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May 18, 2020

Board of Directors
Triunfo Water & Sanitation District
Ventura County, California

PUBLIC HEARING FOR PROPOSED INCREASES TO POTABLE WATER RATES FOR ORDINANCE NO. TWSD-350 (Adopted 5/18/20)

Summary

As part of the Triunfo Water & Sanitation District's (District) review of its five-year rate studies for its three enterprises, staff, in conjunction with Raftelis, the District's rate consultant, recently completed a new five-year rate study for potable water. Goals of the rate study were to develop a financial plan to ensure sufficient revenue to meet operating and capital expenses, establish rates that are based on cost of service, and to build and maintain adequate reserves.

Following review of the rate plan options, the Board approved moving forward with the recommended rate plan proposed for the next five years with a 6% across the board for Fiscal Years (FYs) 2021, 2022, 2023 and 4% for FYs 2024 and 2025. The factors upon which the proposed potable water rate increases are based include the following:

- Increase in age related maintenance, repair, and replacement
- Increase in operation and maintenance costs
- Updated five-year capital improvement plan implementation
- Water Conservation related revenue impacts
- Establishment and maintenance of target reserve levels

Staff was directed to initiate the Prop 218 process and schedule a public hearing for May 18, 2020. Staff recommends the Board conduct a public hearing to consider adopting the proposed potable water and meter charge rates for the District (Tables I and II below).

Proposition 218, the "Right to Vote on Taxes Act", requires the District to provide notice to affected customers of the proposed rate changes and allow them the opportunity to review the proposed rate plan and if they so choose, submit a written protest prior to implementing the proposed increases in the potable water charges. If a majority protest is received then the increases cannot be adopted and the current rates will remain in effect. If insufficient written protests are received (less than ~2,200), then the District may adopt the proposed increases in the potable water charges based on the Rate Study. Proposition 218 notifications of the proposed increases in potable water rates

were mailed to potable water customers and property owners on April 3, 2020. As of May 13, 2020, the District has received 8 written protests to the proposed rate increases with copies available from the Clerk of the Board.

In addition to the proposed potable water service rate increases, staff has also increased the connection fee by 0.72%, as set forth in the Ordinance, based on the March to March average percentage change in the Construction Cost Index (CCI) for the Los Angeles area published in the McGraw-Hill construction weekly magazine titled "ENR".

Table I: Proposed Five-Year Quantity Rates for Potable Water

| Tier | Monthly Use | Current Rate FY2020 | Rate FY2021 | Rate FY2022 | Rate FY2023 | Rate FY2024 | Rate FY2025 |
|------|-------------|---------------------|-------------|-------------|-------------|-------------|-------------|
| 1 | 0-7 HCF | \$6.45 | \$6.84 | \$7.26 | \$7.70 | \$8.01 | \$8.34 |
| 2 | >7-28 HCF | \$7.31 | \$7.75 | \$8.22 | \$8.72 | \$9.07 | \$9.44 |
| 3 | >28 HCF | \$8.94 | \$9.48 | \$10.05 | \$10.66 | \$11.09 | \$11.54 |

Notes:

Fiscal Year 2021 begins July 1, 2020

HCF = 100 cubic feet of water = 748 gallons

Table II: Proposed Five-Year Monthly Service Charges

| Meter Size | Current FY2020 | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 |
|------------|----------------|------------|------------|------------|------------|------------|
| 3/4" | \$29.74 | \$31.53 | \$33.43 | \$35.44 | \$36.86 | \$38.34 |
| 1" | \$46.94 | \$49.76 | \$52.75 | \$55.92 | \$58.16 | \$60.49 |
| 1-1/2" | \$89.99 | \$94.72 | \$100.41 | \$106.44 | \$110.70 | \$115.13 |
| 2" | \$141.64 | \$148.02 | \$156.91 | \$166.33 | \$172.99 | \$179.91 |
| 3" | \$305.20 | \$316.78 | \$335.79 | \$355.94 | \$370.18 | \$384.99 |
| 4" | \$546.23 | \$565.49 | \$599.42 | \$635.39 | \$660.81 | \$687.25 |
| 6" | \$1,209.09 | \$1,249.44 | \$1,324.41 | \$1,403.88 | \$1,460.04 | \$1,518.45 |

Please contact me at 805-658-4621 or email marknorris@triumfowsd.com if you have any questions or need additional information.

Fiscal Impact

Based on the current projected potable water sales for FY2020, the 6% increase will generate approximately \$475,000 in additional revenue for FY2021.

Recommendation

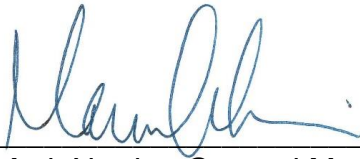
It is recommended the Board:

- A. Pursuant to Proposition 218, conduct a public hearing regarding proposed TWSD Ordinance No. TWSD-350, that will increase the potable water charges:

- 1) Call to order and reconvene the public hearing.
 - 2) Receive staff report and recommendations.
 - 3) Report of written communication by Clerk of the Board.
 - 4) Public comment.
 - 5) Close public hearing.
 - 6) Discussion by Board of Directors.
- B. Conduct the second reading, by title only, of Ordinance No. TWSD-350, which will increase the potable water charges within the TWSD Service Area, and adjusts the service connection fee by the prescribed 0.72% CCI increase, and adopt Ordinance No. TWSD-350 effective July 1, 2020.
- C. Direct staff to place notification of the approved rate increase in the informational box located within the District's water bill.

ORDINANCE NO. TWSD-350 (Adopted 5/18/20) PRESCRIBING FEES AND CHARGES FOR POTABLE WATER PROVIDED BY TRIUNFO WATER & SANITATION DISTRICT

REVIEWED AND APPROVED


Mark Norris - General Manager

- Attachments:
1. TWSD Ordinance No. TWSD-350
 2. Triunfo WSD Water and Recycled Water Rate Study

TRIUNFO WATER & SANITATION DISTRICT

**ORDINANCE NO. TWSD-350 (Adopted 5/18/20)
PRESCRIBING FEES AND CHARGES FOR POTABLE WATER
PROVIDED BY TRIUNFO WATER & SANITATION DISTRICT**

WHEREAS, the Triunfo Water & Sanitation District (“District”) is duly organized and established under the laws of the State of California and, as such, is empowered to impose fees and charges relative to the District’s provision of services to its service area; and

WHEREAS, the District provides retail potable water service to its customers and charges these customers appropriate service fees and charges designed to cover operating and maintenance expenses associated with the provision of the services; and

WHEREAS, the District has estimated the costs of providing retail potable water service to its customers based on financial information for the current year and the entire operating history of the enterprise; and

WHEREAS, this Ordinance No. TWSD-350 (“Ordinance”) prescribes fees and charges pertaining to the provision of retail potable water service to the District’s customers; and

WHEREAS, in accordance with the Proposition 218 Omnibus Implementation Act (Government Code Section 53750 through 53756) the District has adopted a schedule of potable water rates that authorizes automatic adjustments that pass-through increase in the wholesale cost of potable water, as calculated per hundred cubic feet of water (HCF); and

WHEREAS, in accordance with Government Code Section 53756(d), the District will provide written notice to all affected property owners prior to imposing the automatic adjustments set forth in this Ordinance that pass-through increases in wholesale cost of potable water charged by Calleguas, as calculated per hundred cubic feet of water (HCF). Said written notice shall be not less than thirty (30) days before the effective date of said adjustments; and,

WHEREAS, the District has complied with all applicable requirements set forth in Article XIII D of the California Constitution (enacted by Proposition 218, November 5, 1996 Statewide election); and

WHEREAS, on May 7 and May 13, 2020, notices were published in the Ventura County Star, a newspaper of general circulation published and circulated in the District, providing a summary of this Ordinance and noticing a May 18, 2020 public hearing to consider adoption of this Ordinance; and

WHEREAS, all persons present at said hearing and interested in the matter were heard and given the opportunity to be heard on the enactment of the proposed fees and charges prescribed in this Ordinance; and

WHEREAS, after considering the financial information, hearing a staff presentation, considering the testimony received at the public hearing and discussion of the issues, the Board of Directors concludes that the proposed fees and charges prescribed in this Ordinance are necessary for the District’s provision of services and do not exceed the cost of those services; and

WHEREAS, the adoption of this Ordinance is statutorily exempt under the California Environmental Quality Act pursuant to the provisions of Public Resources Code Section 21080(b)(8) and California Code of regulations Section 15273(a).

NOW, THEREFORE, the Board hereby ordains as follows:

SECTION 1. SHORT TITLE

This Ordinance shall be known as the TWSD Potable Water Fee and Charge Ordinance.

SECTION 2. DEFINITIONS

The following words as used in this Ordinance shall have the meanings set forth below unless otherwise apparent in the context in which they are used:

- a. "Board of Directors" or "Board" means the TWSD Board of Directors.
- b. "Customer" means any person, association, corporation, governmental agency, firm, or company of record receiving water service from the District.
- c. "District" or "TWSD" means the Triunfo Water & Sanitation District.
- d. "Hundred Cubic Feet" or HCF" or "Unit of Water" means 100 cubic feet or 748 gallons of water.

SECTION 3. FEES AND CHARGES

The following fees and charges are hereby prescribed:

A. Monthly Service Charge

| Meter Size | Current FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
|------------|-----------------|------------|------------|------------|------------|------------|
| 3/4" | \$29.74 | \$31.53 | \$33.43 | \$35.44 | \$36.86 | \$38.34 |
| 1" | \$46.94 | \$49.76 | \$52.75 | \$55.92 | \$58.16 | \$60.49 |
| 1-1/2" | \$89.99 | \$94.72 | \$100.41 | \$106.44 | \$110.70 | \$115.13 |
| 2" | \$141.64 | \$148.02 | \$156.91 | \$166.33 | \$172.99 | \$179.91 |
| 3" | \$305.20 | \$316.78 | \$335.79 | \$355.94 | \$370.18 | \$384.99 |
| 4" | \$546.23 | \$565.49 | \$599.42 | \$635.39 | \$660.81 | \$687.25 |
| 6" | \$1,209.09 | \$1,249.44 | \$1,324.41 | \$1,403.88 | \$1,460.04 | \$1,518.45 |

B. Quantity Rate for Potable Water

| Tier | Monthly Use | Current Rate FY 2020 | Rate FY 2021 | Rate FY 2022 | Rate FY 2023 | Rate FY 2024 | Rate FY 2025 |
|------|-------------|----------------------|--------------|--------------|--------------|--------------|--------------|
| 1 | 0-7 HCF | \$6.45 | \$6.84 | \$7.26 | \$7.70 | \$8.01 | \$8.34 |
| 2 | >7-28 HCF | \$7.31 | \$7.75 | \$8.22 | \$8.72 | \$9.07 | \$9.44 |
| 3 | >28 HCF | \$8.94 | \$9.48 | \$10.05 | \$10.66 | \$11.09 | \$11.54 |

Any of the quantity rates specified above are, in accordance with applicable law, subject to adjustment by the District should Calleguas adopt between January 1, 2020 and the end of Fiscal Year 2020-2021 further increases or decreases in its potable water wholesale rate.

C. Automatic Fire Sprinkler Monthly Service Charge

| Meter Size | Current FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY2025 |
|------------|-----------------|---------|---------|---------|---------|---------|
| 3/4" | \$29.74 | \$31.53 | \$33.43 | \$35.44 | \$36.86 | \$38.34 |

Water used through an automatic fire sprinkler system for purposes other than for extinguishing fires or a related purpose, shall be charged the Tier 3 metered water rate for all water used through such service connection.

D. Service Connection Fee

| Meter Size | Current FY 2020 | FY 2021 |
|------------|-----------------|-----------|
| 3/4" | \$4,827 | \$4,875 |
| 1" | \$8,061 | \$8,125 |
| 1-1/2" | \$16,073 | \$16,200 |
| 2" | \$25,727 | \$25,900 |
| 3" | \$56,329 | \$56,725 |
| 4" | \$101,363 | \$102,100 |
| 6" | \$225,267 | \$226,900 |

Commencing on July 1, 1990 and continuing thereafter on each July 1, the water connection fee set forth above shall be adjusted by an increment based on the March to March average percentage change in the Construction Cost Index for the Los Angeles area published in the McGraw-Hill construction weekly magazine titled "ENR," and rounded to the nearest twenty-five dollars (\$25). However, the Board may at its sole option determine, by resolution adopted prior thereto, that such adjustment shall not be effective for the next succeeding years, or may determine other amounts as appropriate based upon the capital expenditure needs of the District.

E. Processing, Planning and Inspection Fees

| Item | Fee |
|--|---|
| Application Fee | 1. Projects that require only administrative review: \$0 2. All other Projects: \$150 |
| Project Completion Deposit | Projects that require a final audit or inspection: \$1000 |
| Water Line Plan Check Fee | 1. Plan check fee: \$100/sheet 2. Plans resubmitted after change orders: \$100/sheet 3. Subdivision Final Map or Parcel Map Sewer Improvement Plan: \$100/sheet |
| Water Line Construction Inspection Fee | 1. Inspection Fee: \$125/hour (\$350 minimum) 2. Overtime Inspection Fee: \$200/hour |

F. Miscellaneous Fees

| Item | Fee |
|--|---------------|
| Account Set Up Fee | \$15.00 |
| Construction Connection (Per Month) | \$8.50 |
| New Customer Deposit –3/4” Meter | \$75.00 |
| New Customer Deposit - 1” Meter | \$80.00 |
| New Customer Deposit – 1 ½” Meter | \$100.00 |
| New Customer Deposit - 2” Meter | \$150.00 |
| New Customer Deposit over 2” Meter | \$200.00 |
| Shut off Notice/Shut off/Turn on/etc. - Regular Business Hours | \$30.00 each |
| Shut off Notice/Shut off/Turn on/etc. - After Hours/Weekends | \$325.00 each |
| Fire Service (Per Inch of Meter Diameter) | \$6.75 |
| Security Deposit – Metered Hydrant Service | \$1,200.00 |
| Security Deposit – Reinstatement after shut off for customers with history of delinquent payment and will escalate based on the amount of the billing (returned after one year if no late fees are applied during the entire period) | \$150.00 |
| Unauthorized Turn on | \$ 75.00 |
| Unauthorized Fire Hydrant Use | \$ 250.00 |

In addition, the District shall collect charges for work performed or for damages incurred (i.e., damaged meter box, meter box replacement covers, damaged fire hydrants, etc.). The charges shall be based on the costs incurred including an amount for overhead as set by the District.

SECTION 4. FINDINGS

The TWSD Board of Directors finds the foregoing fees and charges are for the purpose of: (1) meeting operating expenses, including but not limited to the District’s operations, maintenance and management contract; (2) purchasing or leasing supplies, equipment and materials; (3) meeting financial reserve needs and requirements; (4) obtaining funds for constructing and maintaining water facilities necessary to maintain service within existing service areas; (5) improvements and repairs; and (6) debt service and refunds.

The TWSD Board of Directors further finds that the foregoing fees and charges: (1) do not exceed the funds required to provide the service; (2) are not used for any purpose other than that for which they are imposed; (3) as imposed upon any parcel or person as an incident of property ownership, do not exceed the proportional cost of the service attributable to the parcel; and, (4) are imposed only for service that is actually used by, or immediately available to, the owner of the property in question.

SECTION 5. FEE REVIEW PERIOD

On or about January 1 of each year, the General Manager is hereby empowered and shall review the estimated cost of providing the services described and the impact of any pending or anticipated changes in the service level. The General Manager shall report these findings to the Board of Directors at a duly noticed public hearing and recommend any adjustment to the fees and charges or other action that may be required.

SECTION 6. SEVERABILITY

This Ordinance, except for those portions that are found to be invalid, would remain in full force

and effect and continue to be valid. The Board of Directors hereby declares it would have passed this Ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, or phrases or the application thereof to any person or circumstance be held invalid.

SECTION 7. REPEAL OF PRIOR INCONSISTENT ORDINANCES

Any prior ordinances or portions of ordinances previously adopted by the District Board of Directors that are in conflict with this Ordinance, are repealed as of the Effective Date of this Ordinance. This includes TWSD-350 (Adopted 11/25/2019).

SECTION 8. EFFECTIVE DATE

This Ordinance shall become effective July 1, 2020.

