



City of Santa Barbara  
Public Works Department

***Memorandum***

**DATE:** February 17, 2022  
**TO:** Water Commission  
**VIA:** Joshua Haggmark, Water Resources Manager  
**FROM:** Dana Hoffenberg, Water Resources Analyst  
**SUBJECT:** Proposed Updates to Wastewater Rates

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**RECOMMENDATION:**

That the Water Commission receive a presentation on updated revenue requirements and cost of service results. Review and discuss the recommended wastewater rate design.

**DISCUSSION:**

Background

The City's wastewater system plays an essential role in protecting public health and the environment. Maintaining the City's wastewater system requires a proactive commitment to investing in the capital infrastructure and resources necessary to keep this vital system operating 24 hours a day, 365 days per year. The City's complex wastewater system includes 256 miles of sewer mains, 7 lift stations, 25 creek crossings, over 7,000 access structures (manholes and cleanouts), two miles of pressurized force mains, and the El Estero Water Resource Center (El Estero) – all of which must operate seamlessly to process approximately 2 billion gallons of wastewater annually. The El Estero Facility Plan identifies over \$95 million in capital improvements needed over the next 20 years.

On January 20, 2022, staff and the City's consultant, HDR, presented to the Water Commission on wastewater rate development. Commissioners provided input on the rate study assumptions and rate design:

- Given current dry conditions and possible State requirements, consider increasing water conservation assumptions within the rate model.
- Analyze the current cap on wastewater charges in light of the sustained level of community water conservation.

After meeting with the Commission in January, staff has been working with HDR on finishing the cost-of-service analysis and designing rates for each class of customer.

### Revenue Requirement and Cost-of-Service Analysis

On a long-term basis, revenues must be sufficient to meet the cost of the City's Wastewater System, including operations and maintenance expenses, capital improvements, mandated standards of treatment, principal and interest payments on existing debt, Council reserve policies, and other obligations. The Covid-19 pandemic has exacerbated increases in operations and maintenance costs as well as construction costs associated with the capital program, adding to the overall revenue requirement. During the initial analysis in January, HDR found that annual rate-revenue increases of about 6 percent on average would be sufficient to meet the needs of the Wastewater System. However, after input received from Commissioners in January and continued lack of local precipitation, HDR increased the assumed level of water consumption in the model from 0.2% annually, to 2% annual conservation in the residential customer class. This has revised the average annual revenue requirement from 6% to 7%. It is important to note that rate-revenue increases do not equate to rate increases, or bill impacts, to individual customer classes of service. For example, a single-family residence with average water use may see different impacts than a commercial customer.

The total revenue requirement, less non-rate revenue from other sources such as fees collected for Fats, Oils, and Grease delivery services, is defined as the "cost of service" for any given fiscal year. After determining the cost of service, rates are then designed to apportion the cost of service among the customer classes, according to the proportionate share of costs of service attributable to the classes and tiers within classes. A cost-of-service analysis is forward-looking and determines the proportional distribution of the revenue requirement to the various customer classes of service (i.e., residential, commercial) and provides the basis for the proposed rates.

### Proposed Rates

Currently, wastewater volumetric charges are assessed on single-family units and small multi-family residential properties (2-4 dwelling units) for only a portion of their water use. The purpose of limiting the applicable billing units is to recognize that water use above a certain level is likely being used for outdoor watering, which does not flow into the wastewater collection system or receive treatment at El Estero. In this report, the word "cap" refers to the quantity of water, in hundred cubic feet (HCF), after which residential customers are not charged wastewater fees for volumetric use.

#### *Single-Family Residences*

Current single-family residential rates include a fixed charge and a volumetric charge based on metered water consumption, with a cap at 10 HCF. In looking at the single-family class, HDR studied the cap in relation to current water usage trends. Many years of drought have created a "new normal" for average water usage as customers have made permanent changes to their properties and habits to reduce water usage. Analysis of current usage trends finds that on average, a single-family's monthly winter water usage (December – March) is 8 HCF. Winter water usage is a reasonable approximation of how much water is being used indoors and thus

discharged to the City's wastewater system, as irrigation should be minimal in winter months. For the above reasons, HDR is recommending reducing the 10 HCF cap for single-family residences to 8 HCF. The change to the billing cap will be phased in over the rate-setting period. The cap will be lowered to 9 HCF in Fiscal Year 2023, and then to 8 HCF in Fiscal Years 2024 and 2025.

### *Multi-Family Residences*

Similar to single-family, the multi-family residential rates include a fixed component and a volumetric component based on potable water use. Currently, if a single water meter serves one, two, three, or four attached dwelling units, or two or more detached dwelling units, the billing cap is set at 10 HCF per dwelling unit, the same cap as single-family residential customers. A single meter serving five or more dwelling units, any of which are attached, is not subject to a volumetric cap. The current rate structure is designed to use the relationship between the number of units served by a single meter as a means to differentiate between multi-family complexes with water use patterns similar to single-family residences, and more dense multi-family complexes with little to no outdoor watering areas.

However, when analyzing water usage patterns of accounts on properties with 2-4 dwelling units, HDR found more similarities in water usage patterns with the 5+ dwelling unit customer class, rather than the single-family customer class. The single-family customer class on average has noticeable differences between winter water usage and summer water usage, indicating a strong irrigation pattern. This makes a cap necessary, as irrigation water does not discharge to the City's wastewater system. However, similar to the 5+ dwelling unit customer class, the 2-4 unit customer class does not show significant differences per dwelling unit between winter water usage and summer water usage. This indicates most water usage within this customer class is occurring indoors and is thus being discharged as wastewater to El Estero. Because of this, HDR is recommending that the cap for the 2-4 unit customer class be removed and to charge for all water usage like the multi-family 5+dwelling unit accounts.

This change will affect a small portion of 2-4 unit multi-family developments, as most water use is currently below the existing caps. There are some accounts, however, that staff will contact and recommend various conservation measures, such as drought-tolerant landscaping and replacement of outdated plumbing fixtures, or installing an irrigation meter, to lessen the impact of this change.

HDR's recommended changes will better reflect the amount of wastewater being discharged into the collection system and treated at El Estero.

