & Greater
4"	0 - 112,000 Gal	112,000 - 261,000 Gal	261,000 Gal & Greater
6"	0 - 200,000 Gal	200,000 - 460,000 Gal	460,000 Gal & Greater
8"	0 - 560,000 Gal	560,000 - 1,288,000 Gal	1,288,000 Gal & Greater

	FY 2022-23	FY 2023-24
Multi-Residential		
Fixed (\$/month)		
Base		
3/4"	\$67.71	\$69.06
1"	118.53	120.90
1 1/2"	304.82	310.92
2"	460.58	469.79
3"	812.82	829.08
4"	1,266.70	1,292.04
6"	2,257.00	2,302.14
8"	6,319.60	6,445.99
System Replacement		
3/4"	\$29.96	\$30.58
1"	47.08	48.05
1 1/2"	121.06	123.57
2"	182.93	186.71
3"	322.82	329.49
4"	503.09	513.49
6"	998.69	1,019.34
8"	2,796.32	2,854.14
Dwelling Unit Fee	\$0.00	\$0.00
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1	\$2.78	\$2.84
Tier 2	2.90	2.96
Tier 3	3.17	3.23
* Tiers vary by meter size		

Current Water Rates (Cont'd)

	FY 2022-23	FY 2023-24
Commercial/Industrial		
Fixed (\$/month)		
Base		
3/4"	\$51.42	\$52.45
1"	90.02	91.82
1 1/2"	231.49	236.12
2"	349.78	356.78
3"	617.29	629.64
4"	961.98	981.22
6"	1,714.06	1,748.34
8"	4,799.36	4,895.35
System Replacement		
3/4"	\$29.96	\$30.58
1"	47.08	48.05
1 1/2"	121.06	123.57
2"	182.93	186.71
3"	322.82	329.49
4"	503.09	513.49
6"	998.69	1,019.36
8"	2,796.32	2,854.14
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1	\$2.79	\$2.85
Tier 2	2.99	3.05
Tier 3	3.13	3.19

* Tiers vary by meter size

	FY 2022-23	FY 2023-24
Common Meter (Irrigation)		
Fixed (\$/month)		
Base		
3/4"	\$18.54	\$18.91
1"	32.46	33.11
1 1/2"	83.48	85.15
2"	126.14	128.66
3"	222.60	227.05
4"	346.90	353.84
6"	618.11	630.47
8"	1,730.69	1,765.31
System Replcement		
3/4"	\$30.61	\$31.22
1"	53.58	54.65
1 1/2"	137.78	140.54
2"	208.19	212.35
3"	367.41	374.76
4"	572.57	584.02
6"	1,020.20	1,040.60
8"	2,856.56	2,913.69
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1 - 0 - 41,000 gallons	\$3.25	\$3.32
Tier 2 > 41,000 gallons	3.62	3.69

* Tiers vary by meter size