PASSED, APPROVED AND ADOPTED this 18th day of May 2020 by the following vote:

AYES:

NOES:

ABSENT:

TRIUNFO WATER & SANITATION DISTRICT

James Wall, Chair

ATTESTED:

Juliet Rodriquez, Clerk of the Board

APPROVED AS TO FORM:

John Mathews, General Counsel

TRIUNFO WATER & SANITATION DISTRICT

Water and Recycled Water Rate Study

Report / April 23, 2020

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April 23, 2020

Mr. Mark Norris
General Manager
1001 Partridge Drive, Suite 150
Ventura, CA 93003

Subject: Water and Recycled Water Rate Study Report

Dear Mr. Norris,

Raftelis is pleased to provide this Water and Recycled Water Rate Study Report to the Triunfo Water & Sanitation District (District). This report presents the analyses, rationales, and methodologies utilized in the study to determine cost of service-based water rates that meet the requirements of California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218).

The study involved a comprehensive review of the District's long-term financial plans, revenue requirements to fairly and equitably allocate costs, current water and recycled water rate structures, and determine proposed water and recycled water rates that are in line with the District's policy objectives. This report presents the analyses, rationales, and methodologies utilized in the study.

The main objectives that informed the study include:

- » Developing a long-term financial plan for water and recycled water
- » Ensuring financial sufficiency to fully fund operating and capital costs and meet reserve requirements
- » Determining water and recycled water rates that meet revenue requirements
- » Minimizing customer impacts to the extent possible

We are confident that the proposed rates developed within this study are fair and equitable to the District's customers and are compliant with Proposition 218. It has been a pleasure working with you and your team, and we wish to express the gratitude for the support you, other District staff, and the Board of Directors provided to us during the study.

Sincerely,



Sudhir Pardiwala
Executive Vice President



Nancy Phan
Senior Consultant

Table of Contents

| | |
|--|-----------|
| 1. EXECUTIVE SUMMARY | 1 |
| Study Background | 1 |
| Current Rates | 1 |
| Legal Framework | 2 |
| Process and Approach | 3 |
| Results and Recommendations | 4 |
| Proposed Rates | 5 |
| 2. WATER FINANCIAL PLAN..... | 6 |
| Current Rates | 6 |
| Customer Data | 7 |
| Revenues | 10 |
| O&M Expenses..... | 11 |
| Debt Service | 15 |
| Capital Projects..... | 15 |
| Reserve Policy..... | 16 |
| Status Quo Financial Plan | 16 |
| Proposed Financial Plan..... | 20 |
| 3. WATER COST OF SERVICE ANALYSIS AND RATE DESIGN | 25 |
| Proposed Adjustments..... | 25 |
| Process and Approach | 25 |
| Cost Causation Components..... | 26 |
| Revenue Requirement..... | 26 |
| Peaking Factors..... | 27 |
| Equivalent Meters | 29 |
| Operating and Capital Allocations | 29 |
| Adjusted Cost of Service | 33 |
| Unit Cost Derivation..... | 35 |
| Revenue Requirement Distribution..... | 35 |
| Revenue Offset Allocation | 36 |

| | |
|---|-----------|
| Monthly Service Charge Calculation..... | 36 |
| Quantity Rate Calculation | 37 |
| Rates for Implementation..... | 38 |
| Customer Impacts..... | 39 |
| Proposed Rates | 39 |
| 4. RECYCLED WATER FINANCIAL PLAN | 40 |
| Current Rates | 40 |
| Customer Data | 40 |
| Revenues | 41 |
| O&M Expenses..... | 42 |
| Debt Service | 45 |
| Capital Projects..... | 45 |
| Reserve Policy..... | 45 |
| Status Quo Financial Plan | 46 |
| Proposed Financial Plan..... | 50 |
| 5. RECYCLED WATER COST OF SERVICE ANALYSIS AND RATE DESIGN | 55 |
| Proposed Adjustments..... | 55 |
| Cost of Service Analysis | 55 |
| Rate Calculation | 56 |
| Customer Impacts..... | 57 |
| Proposed Rates | 57 |

List of Tables

| | |
|--|----|
| Table 1-1: Current Potable Water Rates..... | 1 |
| Table 1-2: Current Recycled Water Rates | 2 |
| Table 1-3: Proposed Potable Water Rates | 5 |
| Table 1-4: Proposed Recycled Water Rates..... | 5 |
| Table 2-1: Current Potable Water Rates..... | 6 |
| Table 2-2: Projected Potable Water Accounts | 7 |
| Table 2-3: Projected Potable Water Usage (hcf) | 9 |
| Table 2-4: Calculated Potable Water Rate Revenues at Current Rates | 10 |
| Table 2-5: Revenue Escalation Factors..... | 10 |
| Table 2-6: Projected Potable Water Revenues at Current Rates | 11 |
| Table 2-7: Expense Escalation Factors | 11 |
| Table 2-8: Potable Water Production..... | 12 |
| Table 2-9: Potable Water Supply Cost..... | 13 |
| Table 2-10: Projected Potable Water Expenses | 14 |
| Table 2-11: Existing Potable Water Debt Service | 15 |
| Table 2-12: Potable Water Capital Projects..... | 15 |
| Table 2-13: Potable Water Financial Plan, Status Quo..... | 17 |
| Table 2-14: Potable Water Fund Balances, Status Quo | 18 |
| Table 2-15: Proposed Revenue Adjustments | 20 |
| Table 2-16: Potable Water Financial Plan, Proposed Adjustments | 21 |
| Table 2-17: Potable Water Fund Balances, Proposed Adjustments | 22 |
| Table 3-1: Proposed Revenue Adjustments | 25 |
| Table 3-2: Revenue Requirement Derivation..... | 26 |
| Table 3-3: System-Wide Peaking Factors | 27 |
| Table 3-4: Tiered Peaking Factors..... | 27 |
| Table 3-5: Water Usage and Capacity..... | 28 |
| Table 3-6: Equivalent Meters..... | 29 |
| Table 3-7: Functional Cost Allocation | 31 |
| Table 3-8: Operating Expense Allocation | 31 |
| Table 3-9: Capital Asset Allocation..... | 32 |

| | |
|--|----|
| Table 3-10: Cost of Service Allocation..... | 34 |
| Table 3-11: Cost of Service Adjustments..... | 34 |
| Table 3-12: Unit Cost Derivation..... | 35 |
| Table 3-13: Revenue Requirement Distribution..... | 35 |
| Table 3-14: Revenue Offset Allocation..... | 36 |
| Table 3-15: Monthly Service Charge Calculation..... | 36 |
| Table 3-16: Base Unit Cost Calculation..... | 37 |
| Table 3-17: Max Day Unit Cost Calculation..... | 37 |
| Table 3-18: Max Hour Unit Cost Calculation..... | 37 |
| Table 3-19: Conservation Unit Cost Calculation..... | 37 |
| Table 3-20: Quantity Rate Calculation..... | 38 |
| Table 3-21: Water Rates for Implementation..... | 38 |
| Table 3-22: Water Customer Bill Impacts, 3/4 inch..... | 39 |
| Table 3-23: Proposed Water Rates..... | 39 |
| Table 4-1: Current Recycled Water Rates..... | 40 |
| Table 4-2: Projected Recycled Water Accounts..... | 40 |
| Table 4-3: Projected Recycled Water Usage (hcf)..... | 41 |
| Table 4-4: Calculated Recycled Water Rate Revenues at Current Rates..... | 41 |
| Table 4-5: Revenue Escalation Factors..... | 41 |
| Table 4-6: Projected Recycled Water Revenues at Current Rates..... | 42 |
| Table 4-7: Expense Escalation Factors..... | 42 |
| Table 4-8: Recycled Water Production..... | 43 |
| Table 4-9: Recycled Water Supply Cost..... | 43 |
| Table 4-10: Projected Recycled Water Expenses..... | 44 |
| Table 4-11: Existing Recycled Water Debt Service..... | 45 |
| Table 4-12: Recycled Water Capital Projects..... | 45 |
| Table 4-13: Recycled Water Financial Plan, Status Quo..... | 47 |
| Table 4-14: Recycled Water Fund Balances, Status Quo..... | 48 |
| Table 4-15: Proposed Revenue Adjustments..... | 50 |
| Table 4-16: Recycled Water Financial Plan, Proposed Adjustments..... | 51 |
| Table 4-17: Recycled Water Fund Balances, Proposed Adjustments..... | 52 |
| Table 5-1: Proposed Revenue Adjustments..... | 55 |

Table 5-2: Recycled Water Retail Revenue Requirement56
Table 5-3: Recycled Water Rate Calculation56
Table 5-4: Recycled Water Customer Bill Impacts, 2 inch57
Table 5-5: Proposed Recycled Water Rates.....57

List of Figures

| | |
|---|----|
| Figure 2-1: Potable Water Financial Plan, Status Quo | 19 |
| Figure 2-2: Potable Water Debt Coverage, Status Quo | 19 |
| Figure 2-3: Potable Water Fund Balances, Status Quo | 20 |
| Figure 2-4: Potable Water Financial Plan, Proposed Adjustments | 23 |
| Figure 2-5: Potable Water Debt Coverage, Proposed Adjustments | 23 |
| Figure 2-6: Potable Water Fund Balances, Proposed Adjustments | 24 |
| Figure 4-1: Recycled Water Financial Plan, Status Quo | 49 |
| Figure 4-2: Recycled Water Debt Coverage, Status Quo | 49 |
| Figure 4-3: Recycled Water Fund Balances, Status Quo | 50 |
| Figure 4-4: Recycled Water Financial Plan, Proposed Adjustments | 53 |
| Figure 4-5: Recycled Water Debt Coverage, Proposed Adjustments | 53 |
| Figure 4-6: Recycled Water Fund Balances, Proposed Adjustments | 54 |

1. Executive Summary

Study Background

Triunfo Water & Sanitation District (District) engaged Raftelis in 2019 to complete a Water and Recycled Water Rate Study. The study consists of developing a long-range financial plan, cost of service analysis, and water and recycled water rates. It encompasses a six-year planning horizon for the financial plan and five years of proposed rates. The first year of proposed rates are for adoption beginning July 2020 and July of every year thereafter.

The objectives of the Water and Recycled Water Study include:

- » Developing a long-term financial plan for water and recycled water
- » Ensuring financial sufficiency to fully fund operating and capital costs and meet reserve requirements
- » Determining water and recycled water rates that meet revenue requirements
- » Minimizing customer impacts to the extent possible

The study period is from fiscal year (FY) 2020 through FY 2025. For the purposes of this study, FY 2020 is the year starting in July 1, 2019 and ending in June 30, 2020.

Current Rates

The District's existing water rates include a monthly service charge based on meter size and a three-tiered quantity rate based on hundred cubic feet (hcf) of water usage. All customer classes are charged the same water rates. **Table 1-1** shows the current water rates.

Table 1-1: Current Potable Water Rates

| A | B | C |
|------|--|------------|
| Line | Potable Water Rates | FY 2020 |
| 1 | Monthly Service Charge | |
| 2 | 3/4 inch | \$29.74 |
| 3 | 1 inch | \$46.94 |
| 4 | 1-1/2 inch | \$89.99 |
| 5 | 2 inch | \$141.64 |
| 6 | 3 inch | \$305.20 |
| 7 | 4 inch | \$546.23 |
| 8 | 6 inch | \$1,209.09 |
| 9 | | |
| 10 | Quantity Rates (\$/hcf) (eff, 1-1-2020) | |
| 11 | Tier 1 (7 hcf) | \$6.45 |
| 12 | Tier 2 (28 hcf) | \$7.31 |
| 13 | Tier 3 (28+ hcf) | \$8.94 |

The District’s existing recycled water rates include a monthly service charge based on meter size for retail customers only and a uniform quantity rate for both retail and wholesale customers, based on hcf and acre-feet (AF) of recycled water usage, respectively. **Table 1-2** shows the current recycled water rates.

Table 1-2: Current Recycled Water Rates

| A | B | C |
|------|---|------------|
| Line | Recycled Water Rates | FY 2020 |
| 1 | Monthly Service Charge | |
| 2 | 2 inch | \$153.66 |
| 3 | 3 inch | \$288.09 |
| 4 | 4 inch | \$480.16 |
| 5 | 6 inch | \$960.24 |
| 6 | | |
| 7 | Retail Quantity Rates (\$/hcf) | |
| 8 | All Usage | \$5.23 |
| 9 | | |
| 10 | Wholesale Quantity Rates (\$/AF) | |
| 11 | All Usage | \$1,138.40 |

Legal Framework¹

The rate-making process, especially for water agencies in California, begins with a review of the legal requirements and framework currently in place. The major legal requirements include Proposition 218 and Article X, Section 2 of the California Constitution, which are outlined in the following sections.

California Constitution – Article XIII D, Section 6 (Proposition 218)

Proposition 218 was enacted by voters in 1996 to ensure, in part, that fees and charges imposed for ongoing delivery of a service to a property (“property-related fees and charges”) are proportional to, and do not exceed, the cost of providing service. Water service fees and charges are property-related and subject to the provisions of Proposition 218. The principal requirements, as they relate to public water service fees and charges, are as follows:

1. Revenues derived from a property-related charge imposed by a public agency shall not exceed the costs required to provide the property-related service.
2. Revenues derived by the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
3. The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No fee or charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed fee or charge shall be mailed to the record owner of each parcel not less than 45 days prior to a public hearing, when the agency considers all written protests against the charge.

As stated in the American Water Works Association’s Manual of Water Supply Practices M1, *Principles of Water Rates, Fees, and Charges, Seventh Edition* (M1 Manual), “water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” Proposition 218 requires that water rates cannot be

¹ Raftelis does not practice law nor does it provide legal advice. The above discussion provides a general overview of Raftelis’ understanding as rate practitioners and is labeled “legal framework” for literary convenience only. The District should consult with its legal counsel for clarification and/or specific guidance.

“arbitrary and capricious,” meaning that the rate-setting methodology must establish a clear nexus between costs and the rates charged.

California Constitution – Article X, Section 2

Article X, Section 2 of the California Constitution was established in 1976 and states the following:

“It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.”

Article X, Section 2 of the California Constitution institutes the need to preserve the State’s water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage conservation.

Process and Approach

The process and approach Raftelis utilized in the study is informed by the District’s policy objectives, the current water system and rates, and the legal requirements in California (namely, Proposition 218). The resulting cost of service analysis and rate design process considers all these factors and follows four key steps, outlined below, to derive proposed rates that fulfill the District’s policy objectives, meets industry standards, and complies with Proposition 218.

Step 1: Revenue Requirement Calculation

The rate-making process begins by determining the revenue requirement for the base year, also known as the rate-setting year. The base year for this study is FY 2021 (July 1, 2020 to June 30, 2021). The revenue requirement should sufficiently fund the utility’s operation and maintenance (O&M) costs, annual debt service, capital project expenses, and reserve funding as projected in the District’s budgets.

Step 2: Cost of Service Analysis

The annual cost of providing water service, or the revenue requirement, is then distributed among customer classes commensurate with their use of and burden on the system. A cost of service analysis involves the following steps:

1. Functionalize costs – the O&M expense budget is categorized into functions such as supply, treatment, pumping, transmission and distribution (T&D), etc.
2. Allocate to cost causation components – the functionalized costs are then allocated to system cost causation components such as supply, delivery, peaking, conservation, etc.
3. Develop unit costs – unit costs for each cost causation component is determined using appropriate units of service for each.
4. Distribute cost causation components – the cost causation components are allocated to each customer class using the unit costs in proportion to their demand and burden on the system.

A cost of service analysis considers both the average water demand and peak demand. Peaking costs² are incurred during maximum periods of consumption, most often coinciding with summertime irrigation usage. There are additional capacity-related³ costs associated with designing, constructing, operating, maintaining, and replacing

² Collectively, maximum day and maximum hour costs are known as peaking costs.

³ System capacity is the system’s ability to supply water to all delivery points at the time when demanded. The time of greatest demand is known as peak demand. Both the operating and capital costs incurred to accommodate peak flows are generally allocated to each customer class based upon the relative demand during the peak day and peak hour event.

and refurbishing facilities to meet peak demand. These peaking costs must be allocated to the customer classes whose water demand patterns generate additional costs for the utility, proportionate to their burden on the peaking-related facilities.

Step 3: Rate Design and Calculation

After allocating the revenue requirement to each water system and its corresponding customer classes, the rate design and calculation process can begin. Rates do more than simply recover costs; within the legal framework and industry standards, properly designed rates should support the District’s policy objectives, while adhering to cost of service principles. Rates are not only a financial instrument but act as a public information tool in communicating policy objectives to customers. The rate design process also includes a rate impact analysis to all customer classes and sample customer bill impact analysis.