### *Commercial and Commercial High/Industrial*

Currently, there are two commercial classes in the adopted wastewater rate structure: Commercial and Commercial High Strength/Industrial. These customer classes are billed volumetrically, subject to a minimum charge based on meter size. HDR is recommending

recalibrating the minimum charge to reflect current customer characteristics. This change is being phased in and will appear in year 2 of the rate adoption period (Fiscal Year 2024).

#### *High Strength Surcharge Fee*

During the City's last wastewater rate study, HDR recommended the addition of a high strength wastewater surcharge fee to cover the additional treatment costs associated with waste streams with unusually high strength. Discharges that fall in this category include but are not limited to, domestic septic tank/portable restroom discharges, industrial laundry services, and alcohol beverage manufacturing (brewery, wineries, and distilleries). This surcharge has been implemented and HDR recommends maintaining the surcharge. The cost-of-service analysis has determined the proportional allocation of costs on a per pound basis for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and Ammonia. Staff has conducted outreach to the customer most predominately affected by the surcharge, Marborg Industries, a large domestic septic tank/portable restroom hauling service and receiving station, to communicate planned increases to the surcharge.

#### Next Steps

After receiving input from the Water Commission, HDR will complete the cost-of-service analysis and rate design. Staff is planning to present the proposed wastewater rates at the regularly scheduled Water Commission meeting on March 17, 2022, followed by the Finance Committee on March 29, 2022. If approved, the proposed rates would be noticed in compliance with Proposition 218. An informational public webinar on the proposed rate changes is currently planned for mid-May. A public hearing compliant with Prop 218 is tentatively scheduled before City Council on June 14, 2022, prior to the adoption of the Fiscal Year 2023 budget.

**City of Santa Barbara  
Wastewater Rate Study  
Single Family Rates**

|                      | <i><b>Present<br/>Rates</b></i> | <b>FY 2023</b> | <b>FY 2024</b> | <b>FY 2025</b> |
|----------------------|---------------------------------|----------------|----------------|----------------|
| <b>Base Fee</b>      | <b><i>\$/Acct.</i></b>          |                |                |                |
| Per Account          | \$22.68                         | \$25.35        | \$27.00        | \$28.76        |
| <b>Volume Charge</b> | <b><i>\$ / HCF</i></b>          |                |                |                |
| 0 - 10               | \$3.71                          | --             | --             | --             |
| 10 +                 | 0.00                            | --             | --             | --             |
| 0 - 9                | --                              | \$3.83         | --             | --             |
| 9 +                  | --                              | 0.00           | --             | --             |
| 0 - 8                | --                              | --             | \$4.28         | \$4.62         |
| 8 +                  | --                              | --             | 0.00           | 0.00           |

City of Santa Barbara  
Wastewater Rate Study  
Multi-Family Rates

|                        | <i>Present<br/>Rates</i> | <b>FY 2023</b> | <b>FY 2024</b> | <b>FY 2025</b> |
|------------------------|--------------------------|----------------|----------------|----------------|
| <b>Fixed Charge</b>    | <b><i>\$ / DU</i></b>    |                |                |                |
| 1 - 4 DU               | \$22.68                  | \$25.35        | \$27.00        | \$28.76        |
| 5+ DU                  | 22.68                    | 25.35          | 27.00          | 28.76          |
| <b>Volume</b>          |                          |                |                |                |
| <b><i>1 - 4 DU</i></b> | <b><i>\$ / HCF</i></b>   |                |                |                |
| 0 - 10                 | \$3.71                   | --             | --             | --             |
| 10 +                   | 0.00                     | --             | --             | --             |
| All Consumption        | --                       | \$3.83         | \$4.28         | \$4.62         |
| <b><i>5+ DU</i></b>    |                          |                |                |                |
| All Usage              | \$3.71                   | \$3.83         | \$4.28         | \$4.62         |

City of Santa Barbara  
Wastewater Rate Study  
Commercial Rates

|                      | <i>Present<br/>Rates</i> | <b>FY 2023</b> | <b>FY 2024</b> | <b>FY 2025</b> |
|----------------------|--------------------------|----------------|----------------|----------------|
| <b>Minimum Bill</b>  | <b><i>\$/Acct.</i></b>   |                |                |                |
| 5/8"                 | \$43.39                  | \$46.65        | \$51.69        | \$55.05        |
| 3/4"                 | 65.09                    | 69.98          | 77.54          | 82.58          |
| 1"                   | 75.72                    | 81.41          | 90.46          | 96.34          |
| 1 1/2"               | 129.97                   | 139.73         | 129.23         | 137.63         |
| 2"                   | 216.68                   | 232.96         | 206.76         | 220.20         |
| 3"                   | 433.20                   | 465.75         | 387.68         | 412.88         |
| 4"                   | 540.67                   | 581.29         | 646.13         | 688.13         |
| 6"                   | 1,082.96                 | 1,164.33       | 1,292.25       | 1,376.25       |
| 8"                   | 1,895.21                 | 2,037.60       | 2,067.60       | 2,202.00       |
| 10"                  | 2,909.10                 | 3,127.67       | 2,972.18       | 3,165.38       |
| <b>Volume Charge</b> | <b><i>\$ / HCF</i></b>   |                |                |                |
| Billed               | \$4.60                   | \$4.94         | \$5.27         | \$5.63         |

City of Santa Barbara  
Wastewater Rate Study  
Commercial - High Strength Rates

|                      | <i>Present<br/>Rates</i> | FY 2023  | FY 2024  | FY 2025  |
|----------------------|--------------------------|----------|----------|----------|
| <b>Minimum Bill</b>  | <b><i>\$/Acct.</i></b>   |          |          |          |
| 5/8"                 | \$56.06                  | \$61.04  | \$59.70  | \$63.58  |
| 3/4"                 | 84.09                    | 91.56    | 89.55    | 95.37    |
| 1"                   | 98.27                    | 107.00   | 104.48   | 111.27   |
| 1 1/2"               | 160.80                   | 175.08   | 149.25   | 158.95   |
| 2"                   | 280.69                   | 305.62   | 238.80   | 254.32   |
| 3"                   | 561.21                   | 611.06   | 447.75   | 476.85   |
| 4"                   | 701.75                   | 764.09   | 746.25   | 794.75   |
| 6"                   | 1,403.22                 | 1,527.87 | 1,492.50 | 1,589.50 |
| 8"                   | 2,455.57                 | 2,673.71 | 2,388.00 | 2,543.20 |
| 10"                  | 3,858.97                 | 4,201.78 | 3,432.75 | 3,655.85 |
| <b>Volume Charge</b> | <b><i>\$/ HCF</i></b>    |          |          |          |
| Billed               | \$5.73                   | \$6.24   | \$6.65   | \$7.08   |