Step 4: Administrative Record Preparation and Rate Adoption

The final step in a cost of service and rate study is to develop the administrative record in preparation for the rate adoption process. The administrative record, also known as the study report, documents the rate study results and presents the methodologies, rationale, justifications, and calculations utilized to derive the proposed rates. A thorough and methodical administrative record serves two important functions: maintaining defensibility in a litigious environment and communicating the rate adoption process to customers and important stakeholders.

Results and Recommendations

After a comprehensive review of the District’s long-range financial plan for the water and recycled water enterprises, Raftelis has identified the financial drivers in the study for each utility:

- » Water – the District expects to spend approximately \$4.3 million on capital projects over the study period. Revenue adjustments are needed to rate fund all capital expenses and supplement depleted reserve balances.
- » Recycled water – while the recycled water reserve balances are healthy without revenue adjustments, the debt coverage ratio for the utility’s two existing debt obligations will fall beneath the required coverage in the last two years of the study necessitating small revenue adjustments.

Based on these drivers, Raftelis recommends the following revenue adjustments for each utility:

- » Water – 6.0 percent per year from FY 2021 through FY 2023 and 4.0 percent per year from FY 2024 and FY 2025
- » Recycled water – 2.0 percent each year from FY 2021 through FY 2025
- » No additional debt for either utility

Proposed Rates

Based on the results and recommendations in the previous section, Raffelis calculated proposed water and recycled water rates for the five-year planning horizon. The proposed water rates for implementation are shown in **Table 1-3**.

Table 1-3: Proposed Potable Water Rates

| A | B | C | D | E | F | G |
|------|--------------------------------|------------|------------|------------|------------|------------|
| Line | Potable Water Rates | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | 3/4 inch | \$31.53 | \$33.43 | \$35.44 | \$36.86 | \$38.34 |
| 3 | 1 inch | \$49.76 | \$52.75 | \$55.92 | \$58.16 | \$60.49 |
| 4 | 1-1/2 inch | \$94.72 | \$100.41 | \$106.44 | \$110.70 | \$115.13 |
| 5 | 2 inch | \$148.02 | \$156.91 | \$166.33 | \$172.99 | \$179.91 |
| 6 | 3 inch | \$316.78 | \$335.79 | \$355.94 | \$370.18 | \$384.99 |
| 7 | 4 inch | \$565.49 | \$599.42 | \$635.39 | \$660.81 | \$687.25 |
| 8 | 6 inch | \$1,249.44 | \$1,324.41 | \$1,403.88 | \$1,460.04 | \$1,518.45 |
| 9 | | | | | | |
| 10 | Quantity Rates (\$/hcf) | | | | | |
| 11 | Tier 1 (7 hcf) | \$6.84 | \$7.26 | \$7.70 | \$8.01 | \$8.34 |
| 12 | Tier 2 (28 hcf) | \$7.75 | \$8.22 | \$8.72 | \$9.07 | \$9.44 |
| 13 | Tier 3 (28+ hcf) | \$9.48 | \$10.05 | \$10.66 | \$11.09 | \$11.54 |

Proposed recycled water rates, shown in **Table 1-4**, are based on the total revenue requirement for recycled water resulting from the revenue adjustment. Wholesale quantity rates are based on 80 percent of the Calleguas Municipal Water District’s Tier 1 rate. The revenue adjustment represents the amount of revenue for all recycled water customers, therefore, the retail quantity rate increases based on a different percentage. This calculation is explained in detail in a later section of this report.

Table 1-4: Proposed Recycled Water Rates

| A | B | C | D | E | F | G |
|------|---|----------|----------|------------|------------|------------|
| Line | Recycled Water Rates | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | 2 inch | \$154.37 | \$157.46 | \$160.61 | \$163.83 | \$167.11 |
| 3 | 3 inch | \$289.43 | \$295.22 | \$301.13 | \$307.16 | \$313.31 |
| 4 | 4 inch | \$482.38 | \$492.03 | \$501.88 | \$511.92 | \$522.16 |
| 5 | 6 inch | \$964.68 | \$983.98 | \$1,003.66 | \$1,023.74 | \$1,044.22 |
| 6 | | | | | | |
| 7 | Retail Quantity Rates (\$/hcf) | | | | | |
| 8 | All Usage | \$5.26 | \$5.37 | \$5.48 | \$5.59 | \$5.71 |
| 9 | | | | | | |
| 10 | Wholesale Quantity Rates (\$/AF) | | | | | |
| 11 | All Usage | | | | | |

Based on Calleguas Municipal Water District rates

2. Water Financial Plan

This section of the report discusses the financial plan for the water utility, which includes the O&M expenses, CIP, reserve funding, projected revenue under existing rates, and revenue adjustments needed to ensure the utility’s fiscal sustainability and solvency. The budget year, which for this study is FY 2020, is the year from which revenues and expenses are projected for the study period. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report.

Current Rates

The District’s current water rates, shown in **Table 2-1**, include a monthly service charge based on meter size and a three-tiered quantity rate based on hcf of water usage.

Table 2-1: Current Potable Water Rates

| A | B | C |
|------|--------------------------------|------------|
| Line | Potable Water Rates | FY 2020 |
| 1 | Monthly Service Charge | |
| 2 | 3/4 inch | \$29.74 |
| 3 | 1 inch | \$46.94 |
| 4 | 1-1/2 inch | \$89.99 |
| 5 | 2 inch | \$141.64 |
| 6 | 3 inch | \$305.20 |
| 7 | 4 inch | \$546.23 |
| 8 | 6 inch | \$1,209.09 |
| 9 | | |
| 10 | Quantity Rates (\$/hcf) | |
| 11 | Tier 1 (7 hcf) | \$6.45 |
| 12 | Tier 2 (28 hcf) | \$7.31 |
| 13 | Tier 3 (28+ hcf) | \$8.94 |

Customer Data

Table 2-2 and Table 2-3 show the projected water accounts and usage for each customer class during the study period. District staff provided water account and usage data for FY 2019. Growth is not expected for all years of the study, which is reflected in the projections for FY 2020 and beyond.

Table 2-2: Projected Potable Water Accounts

| A | B | C | D | E | F | G | H | I |
|------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Line | Potable Water Accounts | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Single Family Residential | | | | | | | |
| 2 | 3/4 inch | 4,852 | 4,852 | 4,852 | 4,852 | 4,852 | 4,852 | 4,852 |
| 3 | 1 inch | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| 4 | 1-1/2 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 2 inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 3 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 4 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Total - Single Family Residential | 4,900 | 4,900 | 4,900 | 4,900 | 4,900 | 4,900 | 4,900 |
| 10 | | | | | | | | |
| 11 | Multi-Family Residential | | | | | | | |
| 12 | 3/4 inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 1-1/2 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 2 inch | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 16 | 3 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 4 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | Total - Multi-Family Residential | 112 | 112 | 112 | 112 | 112 | 112 | 112 |
| 20 | | | | | | | | |
| 21 | Commercial | | | | | | | |
| 22 | 3/4 inch | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 23 | 1 inch | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 24 | 1-1/2 inch | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 25 | 2 inch | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 26 | 3 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 4 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | Total - Commercial | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 30 | | | | | | | | |
| 31 | Institutional | | | | | | | |
| 32 | 3/4 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 1 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 1-1/2 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 2 inch | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 36 | 3 inch | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 37 | 4 inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | Total - Institutional | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 40 | | | | | | | | |
| 41 | Landscape | | | | | | | |
| 42 | 3/4 inch | 11 | 11 | 11 | 11 | 11 | 11 | 11 |

| A | B | C | D | E | F | G | H | I |
|------|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Line | Potable Water Accounts | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 43 | 1 inch | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 44 | 1-1/2 inch | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 45 | 2 inch | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| 46 | 3 inch | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 47 | 4 inch | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 48 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 49 | Total - Landscape | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| 50 | | | | | | | | |
| 51 | Recreation and Other | | | | | | | |
| 52 | 3/4 inch | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 53 | 1 inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1-1/2 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 2 inch | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 56 | 3 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 4 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58 | 6 inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59 | Total - Recreation and Other | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 60 | | | | | | | | |
| 61 | Total - Potable Water Accounts | 5,169 | 5,169 | 5,169 | 5,169 | 5,169 | 5,169 | 5,169 |

Table 2-3: Projected Potable Water Usage (hcf)

| A | B | C | D | E | F | G | H | I |
|------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Line | Potable Water Usage | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Single Family Residential | | | | | | | |
| 2 | Tier 1 | 308,856 | 308,856 | 308,856 | 308,856 | 308,856 | 308,856 | 308,856 |
| 3 | Tier 2 | 329,642 | 329,642 | 329,642 | 329,642 | 329,642 | 329,642 | 329,642 |
| 4 | Tier 3 | 68,232 | 68,232 | 68,232 | 68,232 | 68,232 | 68,232 | 68,232 |
| 5 | Total - Single Family Residential | 706,730 | 706,730 | 706,730 | 706,730 | 706,730 | 706,730 | 706,730 |
| 6 | | | | | | | | |
| 7 | Multi-Family Residential | | | | | | | |
| 8 | Tier 1 | 9,244 | 9,244 | 9,244 | 9,244 | 9,244 | 9,244 | 9,244 |
| 9 | Tier 2 | 26,310 | 26,310 | 26,310 | 26,310 | 26,310 | 26,310 | 26,310 |
| 10 | Tier 3 | 20,263 | 20,263 | 20,263 | 20,263 | 20,263 | 20,263 | 20,263 |
| 11 | Total - Multi-Family Residential | 55,817 | 55,817 | 55,817 | 55,817 | 55,817 | 55,817 | 55,817 |
| 12 | | | | | | | | |
| 13 | Commercial | | | | | | | |
| 14 | Tier 1 | 1,843 | 1,843 | 1,843 | 1,843 | 1,843 | 1,843 | 1,843 |
| 15 | Tier 2 | 3,553 | 3,553 | 3,553 | 3,553 | 3,553 | 3,553 | 3,553 |
| 16 | Tier 3 | 3,542 | 3,542 | 3,542 | 3,542 | 3,542 | 3,542 | 3,542 |
| 17 | Total - Commercial | 8,938 | 8,938 | 8,938 | 8,938 | 8,938 | 8,938 | 8,938 |
| 18 | | | | | | | | |
| 19 | Institutional | | | | | | | |
| 20 | Tier 1 | 570 | 570 | 570 | 570 | 570 | 570 | 570 |
| 21 | Tier 2 | 1,610 | 1,610 | 1,610 | 1,610 | 1,610 | 1,610 | 1,610 |
| 22 | Tier 3 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 |
| 23 | Total - Institutional | 6,471 | 6,471 | 6,471 | 6,471 | 6,471 | 6,471 | 6,471 |
| 24 | | | | | | | | |
| 25 | Landscape | | | | | | | |
| 26 | Tier 1 | 6,222 | 6,222 | 6,222 | 6,222 | 6,222 | 6,222 | 6,222 |
| 27 | Tier 2 | 14,219 | 14,219 | 14,219 | 14,219 | 14,219 | 14,219 | 14,219 |
| 28 | Tier 3 | 52,094 | 52,094 | 52,094 | 52,094 | 52,094 | 52,094 | 52,094 |
| 29 | Total - Landscape | 72,535 | 72,535 | 72,535 | 72,535 | 72,535 | 72,535 | 72,535 |
| 30 | | | | | | | | |
| 31 | Recreation and Other | | | | | | | |
| 32 | Tier 1 | 758 | 758 | 758 | 758 | 758 | 758 | 758 |
| 33 | Tier 2 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 |
| 34 | Tier 3 | 997 | 997 | 997 | 997 | 997 | 997 | 997 |
| 35 | Total - Recreation and Other | 2,763 | 2,763 | 2,763 | 2,763 | 2,763 | 2,763 | 2,763 |
| 36 | | | | | | | | |
| 37 | Total - Potable Water Usage | 853,254 | 853,254 | 853,254 | 853,254 | 853,254 | 853,254 | 853,254 |

Revenues

Table 2-4 shows the calculated water revenues for FY 2021 and beyond at the current water rates. The financial plan uses the District’s budgeted revenues for FY 2020. The current rates in **Table 2-1** are multiplied by the meter counts in **Table 2-2** and 12 months in a year (for the monthly meter charge) and the water usage in **Table 2-3** (for the quantity rates) to determine the calculated water rate revenues.

Table 2-4: Calculated Potable Water Rate Revenues at Current Rates

| A | B | C | D | E | F | G |
|------|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Potable Water Rate Revenues | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | Single Family Residential | \$1,759,756 | \$1,759,756 | \$1,759,756 | \$1,759,756 | \$1,759,756 |
| 3 | Multi-Family Residential | \$189,021 | \$189,021 | \$189,021 | \$189,021 | \$189,021 |
| 4 | Commercial | \$40,246 | \$40,246 | \$40,246 | \$40,246 | \$40,246 |
| 5 | Institutional | \$24,604 | \$24,604 | \$24,604 | \$24,604 | \$24,604 |
| 6 | Landscape | \$151,394 | \$151,394 | \$151,394 | \$151,394 | \$151,394 |
| 7 | Recreation and Other | \$12,903 | \$12,903 | \$12,903 | \$12,903 | \$12,903 |
| 8 | Total - Monthly Service Charge | \$2,177,923 | \$2,177,923 | \$2,177,923 | \$2,177,923 | \$2,177,923 |
| 9 | | | | | | |
| 10 | Quantity Rates | | | | | |
| 11 | Single Family Residential | \$5,011,795 | \$5,011,795 | \$5,011,795 | \$5,011,795 | \$5,011,795 |
| 12 | Multi-Family Residential | \$433,098 | \$433,098 | \$433,098 | \$433,098 | \$433,098 |
| 13 | Commercial | \$69,527 | \$69,527 | \$69,527 | \$69,527 | \$69,527 |
| 14 | Institutional | \$53,805 | \$53,805 | \$53,805 | \$53,805 | \$53,805 |
| 15 | Landscape | \$609,792 | \$609,792 | \$609,792 | \$609,792 | \$609,792 |
| 16 | Recreation and Other | \$21,172 | \$21,172 | \$21,172 | \$21,172 | \$21,172 |
| 17 | Total - Quantity Rates | \$6,199,191 | \$6,199,191 | \$6,199,191 | \$6,199,191 | \$6,199,191 |
| 18 | | | | | | |
| 19 | Total - Potable Water Rate Revenues | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |

To project non-rate revenues, such as miscellaneous revenues and interest earnings, Raftelis uses the revenue escalation factors in **Table 2-5**. Miscellaneous revenues are not inflated for future years, and the reserve interest rate is used to calculate the interest earnings based on the water fund balances.

Table 2-5: Revenue Escalation Factors

| A | B | C | D | E | F | G |
|------|----------------------------|---------|---------|---------|---------|---------|
| Line | Revenue Escalation Factors | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Miscellaneous Revenue | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 2 | Reserve Interest Rate | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |

Table 2-6 shows the projected water revenues for the study period. Water sales (Line 1) and service charge (Line 2) revenues for FY 2021 and beyond are based on the revenue calculation (**Table 2-4**, Lines 8 and 19). Interest earnings (Line 6) is calculated based on the reserve interest rate (**Table 2-5**, Line 2) and the water fund balance.

Table 2-6: Projected Potable Water Revenues at Current Rates

| A | B | C | D | E | F | G | H |
|------|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Potable Water Revenues | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Sales | \$6,306,989 | \$6,199,191 | \$6,199,191 | \$6,199,191 | \$6,199,191 | \$6,199,191 |
| 2 | Service Charges | \$1,941,878 | \$2,177,923 | \$2,177,923 | \$2,177,923 | \$2,177,923 | \$2,177,923 |
| 3 | Cell Site Lease | \$176,020 | \$176,020 | \$176,020 | \$176,020 | \$176,020 | \$176,020 |
| 4 | Penalties and Late Fees | \$81,960 | \$81,960 | \$81,960 | \$81,960 | \$81,960 | \$81,960 |
| 5 | Other | \$11,500 | \$11,500 | \$11,500 | \$11,500 | \$11,500 | \$11,500 |
| 6 | Interest Earnings | \$14,928 | \$46,530 | \$55,649 | \$66,409 | \$77,990 | \$90,808 |
| 7 | Total - Potable Water Revenues | \$8,533,275 | \$8,693,124 | \$8,702,243 | \$8,713,003 | \$8,724,584 | \$8,737,402 |

O&M Expenses

Table 2-7 shows the expense escalation factors used to inflate O&M expenses for future years. These factors were based on input from District staff.