City of Santa Barbara  
Wastewater Rate Study  
High Strength Surcharge Rates

|                        | <i>Present<br/>Rates</i> | FY 2023 | FY 2024 | FY 2025 |
|------------------------|--------------------------|---------|---------|---------|
| <b>Strength Charge</b> | <b>\$ / Lb.</b>          |         |         |         |
| BOD                    | \$0.32                   | \$0.32  | \$0.34  | \$0.36  |
| TSS                    | 0.42                     | 0.46    | 0.48    | 0.51    |
| Ammonia                | 0.98                     | 1.10    | 1.17    | 1.25    |



# Wastewater Rate Study Results & Recommendations

February 17, 2022





## Overview of Previous Discussions

- Given current dry conditions and possible State requirements, consider increasing water conservation assumptions within the rate model.
- Analyze the current cap on wastewater charges in light of the sustained level of community water conservation.



## Summary of Rate Model and Design Updates

- Water Conservation – Increased conservation for residential customers from 0.2% to 2% annually during three year rate period
  - Revenue Requirement – average annual revenue requirement has increased from 6% to 7%
- Residential Cap – Lowered residential cap from 10 HCF to 8 HCF. Eliminated cap for small multi-family properties (2-4 dwelling units)
- Recalibrated commercial wastewater minimum charge





## FINANCING AND CHARGES FOR WASTEWATER SYSTEMS



**wef** Manual of Practice No. 27  
FOURTH EDITION

# Overview of the Wastewater Rate Update

- Provide sufficient revenue to operate and maintain the City's wastewater infrastructure
- Develop proposed rates that are proportional and cost-based rates
- Meet the intent of Proposition 218
- Reflect prudent financial planning criteria
- Maintain target debt service coverage (DSC) ratio
- Prudent level of rate funding for capital projects
- Meet Council minimum reserve balances
- Develop the study using generally accepted methodologies tailored to the City's system and customer characteristics

# Revenue Requirement



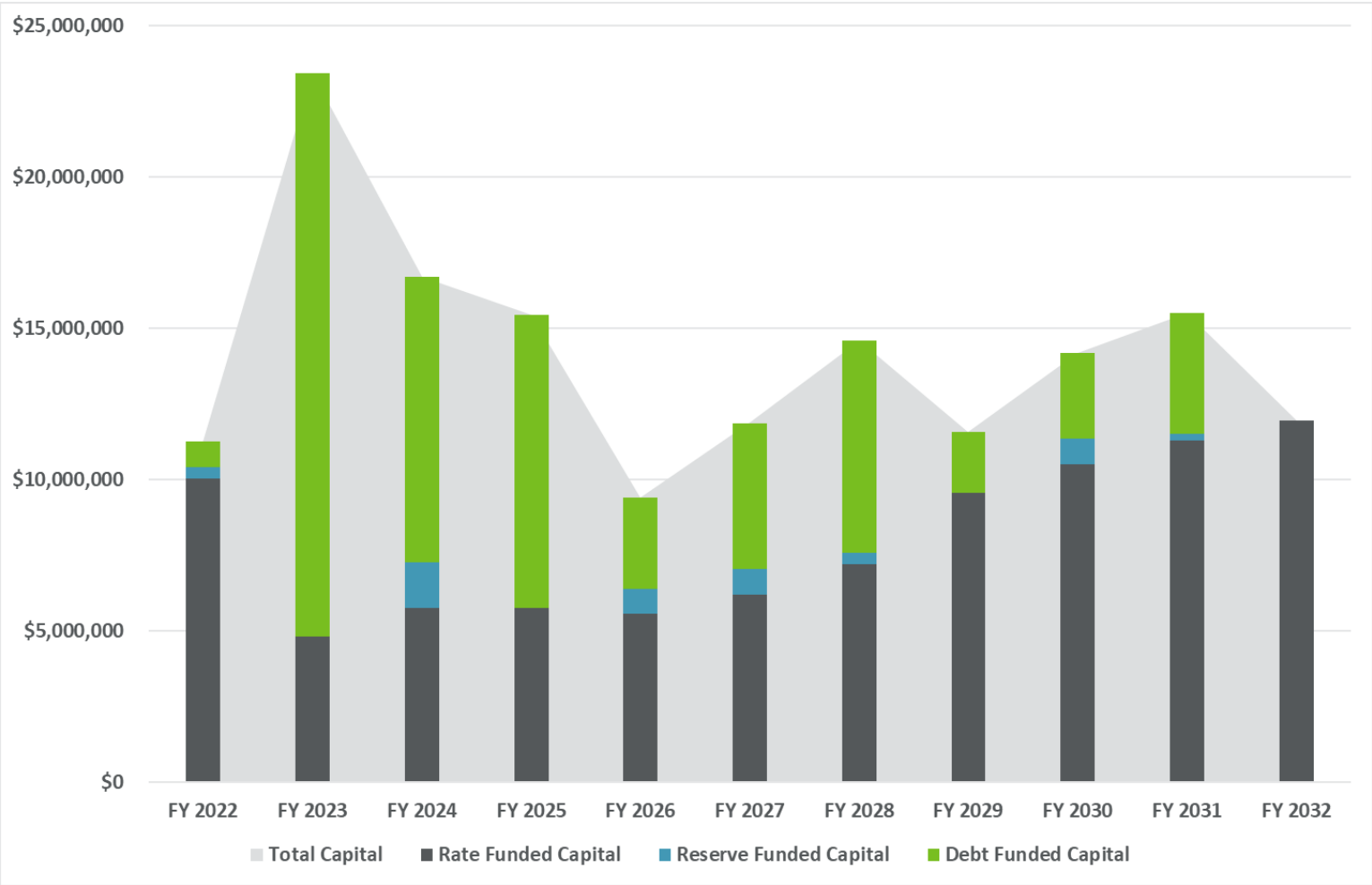


## Revenue Requirement Key Assumptions

- Revenues based on recent customer characteristics and current adopted rates
  - SF & MF assumes 2% conservation per year from FY 2023 – FY 2025
  - Commercial & Commercial High assumes 0.2% conservation per year for FY 2023 – FY 2025
- O&M based on the FY 2022 budget
  - Adjusted projected FY 2023 O&M for known changes
- Annual inflationary increase of approximately 3.5% annually
- Capital improvements based on current capital plan
  - Includes long-term debt issuance (low interest loans) for funding
  - Rate funding and available reserves fund remaining capital needs