Table 2-7: Expense Escalation Factors

| A | B | C | D | E | F | G |
|------|----------------------------|---------|---------|---------|---------|---------|
| Line | Expense Escalation Factors | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | General | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 2 | Salaries | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 3 | Benefits | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 4 | Water Supply | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 5 | Utilities | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 6 | Capital | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% |

Table 2-8 shows the water production and purchased by period. Water production is equal to water demand accounting for the water loss percentage (Line 1). Water demand is equal to the water usage projections for the study period (**Table 2-3**, Line 37) converted from hcf to AF. Total water purchased (Line 14) is equal to water produced (Line 9). The amount of water purchased in the first half of the fiscal year is based on the water use proportion (Line 4) provided by District staff.

Table 2-8: Potable Water Production

| A | B | C | D | E | F | G |
|------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Line | Potable Water Production | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Water Loss Percentage | 5% | 5% | 5% | 5% | 5% |
| 2 | | | | | | |
| 3 | Water Use Proportion | | | | | |
| 4 | Jul-Dec | 59% | 59% | 59% | 59% | 59% |
| 5 | Jan-Jun | 41% | 41% | 41% | 41% | 41% |
| 6 | | | | | | |
| 7 | Water Production (AF) | | | | | |
| 8 | Demanded | 1,959 | 1,959 | 1,959 | 1,959 | 1,959 |
| 9 | Produced | 2,062 | 2,062 | 2,062 | 2,062 | 2,062 |
| 10 | | | | | | |
| 11 | Water Purchased (AF) | | | | | |
| 12 | Jul-Dec | 1,217 | 1,217 | 1,217 | 1,217 | 1,217 |
| 13 | Jan-Jun | 845 | 845 | 845 | 845 | 845 |
| 14 | Total - Water Purchased (AF) | 2,062 | 2,062 | 2,062 | 2,062 | 2,062 |

Table 2-9 shows the water supply cost calculations for FY 2021 and beyond. Water supply costs for FY 2020 are from the District’s budget. District staff provided variable costs for water purchase (Lines 1-19) based on each period of the fiscal year. Variable costs include charges from Calleguas Municipal Water District (CMWD) and Metropolitan Water District (MWD); the District purchases water from CMWD and is charged MWD passthrough costs for that water. District staff also supplied fixed costs (Lines 21-25) that do not vary with the amount of water purchased. Both fixed and variable water supply costs are inflated by the water supply escalation factor (**Table 2-7**, Line 4). Variable water supply costs (Lines 28-33) are calculated by multiplying the variable costs per AF by the amount of water purchased in each period (**Table 2-8**, Lines 12-13)

Table 2-9: Potable Water Supply Cost

| A | B | C | D | E | F | G |
|------|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Potable Water Supply Cost | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Water Supply Variable Costs (\$/AF) | | | | | |
| 2 | MWD Tier 1 Rate | | | | | |
| 3 | Jul-Dec | \$219.45 | \$230.42 | \$241.94 | \$254.04 | \$266.74 |
| 4 | Jan-Jun | \$230.42 | \$241.94 | \$254.04 | \$266.74 | \$280.08 |
| 5 | MWD System Access Charge | | | | | |
| 6 | Jul-Dec | \$414.75 | \$435.49 | \$457.26 | \$480.12 | \$504.13 |
| 7 | Jan-Jun | \$435.49 | \$457.26 | \$480.12 | \$504.13 | \$529.34 |
| 8 | MWD System Power Charge | | | | | |
| 9 | Jul-Dec | \$133.35 | \$140.02 | \$147.02 | \$154.37 | \$162.09 |
| 10 | Jan-Jun | \$140.02 | \$147.02 | \$154.37 | \$162.09 | \$170.19 |
| 11 | MWD Treatment Charge | | | | | |
| 12 | Jul-Dec | \$334.95 | \$351.70 | \$369.28 | \$387.75 | \$407.13 |
| 13 | Jan-Jun | \$351.70 | \$369.28 | \$387.75 | \$407.13 | \$427.49 |
| 14 | CMWD O&M Charge | | | | | |
| 15 | Jul-Dec | \$82.95 | \$87.10 | \$91.45 | \$96.02 | \$100.83 |
| 16 | Jan-Jun | \$87.10 | \$91.45 | \$96.02 | \$100.83 | \$105.87 |
| 17 | CMWD Capital Construction Charge | | | | | |
| 18 | Jul-Dec | \$308.70 | \$324.14 | \$340.34 | \$357.36 | \$375.23 |
| 19 | Jan-Jun | \$324.14 | \$340.34 | \$357.36 | \$375.23 | \$393.99 |
| 20 | | | | | | |
| 21 | Water Supply Fixed Costs (\$/year) | | | | | |
| 22 | Pumping Lindero 1 | \$77,785 | \$81,674 | \$85,757 | \$90,045 | \$94,548 |
| 23 | Pumping Lindero 2 | \$125,254 | \$131,517 | \$138,092 | \$144,997 | \$152,247 |
| 24 | Capacity Reservation Charge | \$172,149 | \$180,756 | \$189,794 | \$199,284 | \$209,248 |
| 25 | Readiness-to-Serve Charge | \$175,999 | \$184,799 | \$194,039 | \$203,740 | \$213,928 |
| 26 | | | | | | |
| 27 | Water Supply Costs | | | | | |
| 28 | MWD Tier 1 Rate | \$461,759 | \$484,847 | \$509,089 | \$534,544 | \$561,271 |
| 29 | MWD System Access Charge | \$872,702 | \$916,337 | \$962,154 | \$1,010,262 | \$1,060,775 |
| 30 | MWD System Power Charge | \$280,590 | \$294,620 | \$309,351 | \$324,818 | \$341,059 |
| 31 | MWD Treatment Charge | \$704,790 | \$740,029 | \$777,031 | \$815,882 | \$856,676 |
| 32 | CMWD O&M Charge | \$174,540 | \$183,267 | \$192,431 | \$202,052 | \$212,155 |
| 33 | CMWD Capital Construction Charge | \$649,556 | \$682,033 | \$716,135 | \$751,942 | \$789,539 |
| 34 | Pumping Lindero 1 | \$77,785 | \$81,674 | \$85,757 | \$90,045 | \$94,548 |
| 35 | Pumping Lindero 2 | \$125,254 | \$131,517 | \$138,092 | \$144,997 | \$152,247 |
| 36 | Capacity Reservation Charge | \$172,149 | \$180,756 | \$189,794 | \$199,284 | \$209,248 |
| 37 | Readiness-to-Serve Charge | \$175,999 | \$184,799 | \$194,039 | \$203,740 | \$213,928 |
| 38 | Total - Water Supply Costs | \$3,695,123 | \$3,879,879 | \$4,073,873 | \$4,277,567 | \$4,491,445 |

Table 2-10 shows the projected water O&M expenses. District staff provided the budget for FY 2020; the budgeted values are inflated for future years using the expense escalation factors (**Table 2-7**). Note that the water purchase cost (Line 33) is equal to the calculated water supply cost (**Table 2-9**, Line 38) for FY 2021 and beyond.

Table 2-10: Projected Potable Water Expenses

| A | B | C | D | E | F | G | H |
|------|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Potable Water Expenses | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Administration | | | | | | |
| 2 | Board member fees | \$2,133 | \$2,197 | \$2,263 | \$2,331 | \$2,401 | \$2,473 |
| 3 | Membership and dues | \$27,795 | \$28,629 | \$29,488 | \$30,372 | \$31,284 | \$32,222 |
| 4 | Conference and seminars | \$11,070 | \$11,402 | \$11,744 | \$12,096 | \$12,459 | \$12,833 |
| 5 | Overhead cost allocation | \$600,345 | \$618,355 | \$636,906 | \$656,013 | \$675,694 | \$695,964 |
| 6 | Insurance | \$12,377 | \$12,748 | \$13,130 | \$13,524 | \$13,930 | \$14,348 |
| 7 | Permits | \$38,355 | \$39,506 | \$40,691 | \$41,912 | \$43,169 | \$44,464 |
| 8 | Contract services - VRSD | \$81,371 | \$83,812 | \$86,326 | \$88,916 | \$91,583 | \$94,331 |
| 9 | Subtotal - Administration | \$773,445 | \$796,648 | \$820,548 | \$845,164 | \$870,519 | \$896,635 |
| 10 | | | | | | | |
| 11 | Billing and CS | | | | | | |
| 12 | Professional Services | \$24,716 | \$25,458 | \$26,221 | \$27,008 | \$27,818 | \$28,653 |
| 13 | Credit Card Service Fees | \$54,000 | \$55,620 | \$57,289 | \$59,007 | \$60,777 | \$62,601 |
| 14 | Utilities | \$2,530 | \$2,606 | \$2,684 | \$2,765 | \$2,848 | \$2,933 |
| 15 | Contract services - VRSD | \$395,640 | \$407,509 | \$419,734 | \$432,326 | \$445,296 | \$458,655 |
| 16 | Management and administrative | \$3,200 | \$3,296 | \$3,395 | \$3,497 | \$3,602 | \$3,710 |
| 17 | Subtotal - Billing and CS | \$480,086 | \$494,489 | \$509,323 | \$524,603 | \$540,341 | \$556,551 |
| 18 | | | | | | | |
| 19 | Distribution | | | | | | |
| 20 | Contract services - VRSD | \$1,577,006 | \$1,624,316 | \$1,673,046 | \$1,723,237 | \$1,774,934 | \$1,828,182 |
| 21 | Professional Services | \$25,000 | \$25,750 | \$26,523 | \$27,318 | \$28,138 | \$28,982 |
| 22 | Subtotal - Distribution | \$1,602,006 | \$1,650,066 | \$1,699,568 | \$1,750,555 | \$1,803,072 | \$1,857,164 |
| 23 | | | | | | | |
| 24 | Meters | | | | | | |
| 25 | Contract services - VRSD | \$87,495 | \$90,120 | \$92,823 | \$95,608 | \$98,476 | \$101,431 |
| 26 | Subtotal - Meters | \$87,495 | \$90,120 | \$92,823 | \$95,608 | \$98,476 | \$101,431 |
| 27 | | | | | | | |
| 28 | Pumping | | | | | | |
| 29 | Utilities | \$115,000 | \$120,750 | \$126,788 | \$133,127 | \$139,783 | \$146,772 |
| 30 | Subtotal - Pumping | \$115,000 | \$120,750 | \$126,788 | \$133,127 | \$139,783 | \$146,772 |
| 31 | | | | | | | |
| 32 | Supply | | | | | | |
| 33 | Water Purchase | \$3,402,736 | \$3,695,123 | \$3,879,879 | \$4,073,873 | \$4,277,567 | \$4,491,445 |
| 34 | Subtotal - Supply | \$3,402,736 | \$3,695,123 | \$3,879,879 | \$4,073,873 | \$4,277,567 | \$4,491,445 |
| 35 | | | | | | | |
| 36 | Total - Potable Water Expenses | \$6,460,768 | \$6,847,196 | \$7,128,930 | \$7,422,931 | \$7,729,759 | \$8,049,999 |

Debt Service

Table 2-11 shows the existing water debt service, provided by District staff. The District does not expect to incur additional debt for the water enterprise during this study period.

Table 2-11: Existing Potable Water Debt Service

| A | B | C | D | E | F | G | H |
|------|--|------------------|------------------|------------------|------------------|------------------|------------------|
| Line | Potable Water Existing Debt | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | 2011A Project | \$601,715 | \$601,715 | \$601,715 | \$601,715 | \$601,715 | \$601,715 |
| 2 | 2014 Lease Purchase Agreement | \$214,719 | \$214,719 | \$214,719 | \$214,719 | \$214,719 | \$214,719 |
| 3 | Total - Potable Water Existing Debt | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |

Capital Projects

Table 2-12 shows the water CIP for all years of the study. District staff provided capital costs for the study period; these costs are inflated for future years using the capital expense escalation factor (Table 2-7, Line 6). Since the District does not plan to incur additional debt during this study period, all capital costs will be funded by rates.

Table 2-12: Potable Water Capital Projects

| A | B | C | D | E | F | G | H |
|------|---|------------|------------------|------------------|------------------|------------------|------------------|
| Line | Potable Water Capital Projects | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Savoy Pump Station Replacement | \$0 | \$432,640 | \$281,216 | \$292,465 | \$304,163 | \$126,532 |
| 2 | Deerhill Pump Station Improvements | \$0 | \$82,202 | \$62,992 | \$65,512 | \$68,133 | \$70,858 |
| 3 | Lindero Pump Station Improvements | \$0 | \$0 | \$44,995 | \$116,986 | \$121,665 | \$202,451 |
| 4 | Smoketree Pump Station Replacement | \$0 | \$0 | \$112,486 | \$175,479 | \$182,498 | \$189,798 |
| 5 | Lambourne Pump Station Improvements | \$0 | \$0 | \$33,746 | \$58,493 | \$60,833 | \$63,266 |
| 6 | Pipeline Rehabilitation | \$0 | \$108,160 | \$112,486 | \$116,986 | \$121,665 | \$126,532 |
| 7 | Reservoir Rehabilitation | \$0 | \$108,160 | \$112,486 | \$116,986 | \$121,665 | \$126,532 |
| 8 | Total - Potable Water Capital Projects | \$0 | \$731,162 | \$760,408 | \$942,906 | \$980,622 | \$905,968 |

Reserve Policy

The District's existing reserve policy is robust and ensures financial resilience in the face of unexpected events, such as natural disasters, asset failures, or reduced revenues. The reserve policy for water includes the following components:

- » Operating reserve – 3 (minimum) to 6 (maximum) months of annual O&M expenses
- » Capital reserve – 5-year average rate-funded CIP costs
- » Debt service – 1 year of annual debt service
- » Rate stabilization reserve – 3 (minimum) to 6 (maximum) months of operating revenues

Reserves allow the District to have better ratings and lower interest rates if it issues debt.

Status Quo Financial Plan

Table 2-13 shows the water financial plan under the status quo or “do nothing” scenario. This scenario shows no revenue adjustments. Net cash flow (Line 34) is equal to revenue (Line 17) less O&M expenses (Line 26) and debt and capital costs (Line 32). Net revenue (Line 35) is equal to revenues less O&M expenses. Net revenue, which is positive for all years of the study, shows that the District's existing water rate revenues are sufficient to fund all O&M expenses. However, net cash flow is negative for the last four years of the study, which shows that existing rate revenues are not sufficient to recover all costs associated with capital projects. The calculated debt coverage ratio (Line 37), which is calculated by dividing net revenue by annual debt service, falls below the 1.25 requirement starting in FY 2024.

Rate and miscellaneous revenues (Lines 12-17) are from **Table 2-6**. Note that the interest earnings in the status quo scenario are lower, due to lower fund balances. O&M expenses (Lines 19-26) are from **Table 2-10**. Debt service (Lines 29-30) are from **Table 2-11**. Capital project costs (Line 31) are from **Table 2-12**.