# Summary of the Capital Funding Analysis



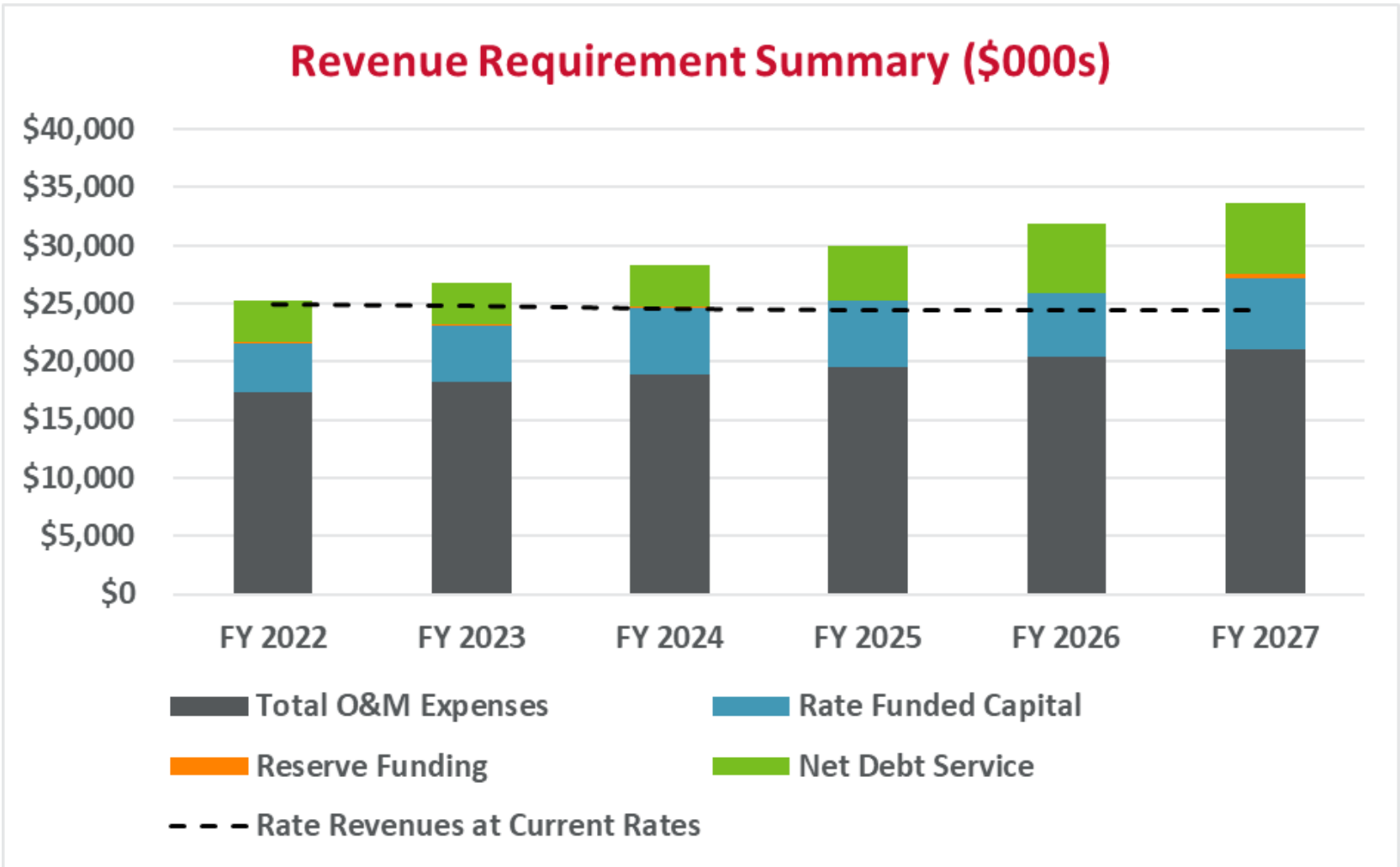
## Examples:

- El Estero WRC Electrical Upgrade (FY 2023 – FY 2025, \$29M)
- Braemar Lift Station (FY 2023, \$7M)





# Summary of the Revenue Requirement Analysis





# Revenue Requirement Summary

- Annual rate adjustments are necessary to fund the wastewater utility. System wide revenue adjustments are 7%, 6.5%, and 6.5% for FY23-25.
  - **O&M** – annual inflationary impacts and staffing adjustments
  - **Capital** – increase of funding for annual renewal, replacement and necessary improvements
  - **Reserves** – maintain reserves at Council policy levels
  - **Maintain** – adequate financial metrics needed to issue future planned long-term debt

|                                | Current | FY 2023 | FY 2024 | FY 2025 |
|--------------------------------|---------|---------|---------|---------|
| Avg Single Family Bill (8 HCF) | \$52.36 | \$55.99 | \$61.24 | \$65.72 |
| Monthly Change \$              |         | \$3.63  | \$5.25  | \$4.48  |