Table 2-13: Potable Water Financial Plan, Status Quo

| A | B | C | D | E | F | G | H |
|------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Line | Potable Water Financial Plan | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 2 | | | | | | | |
| 3 | Revenue Adjustments | | | | | | |
| 4 | FY 2020 - 0.0% | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 5 | FY 2021 - 0.0% | | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | FY 2022 - 0.0% | | | \$0 | \$0 | \$0 | \$0 |
| 7 | FY 2023 - 0.0% | | | | \$0 | \$0 | \$0 |
| 8 | FY 2024 - 0.0% | | | | | \$0 | \$0 |
| 9 | FY 2025 - 0.0% | | | | | | \$0 |
| 10 | Total - Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 11 | | | | | | | |
| 12 | Revenues | | | | | | |
| 13 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 14 | Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 15 | Other Revenues | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 |
| 16 | Interest Earnings | \$14,928 | \$44,017 | \$45,420 | \$42,900 | \$36,250 | \$26,582 |
| 17 | Total - Revenues | \$8,533,275 | \$8,690,611 | \$8,692,014 | \$8,689,494 | \$8,682,844 | \$8,673,176 |
| 18 | | | | | | | |
| 19 | O&M Expenses | | | | | | |
| 20 | Administration | \$773,445 | \$796,648 | \$820,548 | \$845,164 | \$870,519 | \$896,635 |
| 21 | Billing and Customer Service | \$480,086 | \$494,489 | \$509,323 | \$524,603 | \$540,341 | \$556,551 |
| 22 | Distribution | \$1,602,006 | \$1,650,066 | \$1,699,568 | \$1,750,555 | \$1,803,072 | \$1,857,164 |
| 23 | Meters | \$87,495 | \$90,120 | \$92,823 | \$95,608 | \$98,476 | \$101,431 |
| 24 | Pumping | \$115,000 | \$120,750 | \$126,788 | \$133,127 | \$139,783 | \$146,772 |
| 25 | Supply | \$3,402,736 | \$3,695,123 | \$3,879,879 | \$4,073,873 | \$4,277,567 | \$4,491,445 |
| 26 | Total - O&M Expenses | \$6,460,768 | \$6,847,196 | \$7,128,930 | \$7,422,931 | \$7,729,759 | \$8,049,999 |
| 27 | | | | | | | |
| 28 | Debt and Capital | | | | | | |
| 29 | Existing Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 30 | Proposed Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 31 | Rate Funded Capital Projects | \$0 | \$731,162 | \$760,408 | \$942,906 | \$980,622 | \$905,968 |
| 32 | Total - Debt and Capital | \$816,435 | \$1,547,596 | \$1,576,843 | \$1,759,341 | \$1,797,057 | \$1,722,403 |
| 33 | | | | | | | |
| 34 | Net Cash Flow | \$1,256,073 | \$295,818 | (\$13,758) | (\$492,777) | (\$843,972) | (\$1,099,226) |
| 35 | Net Revenue | \$2,072,507 | \$1,843,415 | \$1,563,084 | \$1,266,563 | \$953,085 | \$623,177 |
| 36 | | | | | | | |
| 37 | Calculated Debt Coverage | 2.54 | 2.26 | 1.91 | 1.55 | 1.17 | 0.76 |
| 38 | Required Debt Coverage | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |

Table 2-14 shows the projected water fund balances under the status quo scenario. The water ending balance (Line 17) is below minimum reserve target levels (Line 18) for all years of the study. The minimum reserve target is the sum of Lines 22, 23, 24, 26 and the maximum reserve target is the sum of Lines 22, 23, 24, 27.

Table 2-14: Potable Water Fund Balances, Status Quo

| A | B | C | D | E | F | G | H |
|------|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Potable Water Fund Balances | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Beginning Balance | \$3,019,709 | \$4,275,782 | \$4,571,600 | \$4,557,842 | \$4,065,064 | \$3,221,092 |
| 2 | | | | | | | |
| 3 | Sources of Funds | | | | | | |
| 4 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 5 | Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | Other Revenues | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 |
| 7 | Debt Proceeds | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 8 | Interest Earnings | \$14,928 | \$44,017 | \$45,420 | \$42,900 | \$36,250 | \$26,582 |
| 9 | Total - Sources of Funds | \$8,533,275 | \$8,690,611 | \$8,692,014 | \$8,689,494 | \$8,682,844 | \$8,673,176 |
| 10 | | | | | | | |
| 11 | Uses of Funds | | | | | | |
| 12 | O&M Expenses | \$6,460,768 | \$6,847,196 | \$7,128,930 | \$7,422,931 | \$7,729,759 | \$8,049,999 |
| 13 | Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 14 | Capital Projects | \$0 | \$731,162 | \$760,408 | \$942,906 | \$980,622 | \$905,968 |
| 15 | Total - Uses of Funds | \$7,277,203 | \$8,394,793 | \$8,705,772 | \$9,182,272 | \$9,526,816 | \$9,772,402 |
| 16 | | | | | | | |
| 17 | Ending Balance | \$4,275,782 | \$4,571,600 | \$4,557,842 | \$4,065,064 | \$3,221,092 | \$2,121,866 |
| 18 | Minimum Reserve Target | \$6,859,425 | \$7,265,895 | \$7,371,067 | \$7,420,729 | \$7,442,494 | \$7,465,699 |
| 19 | Maximum Reserve Target | \$8,989,012 | \$9,427,543 | \$9,532,716 | \$9,582,377 | \$9,604,143 | \$9,627,348 |
| 20 | | | | | | | |
| 21 | Reserve Target | | | | | | |
| 22 | Operating | \$3,230,384 | \$3,423,598 | \$3,564,465 | \$3,711,465 | \$3,864,879 | \$4,024,999 |
| 23 | Capital | \$683,020 | \$864,213 | \$828,519 | \$731,180 | \$599,532 | \$462,617 |
| 24 | Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 25 | Rate Stabilization | | | | | | |
| 26 | Minimum | \$2,129,587 | \$2,161,649 | \$2,161,649 | \$2,161,649 | \$2,161,649 | \$2,161,649 |
| 27 | Maximum | \$4,259,174 | \$4,323,297 | \$4,323,297 | \$4,323,297 | \$4,323,297 | \$4,323,297 |

Figure 2-1 shows the water financial plan under the status quo scenario in a graphical format. Current revenues are represented as the dotted line; O&M expenses, debt service, and capital expenses are represented as the turquoise, grey, and yellow stacked bars, respectively. Since the current revenues are not sufficient to fund both O&M and capital expenses, the District will draw from its water reserves to fund these costs. The drawdown on reserves is shown as the green bars.

Figure 2-1: Potable Water Financial Plan, Status Quo

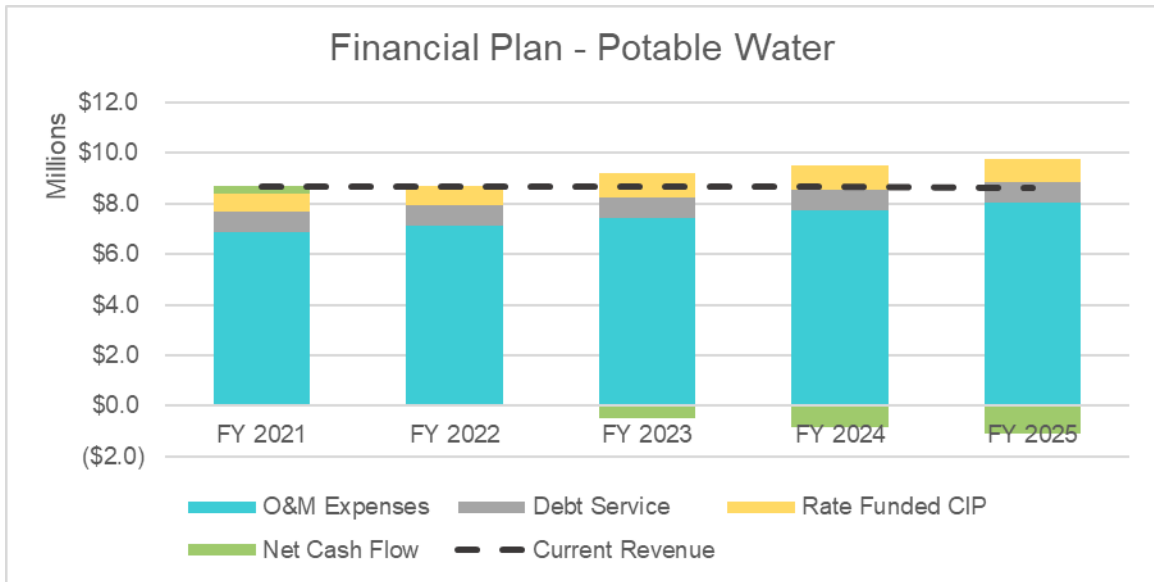


Figure 2-2 shows the water debt coverage under the status quo scenario in a graphical format. The debt coverage ratio falls below the required 1.25 ratio in FY 2024 without additional revenue adjustments.

Figure 2-2: Potable Water Debt Coverage, Status Quo

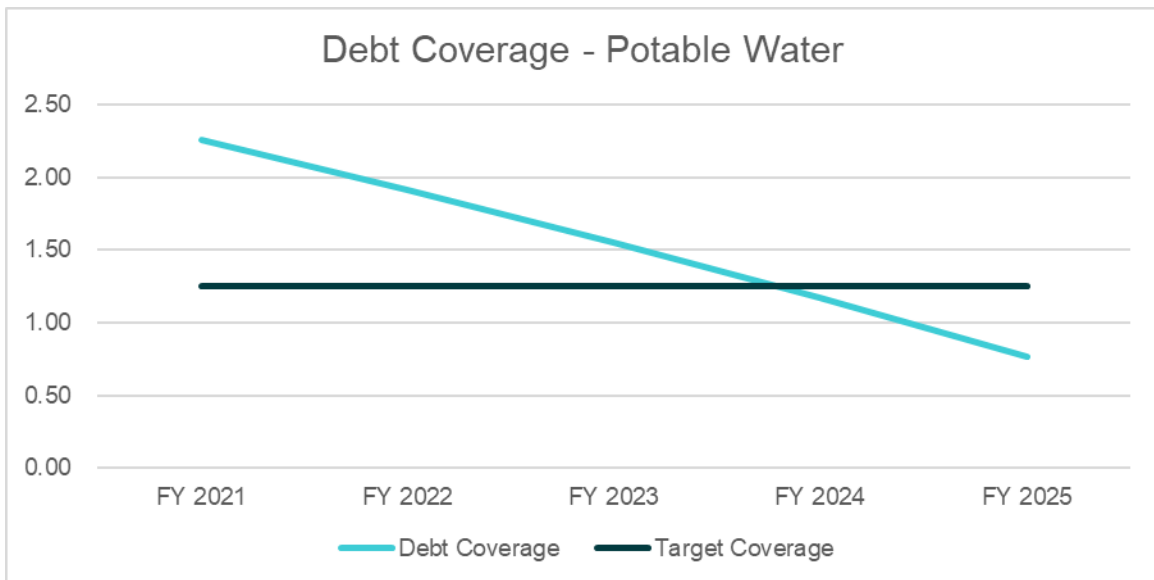
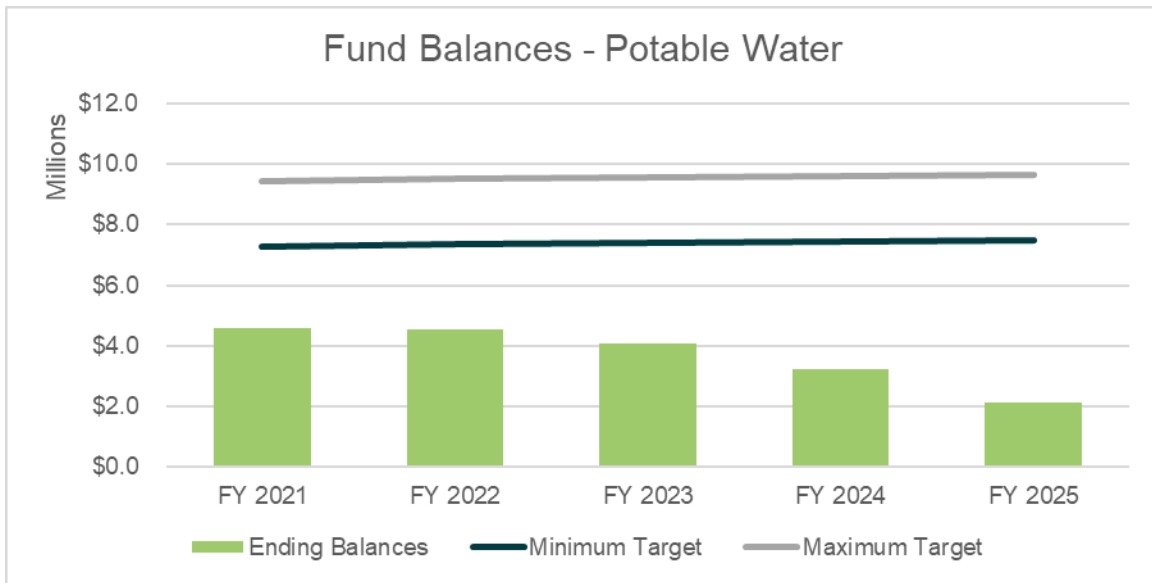


Figure 2-3 shows the water fund balances under the status quo scenario in a graphical format. The fund balances are represented as the green bars; the minimum and maximum reserve targets are represented as the navy and grey lines, respectively. The District’s water funds are below minimum target levels for all years of the study.

Figure 2-3: Potable Water Fund Balances, Status Quo



Proposed Financial Plan

Table 2-15 shows the proposed adjustments to the financial plan.

Table 2-15: Proposed Revenue Adjustments

| A | B | C |
|------|------------------------------|---------------|
| Line | Proposed Revenue Adjustments | Potable Water |
| 1 | FY 2021 | 6.0% |
| 2 | FY 2022 | 6.0% |
| 3 | FY 2023 | 6.0% |
| 4 | FY 2024 | 4.0% |
| 5 | FY 2025 | 4.0% |

Table 2-16 shows the water financial plan with the proposed adjustments. Rate revenues (Line 1) are increased each year by the revenue adjustment percentage (Lines 3-10).

Net cash flow (Line 34) and net revenue (Line 35) are positive for all years of the study, which means that the District’s water revenues are sufficient to fund all operating and capital costs. Calculated debt coverage (Line 37) is also above the debt coverage requirement for all years of the study.

Table 2-16: Potable Water Financial Plan, Proposed Adjustments

| A | B | C | D | E | F | G | H |
|------|------------------------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| Line | Potable Water Financial Plan | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 2 | | | | | | | |
| 3 | Revenue Adjustments | | | | | | |
| 4 | FY 2020 - 0.0% | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 5 | FY 2021 - 6.0% | | \$502,627 | \$502,627 | \$502,627 | \$502,627 | \$502,627 |
| 6 | FY 2022 - 6.0% | | | \$532,784 | \$532,784 | \$532,784 | \$532,784 |
| 7 | FY 2023 - 6.0% | | | | \$564,752 | \$564,752 | \$564,752 |
| 8 | FY 2024 - 4.0% | | | | | \$399,091 | \$399,091 |
| 9 | FY 2025 - 4.0% | | | | | | \$415,055 |
| 10 | Total - Revenue Adjustments | \$0 | \$502,627 | \$1,035,411 | \$1,600,163 | \$1,999,254 | \$2,414,309 |
| 11 | | | | | | | |
| 12 | Revenues | | | | | | |
| 13 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 14 | Revenue Adjustments | \$0 | \$502,627 | \$1,035,411 | \$1,600,163 | \$1,999,254 | \$2,414,309 |
| 15 | Other Revenues | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 |
| 16 | Interest Earnings | \$14,928 | \$46,530 | \$55,649 | \$66,409 | \$77,990 | \$90,808 |
| 17 | Total - Revenues | \$8,533,275 | \$9,195,751 | \$9,737,654 | \$10,313,165 | \$10,723,838 | \$11,151,710 |
| 18 | | | | | | | |
| 19 | O&M Expenses | | | | | | |
| 20 | Administration | \$773,445 | \$796,648 | \$820,548 | \$845,164 | \$870,519 | \$896,635 |
| 21 | Billing and Customer Service | \$480,086 | \$494,489 | \$509,323 | \$524,603 | \$540,341 | \$556,551 |
| 22 | Distribution | \$1,602,006 | \$1,650,066 | \$1,699,568 | \$1,750,555 | \$1,803,072 | \$1,857,164 |
| 23 | Meters | \$87,495 | \$90,120 | \$92,823 | \$95,608 | \$98,476 | \$101,431 |
| 24 | Pumping | \$115,000 | \$120,750 | \$126,788 | \$133,127 | \$139,783 | \$146,772 |
| 25 | Supply | \$3,402,736 | \$3,695,123 | \$3,879,879 | \$4,073,873 | \$4,277,567 | \$4,491,445 |
| 26 | Total - O&M Expenses | \$6,460,768 | \$6,847,196 | \$7,128,930 | \$7,422,931 | \$7,729,759 | \$8,049,999 |
| 27 | | | | | | | |
| 28 | Debt and Capital | | | | | | |
| 29 | Existing Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 30 | Proposed Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 31 | Rate Funded Capital Projects | \$0 | \$731,162 | \$760,408 | \$942,906 | \$980,622 | \$905,968 |
| 32 | Total - Debt and Capital | \$816,435 | \$1,547,596 | \$1,576,843 | \$1,759,341 | \$1,797,057 | \$1,722,403 |
| 33 | | | | | | | |
| 34 | Net Cash Flow | \$1,256,073 | \$800,958 | \$1,031,881 | \$1,130,894 | \$1,197,022 | \$1,379,309 |
| 35 | Net Revenue | \$2,072,507 | \$2,348,554 | \$2,608,724 | \$2,890,235 | \$2,994,079 | \$3,101,712 |
| 36 | | | | | | | |
| 37 | Calculated Debt Coverage | 2.54 | 2.88 | 3.20 | 3.54 | 3.67 | 3.80 |
| 38 | Required Debt Coverage | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |

Table 2-17 shows the projected water fund balances with the proposed adjustments. The District's water ending balances (Line 17) are below minimum reserve target levels (Line 18) for the first four years of the study but will meet minimum targets in the last two years. The minimum reserve target is the sum of Lines 22, 23, 24, 26 and the maximum reserve target is the sum of Lines 22, 23, 24, 27.

Table 2-17: Potable Water Fund Balances, Proposed Adjustments

| A | B | C | D | E | F | G | H |
|------|---------------------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| Line | Potable Water Fund Balances | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Beginning Balance | \$3,019,709 | \$4,275,782 | \$5,076,740 | \$6,108,621 | \$7,239,515 | \$8,436,538 |
| 2 | | | | | | | |
| 3 | Sources of Funds | | | | | | |
| 4 | Rate Revenues | \$8,248,867 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 | \$8,377,114 |
| 5 | Revenue Adjustments | \$0 | \$502,627 | \$1,035,411 | \$1,600,163 | \$1,999,254 | \$2,414,309 |
| 6 | Other Revenues | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 | \$269,480 |
| 7 | Debt Proceeds | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 8 | Interest Earnings | \$14,928 | \$46,530 | \$55,649 | \$66,409 | \$77,990 | \$90,808 |
| 9 | Total - Sources of Funds | \$8,533,275 | \$9,195,751 | \$9,737,654 | \$10,313,165 | \$10,723,838 | \$11,151,710 |
| 10 | | | | | | | |
| 11 | Uses of Funds | | | | | | |
| 12 | O&M Expenses | \$6,460,768 | \$6,847,196 | \$7,128,930 | \$7,422,931 | \$7,729,759 | \$8,049,999 |
| 13 | Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 14 | Capital Projects | \$0 | \$731,162 | \$760,408 | \$942,906 | \$980,622 | \$905,968 |
| 15 | Total - Uses of Funds | \$7,277,203 | \$8,394,793 | \$8,705,772 | \$9,182,272 | \$9,526,816 | \$9,772,402 |
| 16 | | | | | | | |
| 17 | Ending Balance | \$4,275,782 | \$5,076,740 | \$6,108,621 | \$7,239,515 | \$8,436,538 | \$9,815,847 |
| 18 | Minimum Reserve Target | \$6,859,425 | \$7,391,551 | \$7,629,920 | \$7,820,770 | \$7,942,308 | \$8,069,277 |
| 19 | Maximum Reserve Target | \$8,989,012 | \$9,678,856 | \$10,050,421 | \$10,382,459 | \$10,603,770 | \$10,834,502 |
| 20 | | | | | | | |
| 21 | Reserve Target | | | | | | |
| 22 | Operating | \$3,230,384 | \$3,423,598 | \$3,564,465 | \$3,711,465 | \$3,864,879 | \$4,024,999 |
| 23 | Capital | \$683,020 | \$864,213 | \$828,519 | \$731,180 | \$599,532 | \$462,617 |
| 24 | Debt Service | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 | \$816,435 |
| 25 | Rate Stabilization | | | | | | |
| 26 | Minimum | \$2,129,587 | \$2,287,305 | \$2,420,501 | \$2,561,689 | \$2,661,462 | \$2,765,226 |
| 27 | Maximum | \$4,259,174 | \$4,574,610 | \$4,841,003 | \$5,123,378 | \$5,322,924 | \$5,530,451 |

Figure 2-4 shows the water financial plan with proposed adjustments in a graphical format. The dotted and solid lines represent the current and proposed revenues, respectively. The stacked bars represent operating, debt, and capital expenses. The green bar shows the annual reserve funding to build water balances over time.

Figure 2-4: Potable Water Financial Plan, Proposed Adjustments

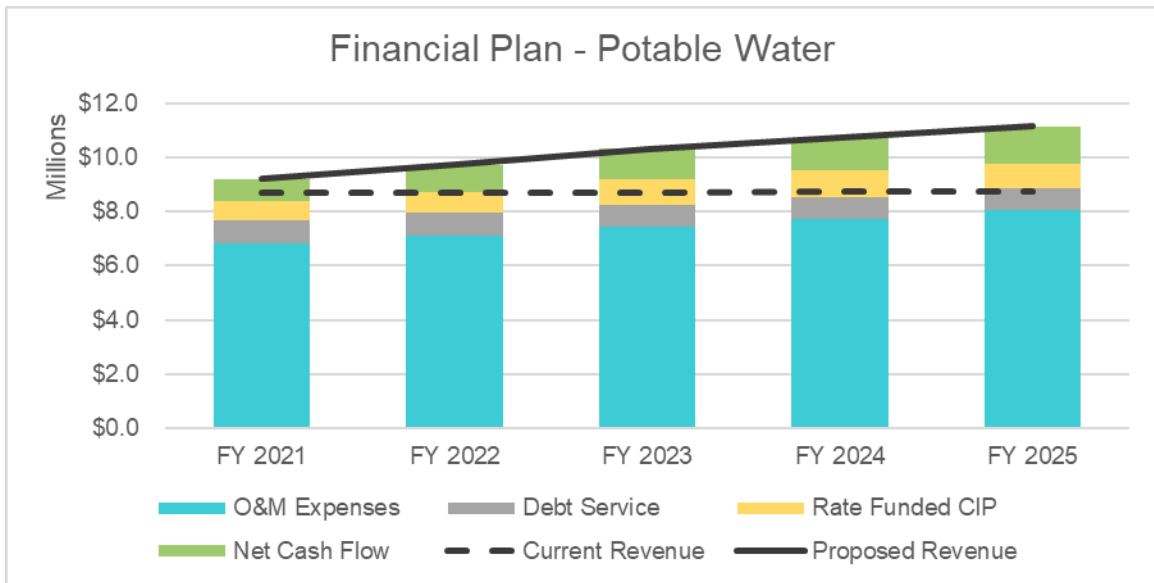


Figure 2-5 shows the water debt coverage under the proposed scenario in a graphical format. Debt coverage is above the required ratio of 1.25 for all years of the study.

Figure 2-5: Potable Water Debt Coverage, Proposed Adjustments

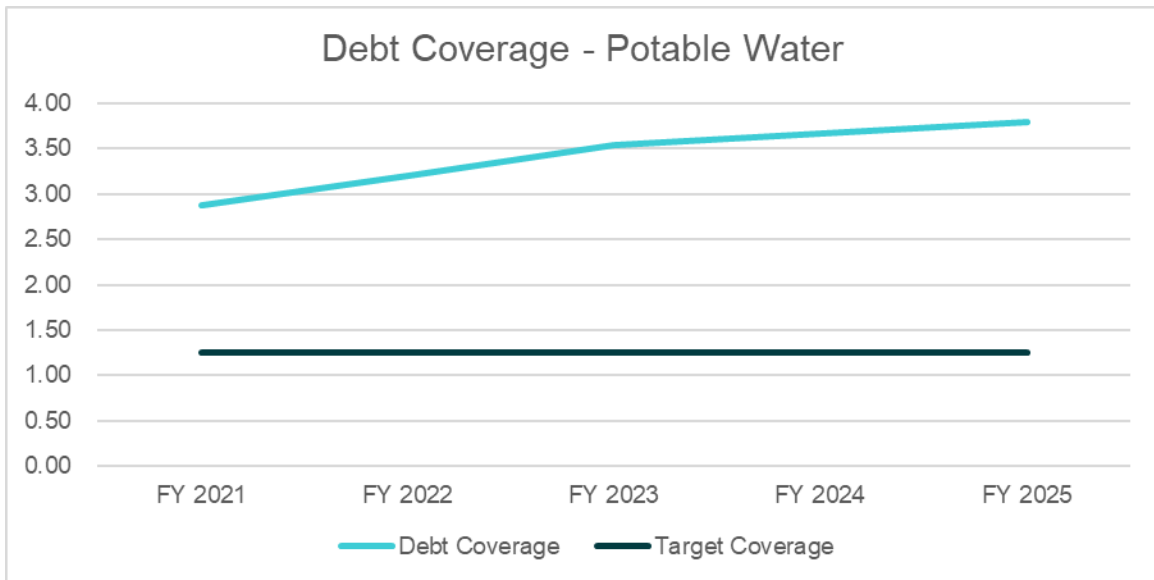
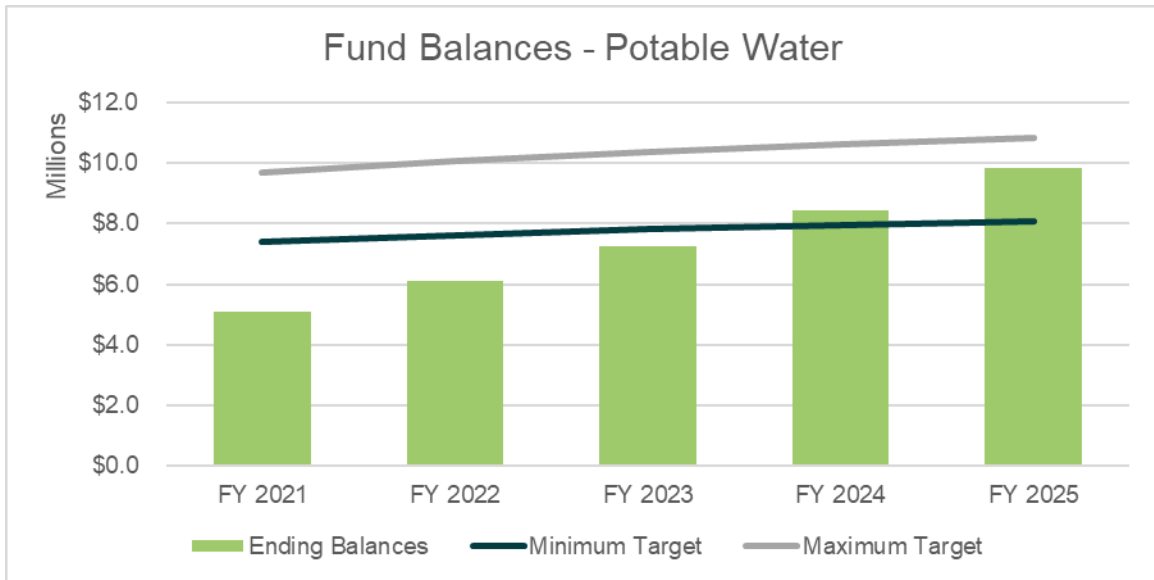


Figure 2-6 shows the water fund balances with the proposed adjustments. The green bars, which represent the water reserves, are above minimum reserve targets beginning in FY 2024.

Figure 2-6: Potable Water Fund Balances, Proposed Adjustments



3. Water Cost of Service Analysis and Rate Design

This section of the report details the cost of service analysis and rate design process for the proposed water rates. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report. All rates shown in this section are rounded up to the nearest cent.

Proposed Adjustments

Table 3-1 shows the proposed revenue adjustments from the water financial plan.

Table 3-1: Proposed Revenue Adjustments

| A | B | C |
|------|------------------------------|---------------|
| Line | Proposed Revenue Adjustments | Potable Water |
| 1 | FY 2021 | 6.0% |
| 2 | FY 2022 | 6.0% |
| 3 | FY 2023 | 6.0% |
| 4 | FY 2024 | 4.0% |
| 5 | FY 2025 | 4.0% |

Process and Approach

The first step in the cost of service analysis process is to determine the revenue requirement, which is based on the results of the financial plan and the proposed revenue adjustments. The framework and methodology utilized to develop the cost of service analysis and apportion the revenue requirement to each customer class and tier is informed by the processes outlined in the M1 Manual.

Cost of service analyses are tailored specifically to meet the unique needs of each utility. However, there are four distinct steps in every analysis to recover costs from customer classes in an accurate, equitable, and defensible manner:

1. Cost functionalization – O&M expenses and capital expenditures are categorized by their function in the system. Functions include supply, transmission, distribution, meters, customer service, billing, etc.
2. Cost causation component allocation – the functionalized costs are then allocated to cost causation components based on their burden on the system. The cost causation components include supply, peaking, delivery, meter, customer, etc. The revenue requirement is allocated accordingly to the cost causation components and results in the total revenue requirement for each cost causation component.
3. Unit cost development – the revenue requirement for each cost causation component is divided by the appropriate units of service such as total usage, peaking units, equivalent meters, number of customers, etc. for all customers and dividing the cost causation component costs by the respective service units to determine the unit cost for each cost causation component.
4. Revenue requirement distribution – the unit costs are utilized to distribute the revenue requirement for each cost causation component to customers and tiers based on their service units.

Cost Causation Components

The cost components used in this study are:

- » Base (Delivery) – represents costs of delivering and supplying water to customers under average daily demand conditions
- » Peaking (Max Day and Max Hour) – represents the costs of delivering water to customer at peak capacity and peak times of use
- » Meters – represents costs of servicing, installing, and replacing meters and capacity in the system
- » Billing – represents the costs of customer service staff, billing, and collections
- » Fire Protection – represents costs of providing fire protection service
- » Conservation – represents the costs of the District’s water conservation program
- » General – represents all other costs that have a general or administrative function

Revenue Requirement

Table 3-2 shows the District’s revenue requirement for the rate-setting year, which for this study is FY 2021. The gross revenue requirements, also known as costs, are equal to the O&M expenses, debt service, and rate-funded capital project costs shown in the financial plan (**Table 2-16**). Revenue offsets, also known as non-rate revenues, are subtracted from the gross revenue requirement. Finally, an adjustment for cash balance, which is equal to the net cash flow for FY 2021, is also included to determine the net revenue requirement.

Table 3-2: Revenue Requirement Derivation

| A | B | C | D | E |
|------|--|--------------------|--------------------|--------------------|
| Line | Revenue Requirement | Operating | Capital | Total |
| 1 | Gross Revenue Requirement | | | |
| 2 | O&M Expenses | \$3,152,073 | \$0 | \$3,152,073 |
| 3 | Purchased Water | \$3,695,123 | \$0 | \$3,695,123 |
| 4 | Debt Service | \$0 | \$816,435 | \$816,435 |
| 5 | Rate Funded Capital Projects | \$0 | \$731,162 | \$731,162 |
| 6 | Total - Gross Revenue Requirement | \$6,847,196 | \$1,547,596 | \$8,394,793 |
| 7 | | | | |
| 8 | Revenue Offsets | | | |
| 9 | Revenue-Other | (\$269,480) | \$0 | (\$269,480) |
| 10 | Interest and Investment Earnings | (\$46,530) | \$0 | (\$46,530) |
| 11 | Total Revenue Offsets | (\$316,010) | \$0 | (\$316,010) |
| 12 | | | | |
| 13 | Adjustments | | | |
| 14 | To Cash Balance | \$800,958 | \$0 | \$800,958 |
| 15 | Total Adjustments | \$800,958 | \$0 | \$800,958 |
| 16 | | | | |
| 17 | Net Revenue Requirement | \$7,332,144 | \$1,547,596 | \$8,879,741 |

Peaking Factors

Table 3-3 shows the system-wide peaking factors used to derive the cost component allocation bases for Base (Delivery), Max Day, and Max Hour costs. Base represents average daily demand during the year, which has been normalized to a factor of 1.00 (Column C, Line 1). District staff provided Max Day and Max Hour peaking factors. The Max Day peaking factor (Column C, Line 2) shows that the system-wide Max Day demand is 2.00 times greater than the average daily demand. The Max Hour peaking factor (Column C, Line 3) signifies that the system-wide Max Hour demand is 3.25 times greater than average demand. The allocation bases (Columns D to F) are calculated using the equations outlined in this section. Columns are represented in these equations as letters and rows are represented as numbers. For example, Column D, Line 2 is shown as D2.

The Max Day allocations are calculated as follows:

- » Base Delivery: $C1 / C2 \times 100\% = D2$
- » Max Day: $(C2 - C1) / C2 \times 100\% = E2$

The Max Hour allocations are calculated as follows:

- » Base Delivery: $C1 / C3 \times 100\% = D3$
- » Max Day: $(C2 - C1) / C3 \times 100\% = E3$
- » Max Hour: $(C3 - C2) / C3 \times 100\% = F3$

The average between Max Day and Max Hour (Line 4) is equal to the average of the allocation bases for Max Day (Columns D to F, Line 2) and Max Hour (Columns D to F, Line 3).