# Cost of Service





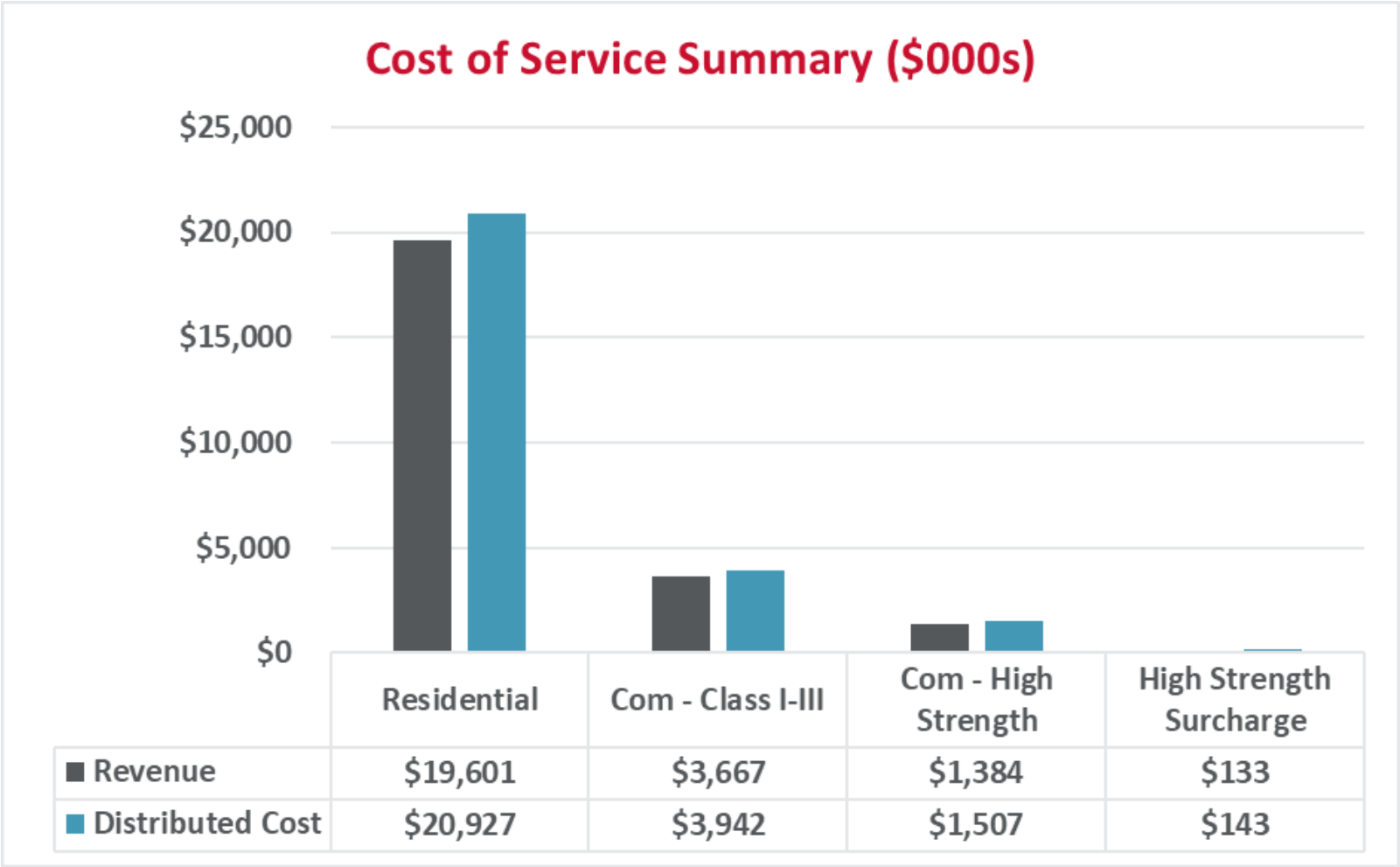
# Sewer Cost of Service

- Equitably allocate costs based on why costs are incurred
  - Volume, strength, or customer related
- Proportionally distribute the allocated costs to each customer class of service
  - Residential, commercial, commercial high, and high strength
  - Distribution factors are based on each customer class's annual volumes, strength of wastewater, and number of customers or equivalent





# Summary of the Cost of Service Analysis



# Rate Design





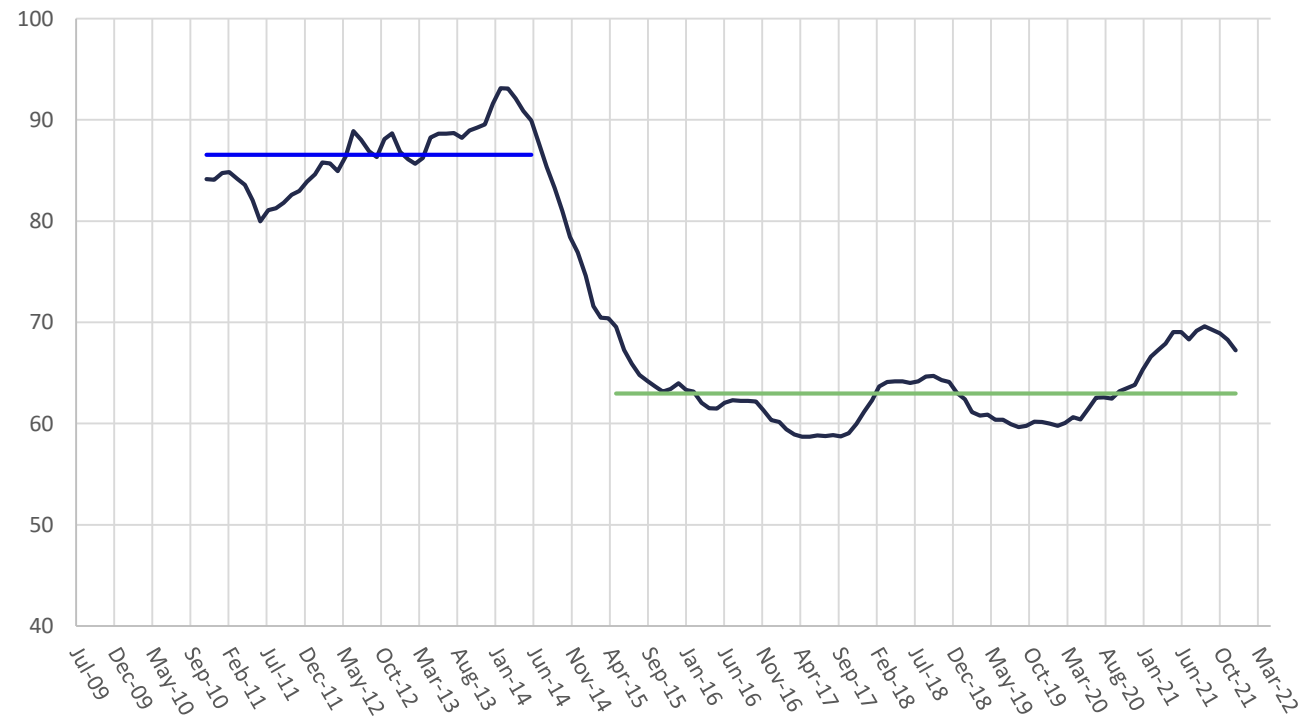
## Overview of Wastewater Billing Units

- Single Family - Billing units are based on water usage up to 10 HCF per month
  - Transition to 8 HCF cap based on winter water usage data
- Multi-Family (2 – 4 Units) – Billing units are based on water usage up to 10 HCF per month
  - Eliminate cap based on lack of variability between winter and summer water usage data
- Multi-Family (5+ Units) – Billing units are based on water usage with no cap
- Non-Residential – Billing units are based on water usage with no cap
  - Recommend a recalibration to the minimum bill calculation