Table 3-3: System-Wide Peaking Factors

| A | B | C | D | E | F | G |
|------|----------------------|--------|------|---------|----------|-------|
| Line | Peaking Factors | Factor | Base | Max Day | Max Hour | Total |
| 1 | Base | 1.00 | 100% | | | 100% |
| 2 | Max Day | 2.00 | 50% | 50% | | 100% |
| 3 | Max Hour | 3.25 | 31% | 31% | 38% | 100% |
| 4 | Average Max Day/Hour | | 40% | 40% | 19% | 100% |

Table 3-4 shows the tiered peaking factors for all customer classes. The tiered peaking factors are based on the maximum monthly usage divided by average monthly usage for all tiers. The maximum month peaking factor is used as a proxy for the tiered Max Day peaking factors. Tiered Max Hour peaking factors are derived by multiplying the Max Day peaking factor by the proportion of the system-wide Max Hour and Max Day peaking factors.

Table 3-4: Tiered Peaking Factors

| A | B | C | D |
|------|--------------------|---------|----------|
| Line | Customer Class | Max Day | Max Hour |
| 1 | All Classes | | |
| 2 | Tier 1 | 1.05 | 1.71 |
| 3 | Tier 2 | 1.47 | 2.39 |
| 4 | Tier 3 | 2.18 | 3.54 |

Table 3-5 shows the calculation of additional capacity required to meet Max Day and Max Hour demands of each tier. Annual use (**Table 2-3**) is converted to average daily use, assuming 365 days in a year. Max Day total capacity is calculated by multiplying the Max Day capacity factor by average daily use. Max Day extra capacity is equal to Max Day total capacity less average daily use. Max Hour total capacity is calculated by multiplying the Max Hour capacity factor by average daily use. Max Hour extra capacity is equal to Max Hour total capacity less Max Day total capacity.

Table 3-5: Water Usage and Capacity

| A | B | C | D | E | F | G | H | I | J | K |
|------|--------------------|---------------------|------------------|-----------------------------|-------------------------|----------------------------------|----------------------------------|--------------------------|-----------------------------------|-----------------------------------|
| Line | Customer Class | Monthly Tiers (hcf) | Annual Use (hcf) | Average Daily Use (hcf/day) | Max Day Capacity Factor | Max Day Total Capacity (hcf/day) | Max Day Extra Capacity (hcf/day) | Max Hour Capacity Factor | Max Hour Total Capacity (hcf/day) | Max Hour Extra Capacity (hcf/day) |
| 1 | All Classes | | | | | | | | | |
| 2 | Tier 1 | 7 | 327,493 | 897 | 1.05 | 942 | 45 | 1.71 | 1,531 | 589 |
| 3 | Tier 2 | 28 | 376,343 | 1,031 | 1.47 | 1,516 | 485 | 2.39 | 2,463 | 947 |
| 4 | Tier 3 | 28+ | 149,418 | 409 | 2.18 | 892 | 483 | 3.54 | 1,450 | 558 |
| 5 | Total | | 853,254 | 2,338 | | 3,350 | 1,013 | | 5,444 | 2,094 |

Equivalent Meters

Equivalent meter units (EMUs) are used to allocate meter-related costs appropriately and equitably. Larger meters have the capacity to impose larger demands on the system and are more expensive to install, maintain, and replace than smaller meters. Equivalent meter units are based on meter hydraulic capacity and are calculated to represent the potential demand on the water system compared to a base meter size. A ratio of hydraulic capacity is calculated by dividing larger meter capacities by the base meter capacity. The base meter in this study is the 3/4 inch meter, which is also the most common meter size.

Table 3-6 shows the equivalent meters for FY 2021. The capacity in gallons per minute (gpm) is based on the hydraulic capacity for each meter size provided in the M1 Manual. The capacity ratios are calculated by dividing the capacity in gpm for each meter size by the capacity in gpm for the 3/4 inch meter. Equivalent meters are calculated by multiplying the capacity ratio by the number of total meters (**Table 2-2**) for each meter size.

Table 3-6: Equivalent Meters

| A | B | C | D | E | F |
|------|--------------|----------------|----------------|--------------|-------------------|
| Line | Meter Size | Capacity (gpm) | Capacity Ratio | Total Meters | Equivalent Meters |
| 1 | 3/4" | 30 | 1.00 | 4,877 | 4,877 |
| 2 | 1" | 50 | 1.67 | 63 | 105 |
| 3 | 1 1/2" | 100 | 3.33 | 22 | 73 |
| 4 | 2" | 160 | 5.33 | 198 | 1,056 |
| 5 | 3" | 350 | 11.67 | 6 | 70 |
| 6 | 4" | 630 | 21.00 | 3 | 63 |
| 7 | 6" | 1,400 | 46.67 | 0 | 0 |
| 8 | Total | | | 5,169 | 6,244 |

Operating and Capital Allocations

Table 3-7 shows the allocation of each functionalized cost to the cost causation components based on the requirements of each function. For example, transmission and treatment facilities are designed to withstand Max Day capacity whereas distribution systems are designed for peak capacity (Max Hour with fire). Storage (reservoirs) are designed for Max Day with fire. The functional allocations reflect the design and maintenance requirements of each system.

The allocations are as follows:

- » Supply – costs for purchased water costs, entirely to Base
- » Reservoir – costs associated with reservoir maintenance, allocated to Max Day with Fire
- » Pumping – costs associated with pumps, allocated to average Max Day/Hour (**Table 3-3**)
- » Transmission – costs associated with transmission system maintenance, allocated to Max Day (**Table 3-3**)
- » Treatment – costs associated with treatment facility maintenance, allocated to Max Day (**Table 3-3**)
- » Distribution – costs associated with distribution system maintenance, allocated to Max Hour with Fire
- » Meters – costs associated with installing and maintaining meters, entirely to Meters
- » Hydrants – costs associated with public fire hydrants, entire to Fire Protection
- » Customer – costs associated with customer service and meter reading, allocated to Meters and Billing
- » Conservation – costs associated with the conservation program, entirely to Conservation
- » General – general and administrative costs, entirely to General
- » Revenue Offset – revenue offsets/non-rate revenues, entirely to Revenue Offsets

Table 3-8 and **Table 3-9** show the O&M expenses (**Table 3-2**) and capital assets (provided by District staff) allocated to each cost component based on the functional cost allocation. The resulting Operating and Capital allocation percentages are used to allocate the operating and capital revenue requirements to each cost component.

Table 3-7: Functional Cost Allocation

| A | B | C | D | E | F | G | H | I | J | K |
|------|-----------------------|------|---------|----------|--------|---------|-----------------|-------------------|---------|-------------------|
| Line | Functional Allocation | Base | Max Day | Max Hour | Meters | Billing | Fire Protection | Conser- vation | General | Revenue Offset |
| 1 | Supply | 100% | | | | | | | | |
| 2 | Reservoir | 43% | 43% | | | | 15% | | | |
| 3 | Pumping | 40% | 40% | 19% | | | | | | |
| 4 | Transmission | 50% | 50% | | | | | | | |
| 5 | Treatment | 50% | 50% | | | | | | | |
| 6 | Distribution | 26% | 26% | 33% | | | 15% | | | |
| 7 | Meters | | | | 100% | | | | | |
| 8 | Hydrants | | | | | | 100% | | | |
| 9 | Customer | | | | 40% | 60% | | | | |
| 10 | Conservation | | | | | | | 100% | | |
| 11 | General | | | | | | | | 100% | |
| 12 | Revenue Offset | | | | | | | | | 100% |

Table 3-8: Operating Expense Allocation

| A | B | C | D | E | F | G | H | I | J | K | L | M |
|------|---------------------------------|--------------|--------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|--------------------|
| Line | O&M Expense Allocation | Function | Base | Max Day | Max Hour | Meters | Billing | Fire Protection | Conser- vation | General | Revenue Offset | Total |
| 1 | Percent Allocation | | | | | | | | | | | |
| 2 | Supply | Supply | 100% | | | | | | | | | 100% |
| 3 | Pumping | Pumping | 40% | 40% | 19% | | | | | | | 100% |
| 4 | Distribution | Distribution | 26% | 26% | 33% | | | 15% | | | | 100% |
| 5 | Meters | Meters | | | | 100% | | | | | | 100% |
| 6 | Billing and Customer Service | Customer | | | | 40% | 60% | | | | | 100% |
| 7 | Conservation | Conservation | | | | | | | 100% | | | 100% |
| 8 | Administration | General | | | | | | | | 100% | | 100% |
| 9 | Dollar Allocation | | | | | | | | | | | |
| 10 | Supply | Supply | \$3,695,123 | | | | | | | | | \$3,695,123 |
| 11 | Pumping | T&D | \$48,764 | \$48,764 | \$23,221 | | | | | | | \$120,750 |
| 12 | Distribution | Distribution | \$431,556 | \$431,556 | \$539,445 | | | \$247,510 | | | | \$1,650,066 |
| 13 | Meters | Meters | | | | \$90,120 | | | | | | \$90,120 |
| 14 | Billing and Customer Service | Customer | | | | \$197,796 | \$296,693 | | | | | \$494,489 |
| 15 | Conservation | Conservation | | | | | | | \$39,506 | | | \$39,506 |
| 16 | Administration | General | | | | | | | | \$757,143 | | \$757,143 |
| 17 | Total - O&M Expenses | | \$4,175,443 | \$480,320 | \$562,666 | \$287,915 | \$296,693 | \$247,510 | \$39,506 | \$757,143 | \$0 | \$6,847,196 |
| 18 | Operating Allocation | | 61% | 7% | 8% | 4% | 4% | 4% | 1% | 11% | 0% | 100% |

Table 3-9: Capital Asset Allocation

| A | B | C | D | E | F | G | H | I | J | K | L | M |
|------|-------------------------------|--------------|--------------------|--------------------|--------------------|--------------------|------------|--------------------|-------------------|------------------|-------------------|---------------------|
| Line | Capital Asset Allocation | Function | Base | Max Day | Max Hour | Meters | Billing | Fire Protection | Conser- vation | General | Revenue Offset | Total |
| 1 | Percent Allocation | | | | | | | | | | | |
| 2 | Treatment | Treatment | 50% | 50% | | | | | | | | 100% |
| 3 | Reservoir | Reservoir | 43% | 43% | | | | 15% | | | | 100% |
| 4 | Distribution | Distribution | 26% | 26% | 33% | | | 15% | | | | 100% |
| 5 | Transmission | Transmission | 50% | 50% | | | | | | | | 100% |
| 6 | Meters | Meters | | | | 100% | | | | | | 100% |
| 7 | General | General | | | | | | | | 100% | | 100% |
| 8 | Wells | Supply | 100% | | | | | | | | | 100% |
| 9 | Fire | Hydrants | | | | | | 100% | | | | 100% |
| 10 | Land | General | | | | | | | | 100% | | 100% |
| 11 | Dollar Allocation | | | | | | | | | | | |
| 12 | Treatment | Treatment | \$0 | \$0 | | | | | | | | \$0 |
| 13 | Reservoir | Reservoir | \$1,096,222 | \$1,096,222 | | | | \$386,902 | | | | \$2,579,345 |
| 14 | Distribution | Distribution | \$4,178,181 | \$4,178,181 | \$5,222,727 | | | \$2,396,310 | | | | \$15,975,399 |
| 15 | Transmission | Transmission | \$24,962 | \$24,962 | | | | | | | | \$49,924 |
| 16 | Meters | Meters | | | | \$2,213,026 | | | | | | \$2,213,026 |
| 17 | General | General | | | | | | | | \$153,423 | | \$153,423 |
| 18 | Wells | Supply | \$0 | | | | | | | | | \$0 |
| 19 | Fire | Hydrants | | | | | | \$532,488 | | | | \$532,488 |
| 20 | Land | General | | | | | | | | \$2,642 | | \$2,642 |
| 21 | Total - Capital Assets | | \$5,299,365 | \$5,299,365 | \$5,222,727 | \$2,213,026 | \$0 | \$3,315,699 | \$0 | \$156,065 | \$0 | \$21,506,246 |
| 22 | Capital Allocation | | 25% | 25% | 24% | 10% | 0% | 15% | 0% | 1% | 0% | 100% |

Adjusted Cost of Service

Table 3-10 shows the cost of service allocation to each cost component. Operating expenses and reserve funding (Lines 1-2) are allocated using the operating cost allocation percentage (**Table 3-8**, Line 18). Capital expenses (Line 3) are allocated using the capital asset allocation percentage (**Table 3-9**, Line 22). General costs are reallocated (Line 6) to each cost component based on the proportion of costs within each component in the initial cost of service allocation (Line 5) to derive the adjusted cost allocation, excluding revenue offsets. Revenue offsets are specific non-rate revenues and are not a function of general costs. Please note that the total cost of service is equal to the total revenue required from rates (**Table 3-2**).

Table 3-11 shows the adjustments to the cost of service allocation for each cost component. The cost components are separated into two different rate components: those associated with fixed charges (monthly service charge) and variable charges (quantity rates). A portion of Max Day and Max Hour costs are reallocated to Meters. Capacity in the water system required to meet peak demand is, to some extent, a function of the meter capacities. Each meter size can demand up to its total capacity (**Table 3-6**, Column C) at any given time, thus requiring the District's water system to be sized accordingly. Therefore, a portion of peaking costs are reallocated to Meters to represent capacity-related costs. Fire protection costs represent the costs of the public fire protection system (public hydrants) and are allocated entirely to Meters. Public fire service is a benefit shared by all customers and connections to the water system.

Table 3-10: Cost of Service Allocation

| A | B | C | D | E | F | G | H | I | J | K | L |
|------|---|--------------------|--------------------|--------------------|------------------|------------------|------------------|-------------------|------------------|--------------------|--------------------|
| Line | Cost of Service Allocation | Base | Max Day | Max Hour | Meters | Billing | Fire Protection | Conser- vation | General | Revenue Offset | Total |
| 1 | Operating Expenses | \$4,175,443 | \$480,320 | \$562,666 | \$287,915 | \$296,693 | \$247,510 | \$39,506 | \$757,143 | \$0 | \$6,847,196 |
| 2 | Operating Reserve Funding | \$488,427 | \$56,186 | \$65,818 | \$33,679 | \$34,706 | \$28,953 | \$4,621 | \$88,568 | \$0 | \$800,958 |
| 3 | Capital Expenses | \$381,344 | \$381,344 | \$375,829 | \$159,250 | \$0 | \$238,599 | \$0 | \$11,230 | \$0 | \$1,547,596 |
| 4 | Revenue Offsets | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | (\$316,010) | (\$316,010) |
| 5 | Total - Cost of Service | \$5,045,214 | \$917,850 | \$1,004,313 | \$480,845 | \$331,399 | \$515,061 | \$44,127 | \$856,941 | (\$316,010) | \$8,879,741 |
| 6 | Allocation of General Costs | \$518,473 | \$94,323 | \$103,209 | \$49,414 | \$34,056 | \$52,930 | \$4,535 | (\$856,941) | \$0 | \$0 |
| 7 | Total - Adjusted Cost of Service | \$5,563,688 | \$1,012,173 | \$1,107,522 | \$530,259 | \$365,456 | \$567,992 | \$48,662 | \$0 | (\$316,010) | \$8,879,741 |

Table 3-11: Cost of Service Adjustments

| A | B | C | D | E | F | G | H | I | J | K | L |
|------|--------------------------------|-------------------------|--------------------|------------------|------------------|--------------------|------------------|--------------------|-------------------|--------------------|--------------------|
| Line | Cost Components | Fixed/ Variable Rate | Base | Max Day | Max Hour | Meters | Billing | Fire Protection | Conser- vation | Revenue Offset | Total |
| 1 | Percent Allocation | | | | | | | | | | |
| 2 | Base | Variable | 100% | | | | | | | | 100% |
| 3 | Max Day | Variable | | 55% | | 45% | | | | | 100% |
| 4 | Max Hour | Variable | | | 60% | 40% | | | | | 100% |
| 5 | Meters | Fixed | | | | 100% | | | | | 100% |
| 6 | Billing | Fixed | | | | | 100% | | | | 100% |
| 7 | Fire Protection | Fixed | | | | 100% | | | | | 100% |
| 8 | Conservation | Variable | | | | | | | 100% | | 100% |
| 9 | Revenue Offsets | Variable | | | | | | | | 100% | 100% |
| 10 | Dollar Allocation | | | | | | | | | | |
| 11 | Base | Variable | \$5,563,688 | | | | | | | | \$5,563,688 |
| 12 | Max Day | Variable | | \$556,695 | | \$455,478 | | | | | \$1,012,173 |
| 13 | Max Hour | Variable | | | \$664,513 | \$443,009 | | | | | \$1,107,522 |
| 14 | Meters | Fixed | | | | \$530,259 | | | | | \$530,259 |
| 15 | Billing | Fixed | | | | | \$365,456 | | | | \$365,456 |
| 16 | Fire Protection | Fixed | | | | \$567,992 | | | | | \$567,992 |
| 17 | Conservation | Variable | | | | | | | \$48,662 | | \$48,662 |
| 18 | Revenue Offsets | Variable | | | | | | | | (\$316,010) | (\$316,010) |
| 19 | Total - Cost Components | | \$5,563,688 | \$556,695 | \$664,513 | \$1,996,738 | \$365,456 | \$0 | \$48,662 | (\$316,010) | \$8,879,741 |

Unit Cost Derivation

Table 3-12 shows the unit cost derivation for each of the cost components. The adjusted cost of service (Table 3-11) is divided by the units of service for each component to derive the unit cost. Base and Conservation costs are divided between annual use for all classes and tiers (**Table 3-5**, Column D). Max Day costs are divided by Max Day extra capacity (**Table 3-5**, Column H). Max Hour costs are divided by Max Hour extra capacity (**Table 3-5**, Column K). Meter costs are divided by EMUs (**Table 3-6**, Column F). Billing costs are divided by annual bills (**Table 3-6**, Column E x 12 months).