# Water Usage Trends – Changes to Cap

12-Month Average Residential GPCD







# Current and Proposed Wastewater Rate Structure

- **Residential - Single family**
  - Flat fixed charge
  - Variable charge per HCF up to cap
- **Proposed Change**
  - Lower billing cap from 10 HCF to 8 HCF

|                      | Current Rates | FY 2023 | FY 2024 | FY 2025 |
|----------------------|---------------|---------|---------|---------|
| <b>Base Fee</b>      | \$22.68       | \$25.35 | \$27.00 | \$28.76 |
| <b>Volume Charge</b> |               |         |         |         |
| 0 – 10 HCF           | \$3.71        | --      | --      | --      |
| 10 + HCF             | 0.00          | --      | --      | --      |
| 0 – 9 HCF            | --            | \$3.83  | --      | --      |
| 9 + HCF              | --            | 0.00    | --      | --      |
| 0 – 8 HCF            | --            | --      | \$4.28  | \$4.62  |
| 8 + HCF              | --            | --      | 0.00    | 0.00    |



# Current and Proposed Wastewater Rate Structure

- **Residential - Multi-family**

- Flat fixed charge (per dwelling unit)
- Variable charge per HCF up to cap

- **Proposed Change**

- Remove billing cap for Multi-Family 2 – 4 DU

|                      | Current Rates | FY 2023 | FY 2024 | FY 2025 |
|----------------------|---------------|---------|---------|---------|
| <b>Base Fee</b>      | \$22.68       | \$25.35 | \$27.00 | \$28.76 |
| <b>Volume Charge</b> |               |         |         |         |
| <b>1 – 4 DU</b>      |               |         |         |         |
| 0 – 10 HCF           | \$3.71        | --      | --      | --      |
| 10 + HCF             | 0.00          | --      | --      | --      |
| All Use              | --            | \$3.83  | \$4.28  | \$4.62  |
| <b>5+ DU</b>         |               |         |         |         |
| All Use              | \$3.71        | \$3.83  | \$4.28  | \$4.62  |



# Current and Proposed Wastewater Rate Structure

- **Commercial**

- *Minimum charge* by meter size
  - Adjusting meter size minimum bill and weighting in FY 2024
- Variable charge per HCF once minimum is met

|                               | Current Rates | FY 2023  | FY 2024  | FY 2025  |
|-------------------------------|---------------|----------|----------|----------|
| <b>Minimum Bill</b>           |               |          |          |          |
| 5/8"                          | \$43.39       | \$46.65  | \$51.69  | \$55.05  |
| 3/4"                          | 65.09         | 69.98    | 77.54    | 82.58    |
| 1"                            | 75.72         | 81.41    | 90.46    | 96.34    |
| 1 1/2"                        | 129.97        | 139.73   | 129.23   | 137.63   |
| 2"                            | 216.68        | 232.96   | 206.76   | 220.20   |
| 3"                            | 433.20        | 465.75   | 387.68   | 412.88   |
| 4"                            | 540.67        | 581.29   | 646.13   | 688.13   |
| 6"                            | 1,082.96      | 1,164.33 | 1,292.25 | 1,376.25 |
| 8"                            | 1,895.21      | 2,037.60 | 2,067.60 | 2,202.00 |
| 10"                           | 2,909.10      | 3,127.67 | 2,972.18 | 3,165.38 |
| <b>Volume Charge (\$/HCF)</b> |               |          |          |          |
| Water Consumed                | \$4.60        | \$4.94   | \$5.27   | \$5.63   |



# Current and Proposed Wastewater Rate Structure

- **High Strength Commercial**

- *Minimum charge by meter size*
  - Adjusting meter size minimum bill and weighting in FY 2024
- Variable charge per HCF once minimum is met

|                                 | Current Rates | FY 2023  | FY 2024  | FY 2025  |
|---------------------------------|---------------|----------|----------|----------|
| <b>Minimum Bill</b>             |               |          |          |          |
| 5/8"                            | \$56.06       | \$61.04  | \$59.70  | \$63.58  |
| 3/4"                            | 84.09         | 91.56    | 89.55    | 95.37    |
| 1"                              | 98.27         | 107.00   | 104.48   | 111.27   |
| 1 1/2"                          | 160.80        | 175.08   | 149.25   | 158.95   |
| 2"                              | 280.69        | 305.62   | 238.80   | 254.32   |
| 3"                              | 561.21        | 611.06   | 447.75   | 476.85   |
| 4"                              | 701.75        | 764.09   | 746.25   | 794.75   |
| 6"                              | 1,403.22      | 1,527.87 | 1,492.50 | 1,589.50 |
| 8"                              | 2,455.57      | 2,673.71 | 2,388.00 | 2,543.20 |
| 10"                             | 3,858.97      | 4,201.78 | 3,432.75 | 3,655.85 |
| <b>Volume Charge (\$ / HCF)</b> |               |          |          |          |
| Water Consumed                  | \$5.73        | \$6.24   | \$6.65   | \$7.08   |



# Current and Proposed Wastewater Rate Structure

- **High Strength Surcharge**

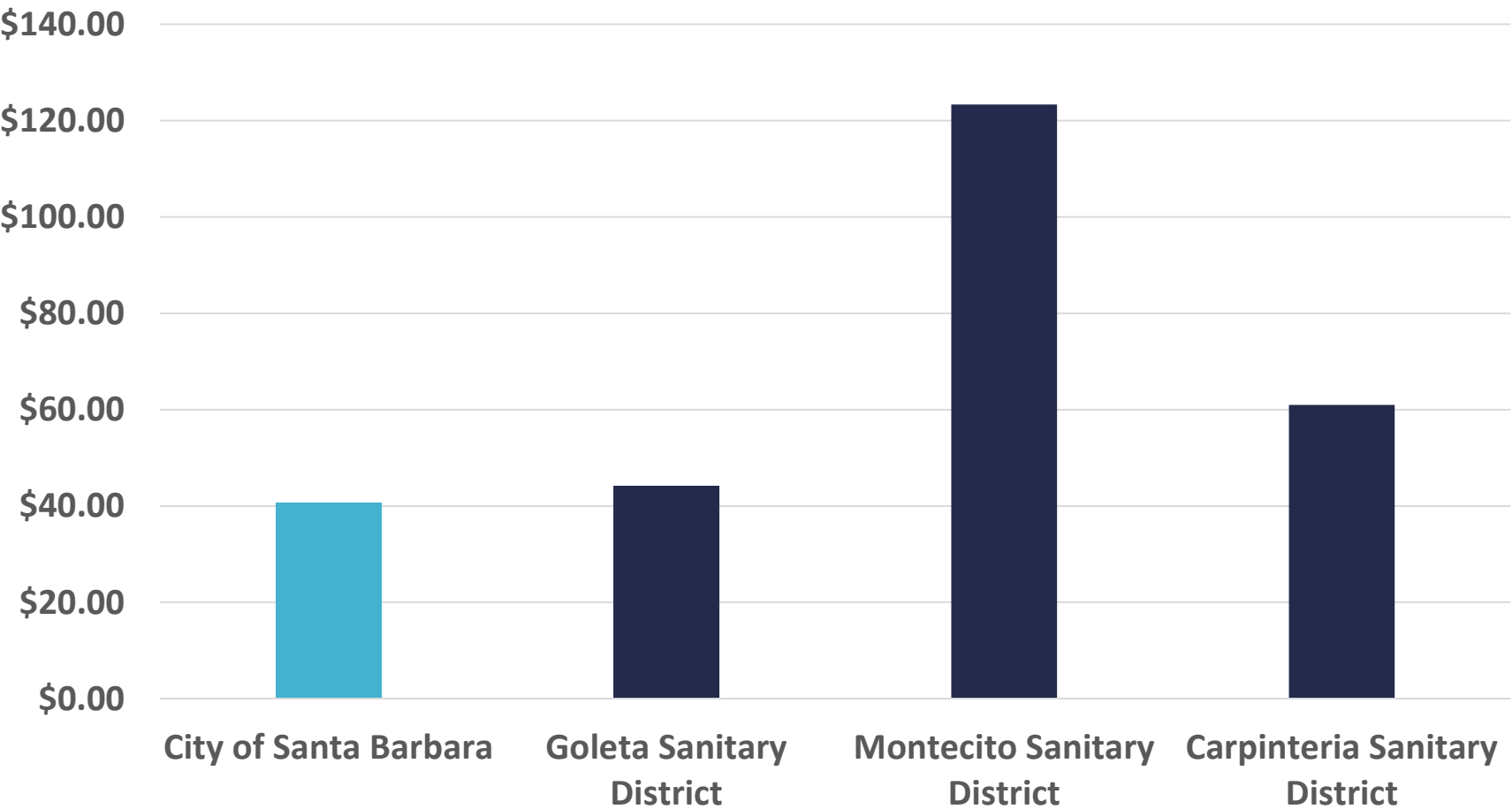
- Impacted by the increase in chemical costs
- Charged on a per pound basis
- Strength level based on testing

|                 | Current Rates | FY 2023 | FY 2024 | FY 2025 |
|-----------------|---------------|---------|---------|---------|
| Strength Charge | \$ / lb.      |         |         |         |
| BOD             | \$0.32        | \$0.32  | \$0.34  | \$0.36  |
| TSS             | 0.42          | 0.46    | 0.48    | 0.51    |
| Ammonia         | 0.98          | 1.10    | 1.17    | 1.25    |



# South Coast Comparison

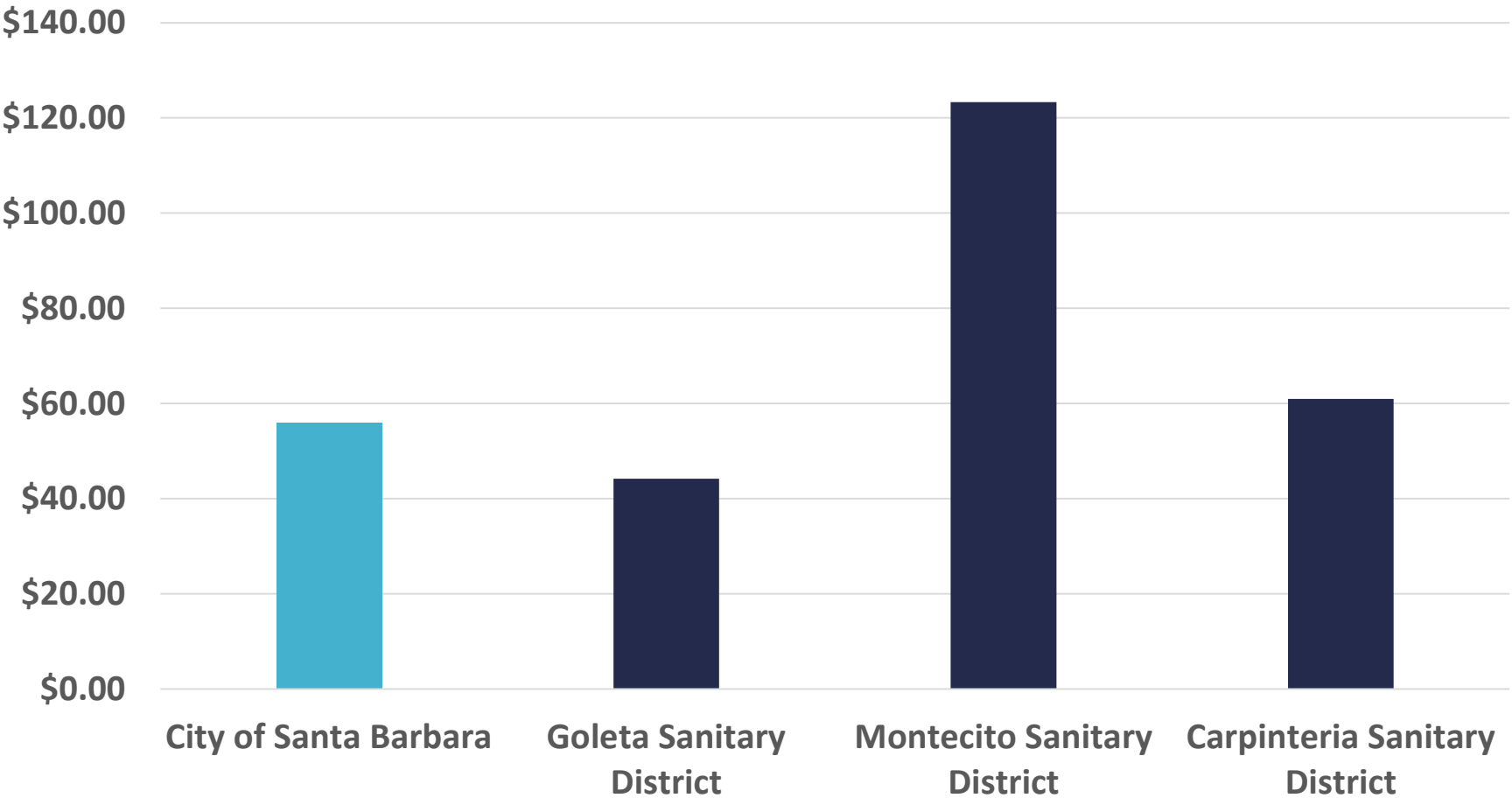
FY23 Proposed Monthly City Wastewater Charges  
vs FY22 Neighboring Agency Charges  
4 HCF - Single Family Residential Customer





# South Coast Comparison

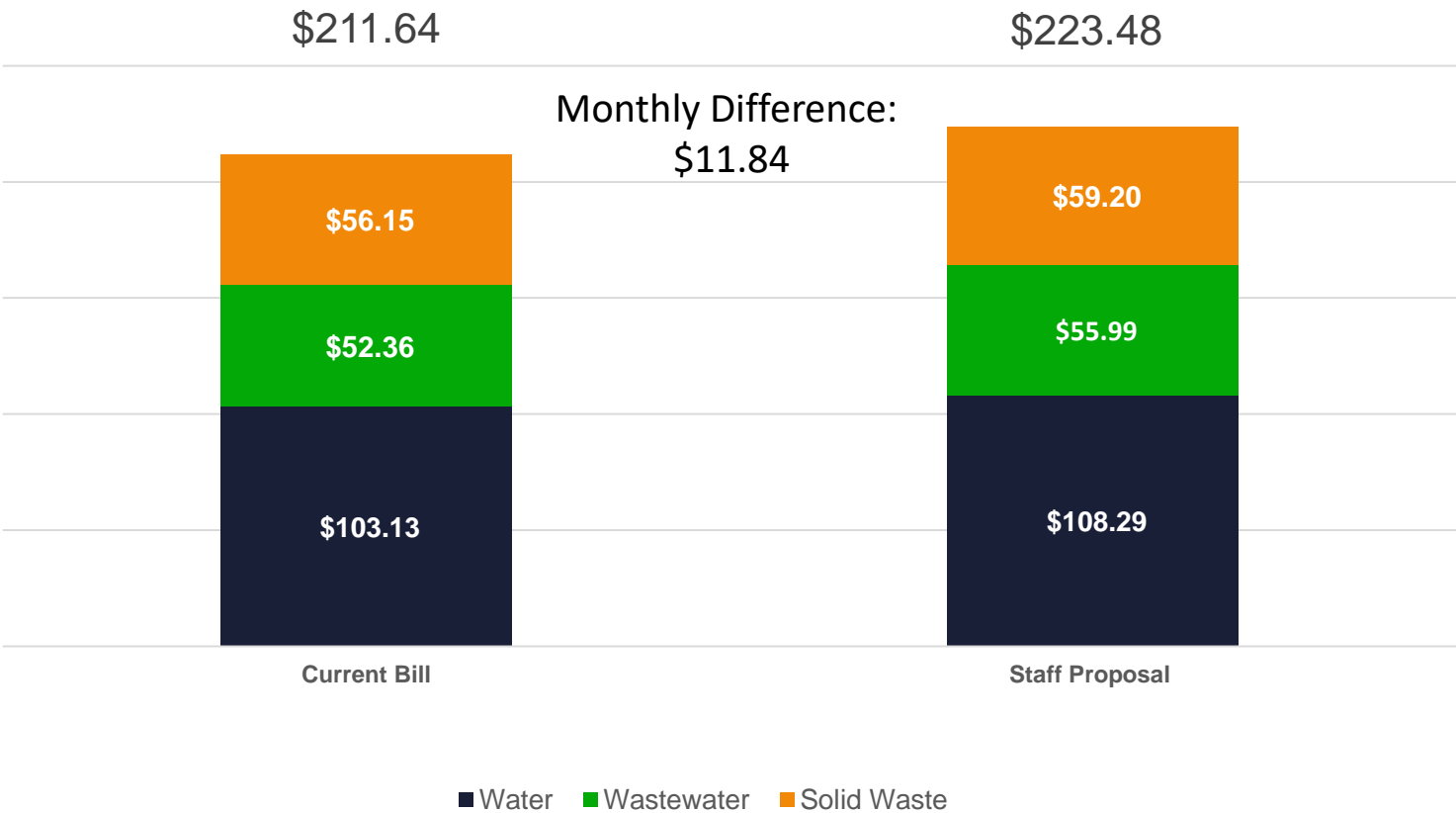
FY23 Proposed Monthly City Wastewater Charges  
vs FY22 Neighboring Agency Charges  
8 HCF - Single Family Residential Customer





# Total Bill Impacts

## FY23 Total Bill Impacts to Single Family Residential Customer 8 HCF







## Next Steps

- Finalize technical analyses based on Water Commission direction
- Review Capacity Charge draft analyses
- Present final findings and recommendations

## Estimated Project Schedule

- March 17: Water Commission
- March 29: Finance Committee - Presentation
- April 2022: Public Rate Notice
- Mid may: Public webinar on rate changes
- June 2022: Public hearing



# Thank You and Discussion