Table 3-12: Unit Cost Derivation

| A | B | C | D | E | F | G | H | I | J |
|------|------------------|---------------|-----------------|-----------------|-----------------|---------------|-------------------|-------------------|-------------|
| Line | Cost Components | Base | Max Day | Max Hour | Meters | Billing | Conser- vation | Revenue Offset | Total |
| 1 | Cost of Service | \$5,563,688 | \$556,695 | \$664,513 | \$1,996,738 | \$365,456 | \$48,662 | (\$316,010) | \$8,879,741 |
| 2 | | | | | | | | | |
| 3 | Units of Service | 853,254 | 1,013 | 2,094 | 6,244 | 62,028 | 853,254 | | |
| 4 | | hcf | hcf/day | hcf/day | EMU | bills/yr | hcf | | |
| 5 | | | | | | | | | |
| 6 | Unit Cost | \$6.52 | \$549.81 | \$317.36 | \$319.77 | \$5.89 | \$0.06 | | |
| 7 | | hcf | hcf/day | hcf/day | EMU | bill | hcf | | |

Revenue Requirement Distribution

Table 3-13 shows the revenue requirement distribution. The revenue requirement, or cost of service, is allocated between fixed rates, variable rates, and revenue offsets. Fixed rate revenue requirements are used to calculate the monthly service charges. Variable rate revenue requirements are used to calculate the quantity rate. Revenue offsets are allocated to rate components separately. Please note that the total revenue requirement is equal to the net revenue requirement (**Table 3-2**).

Table 3-13: Revenue Requirement Distribution

| A | B | C | D | E | F | G | H | I | J |
|------|--|--------------------|------------------|------------------|--------------------|------------------|-------------------|--------------------|--------------------|
| Line | Cost of Service Allocation | Base | Max Day | Max Hour | Meters | Billing | Conser- vation | Revenue Offset | Total |
| 1 | Fixed Rates | | | | | | | | |
| 2 | Meters | | | | \$1,996,738 | | | | \$1,996,738 |
| 3 | Billing | | | | | \$365,456 | | | \$365,456 |
| 4 | | | | | | | | | |
| 5 | Variable Rates | | | | | | | | |
| 6 | Tier 1 | \$2,135,435 | \$24,666 | \$186,866 | | | \$18,677 | | \$2,365,645 |
| 7 | Tier 2 | \$2,453,966 | \$266,443 | \$300,636 | | | \$21,463 | | \$3,042,508 |
| 8 | Tier 3 | \$974,287 | \$265,587 | \$177,010 | | | \$8,521 | | \$1,425,405 |
| 9 | | | | | | | | | |
| 10 | Revenue Offsets | | | | | | | (\$316,010) | (\$316,010) |
| 11 | | | | | | | | | |
| 12 | Total – Revenue Requirement | \$5,563,688 | \$556,695 | \$664,513 | \$1,996,738 | \$365,456 | \$48,662 | (\$316,010) | \$8,879,741 |

Revenue Offset Allocation

Revenue offsets are non-rate revenues that are not derived specifically from any one class of customers. The District can use these revenues at its discretion to offset certain rates to reduce customer impacts. **Table 3-14** shows the revenue offset allocation to each rate component. A portion of offsets are allocated between fixed and variable rates. The revenue offsets for the fixed rate component is allocated entirely to the 3/4 inch meter to maintain affordability for residential users. The revenue offsets for the variable rate component are allocated to each tier, with the largest number of offsets going to Tier 1 and the least amount of offsets going to Tier 3 to maintain affordability for essential indoor water use. The revenue offsets (Column D) are divided by the units of service for each rate component to derive the unit cost.

Table 3-14: Revenue Offset Allocation

| A | B | C | D | E | F | G |
|------|--------------------------------|-------------|--------------------|------------------|----------------------|-----------|
| Line | Revenue Offset Allocation | Allocation | Revenue Offsets | Units of Service | Units | Unit Cost |
| 1 | Fixed Rates | 17% | (\$53,722) | 58,524 | bills per year, 3/4" | (\$0.92) |
| 2 | | | | | | |
| 3 | Variable Rates | | | | | |
| 4 | Tier 1 | 36% | (\$112,784) | 327,493 | hcf in Tier 1 | (\$0.35) |
| 5 | Tier 2 | 34% | (\$107,538) | 376,343 | hcf in Tier 2 | (\$0.29) |
| 6 | Tier 3 | 13% | (\$41,966) | 149,418 | hcf in Tier 3 | (\$0.29) |
| 7 | | | | | | |
| 8 | Total - Revenue Offsets | 100% | (\$316,010) | | | |

Monthly Service Charge Calculation

Table 3-15 shows the monthly service charge calculation, which consists of the Meters, Billing, and Revenue Offset components. The Meters cost component is derived based on EMUs. The Meters unit cost (**Table 3-13**) is multiplied by the capacity ratio for each meter size to appropriately reflect the share of cost by meter size. Billing cost does not vary with meter size and therefore the Billing unit cost (**Table 3-13**) is applied uniformly across all meter sizes. The Revenue Offset component (**Table 3-14**) is allocated to the 3/4 inch meter size only. These components are added together to arrive at the total cost of service (COS) charge for FY 2021.

Table 3-15: Monthly Service Charge Calculation

| A | B | C | D | E | F | G | H | I | J |
|------|------------|----------------|------------------|------------|---------|----------------|------------|----------------|-----------------|
| Line | Meter Size | Capacity Ratio | Number of Meters | Meters | Billing | Revenue Offset | COS Charge | Current Charge | Difference (\$) |
| 1 | 3/4" | 1.00 | 4,877 | \$26.65 | \$5.89 | (\$0.92) | \$31.62 | \$29.74 | \$1.88 |
| 2 | 1" | 1.67 | 63 | \$44.41 | \$5.89 | \$0.00 | \$50.31 | \$46.94 | \$3.37 |
| 3 | 1 1/2" | 3.33 | 22 | \$88.82 | \$5.89 | \$0.00 | \$94.72 | \$89.99 | \$4.73 |
| 4 | 2" | 5.33 | 198 | \$142.12 | \$5.89 | \$0.00 | \$148.02 | \$141.64 | \$6.38 |
| 5 | 3" | 11.67 | 6 | \$310.89 | \$5.89 | \$0.00 | \$316.78 | \$305.20 | \$11.58 |
| 6 | 4" | 21.00 | 3 | \$559.59 | \$5.89 | \$0.00 | \$565.49 | \$546.23 | \$19.26 |
| 7 | 6" | 46.67 | 0 | \$1,243.54 | \$5.89 | \$0.00 | \$1,249.44 | \$1,209.09 | \$40.35 |

Quantity Rate Calculation

Table 3-16 shows the unit cost calculation for the Base cost component. Base costs (**Table 3-13**, Column C) are divided by the annual use for each tier to derive the Base unit cost.

Table 3-16: Base Unit Cost Calculation

| A | B | C | D | E |
|------|--------------------|-------------|------------------|-----------|
| Line | Customer Class | Base | Annual Use (hcf) | Unit Cost |
| 1 | All Classes | | | |
| 2 | Tier 1 | \$2,135,435 | 327,493 | \$6.53 |
| 3 | Tier 2 | \$2,453,966 | 376,343 | \$6.53 |
| 4 | Tier 3 | \$974,287 | 149,418 | \$6.53 |

Table 3-17 shows the unit cost calculation for the Max Day cost component. Max Day costs (**Table 3-13**, Column D) are divided by the annual use for each tier to derive the Max Day unit cost.

Table 3-17: Max Day Unit Cost Calculation

| A | B | C | D | E |
|------|--------------------|-----------|------------------|-----------|
| Line | Customer Class | Max Day | Annual Use (hcf) | Unit Cost |
| 1 | All Classes | | | |
| 2 | Tier 1 | \$24,666 | 327,493 | \$0.08 |
| 3 | Tier 2 | \$266,443 | 376,343 | \$0.71 |
| 4 | Tier 3 | \$265,587 | 149,418 | \$1.78 |

Table 3-18 shows the unit cost calculation for the Max Hour cost component. Max Hour costs (**Table 3-13**, Column E) are divided by the annual use for each tier to derive the Max Hour unit cost.

Table 3-18: Max Hour Unit Cost Calculation

| A | B | C | D | E |
|------|--------------------|-----------|------------------|-----------|
| Line | Customer Class | Max Hour | Annual Use (hcf) | Unit Cost |
| 1 | All Classes | | | |
| 2 | Tier 1 | \$186,866 | 327,493 | \$0.58 |
| 3 | Tier 2 | \$300,636 | 376,343 | \$0.80 |
| 4 | Tier 3 | \$177,010 | 149,418 | \$1.19 |

Table 3-19 shows the unit cost calculation for the Conservation cost component. Conservation costs (**Table 3-13**, Column H) are entirely allocated to Tier 3, which represents use at the highest levels, thus creating the need for a conservation program. Conservation costs are divided by Tier 3 use to derive the Conservation unit cost.

Table 3-19: Conservation Unit Cost Calculation

| A | B | C | D | E |
|------|--------------------|-------------------|------------------|-----------|
| Line | Customer Class | Conser- vation | Annual Use (hcf) | Unit Cost |
| 1 | All Classes | | | |
| 2 | Tier 1 | \$0 | 327,493 | \$0.00 |
| 3 | Tier 2 | \$0 | 376,343 | \$0.00 |
| 4 | Tier 3 | \$48,662 | 149,418 | \$0.33 |

Table 3-20 shows the quantity rate calculation. The Base (**Table 3-16**), Max Day (**Table 3-17**), Max Hour (**Table 3-18**), Conservation (**Table 3-19**), and Revenue Offset (**Table 3-14**) components are combined to derive the COS charge for FY 2021.

Table 3-20: Quantity Rate Calculation

| A | B | C | D | E | F | G | H | I | J |
|------|--------------------|--------|---------|----------|-------------------|-------------------|---------------|-------------------|--------------------|
| Line | Customer Class | Base | Max Day | Max Hour | Conser- vation | Revenue Offset | COS Charge | Current Charge | Difference (\$) |
| 1 | All Classes | | | | | | | | |
| 2 | Tier 1 | \$6.53 | \$0.08 | \$0.58 | \$0.00 | (\$0.35) | \$6.84 | \$6.45 | \$0.39 |
| 3 | Tier 2 | \$6.53 | \$0.71 | \$0.80 | \$0.00 | (\$0.29) | \$7.75 | \$7.31 | \$0.44 |
| 4 | Tier 3 | \$6.53 | \$1.78 | \$1.19 | \$0.33 | (\$0.29) | \$9.54 | \$8.94 | \$0.60 |

Rates for Implementation

The District’s Board of Directors has opted to adopt the water rates shown in **Table 3-21** for FY 2021 to reduce impacts to its water customers. The Board has discretion to adopt rates that are equal to or less than the COS charges calculated in this study. The implemented rates will result in slightly lower rate revenues, which will be offset by the water fund balances. With these rates, the District will still be able to fund all operating and capital costs, meet debt service requirements, and maintain an adequate level of reserves based on its robust financial policy.

Table 3-21: Water Rates for Implementation

| A | B | C |
|------|--------------------------------|------------|
| Line | Potable Water Rates | FY 2021 |
| 1 | Monthly Service Charge | |
| 2 | 3/4 inch | \$31.53 |
| 3 | 1 inch | \$49.76 |
| 4 | 1-1/2 inch | \$94.72 |
| 5 | 2 inch | \$148.02 |
| 6 | 3 inch | \$316.78 |
| 7 | 4 inch | \$565.49 |
| 8 | 6 inch | \$1,249.44 |
| 9 | | |
| 10 | Quantity Rates (\$/hcf) | |
| 11 | Tier 1 (7 hcf) | \$6.84 |
| 12 | Tier 2 (28 hcf) | \$7.75 |
| 13 | Tier 3 (28+ hcf) | \$9.48 |

Customer Impacts

Table 3-22 shows the monthly bill impacts (based on rates for implementation in **Table 3-21**) for a water customer with a 3/4 inch meter at various levels of usage. The average water customer with a 3/4 inch meter using 14 hcf of water per month will see an increase of \$7.60 per month.

Table 3-22: Water Customer Bill Impacts, 3/4 inch

| A | B | C | D | E |
|------|--------------------|--------------|---------------|----------------|
| Line | Water Bill Impacts | Current Bill | Proposed Bill | Monthly Impact |
| 1 | 5 hcf | \$61.99 | \$65.73 | \$3.74 |
| 2 | 7 hcf | \$74.89 | \$79.41 | \$4.52 |
| 3 | 14 hcf (average) | \$126.06 | \$133.66 | \$7.60 |
| 4 | 25 hcf | \$206.47 | \$218.91 | \$12.44 |
| 5 | 50 hcf | \$425.08 | \$450.72 | \$25.64 |

Proposed Rates

Table 3-23 shows the proposed water rates for the study period. The rates are proposed to be implemented on July 1, 2020 and in July of every year thereafter. The first year of rates shown is from **Table 3-21**. All subsequent years' rates (from FY 2022 and beyond) are calculated by increasing the previous years' rates by the proposed revenue adjustments in **Table 3-1**.

Table 3-23: Proposed Water Rates

| A | B | C | D | E | F | G |
|------|--------------------------------|------------|------------|------------|------------|------------|
| Line | Potable Water Rates | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | 3/4 inch | \$31.53 | \$33.43 | \$35.44 | \$36.86 | \$38.34 |
| 3 | 1 inch | \$49.76 | \$52.75 | \$55.92 | \$58.16 | \$60.49 |
| 4 | 1-1/2 inch | \$94.72 | \$100.41 | \$106.44 | \$110.70 | \$115.13 |
| 5 | 2 inch | \$148.02 | \$156.91 | \$166.33 | \$172.99 | \$179.91 |
| 6 | 3 inch | \$316.78 | \$335.79 | \$355.94 | \$370.18 | \$384.99 |
| 7 | 4 inch | \$565.49 | \$599.42 | \$635.39 | \$660.81 | \$687.25 |
| 8 | 6 inch | \$1,249.44 | \$1,324.41 | \$1,403.88 | \$1,460.04 | \$1,518.45 |
| 9 | | | | | | |
| 10 | Quantity Rates (\$/hcf) | | | | | |
| 11 | Tier 1 (7 hcf) | \$6.84 | \$7.26 | \$7.70 | \$8.01 | \$8.34 |
| 12 | Tier 2 (28 hcf) | \$7.75 | \$8.22 | \$8.72 | \$9.07 | \$9.44 |
| 13 | Tier 3 (28+ hcf) | \$9.48 | \$10.05 | \$10.66 | \$11.09 | \$11.54 |

4. Recycled Water Financial Plan

This section of the report discusses the financial plan for the recycled water utility, which includes the O&M expenses, CIP, reserve funding, projected revenue under existing rates, and revenue adjustments needed to ensure the utility’s fiscal sustainability and solvency. The budget year, which for this study is FY 2020, is the year from which revenues and expenses are projected for the study period. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report.

Current Rates

The District’s current recycled water rates, shown in **Table 4-1**, include a monthly service charge based on meter size for retail customers and a uniform quantity rate for retail and wholesale customers.

Table 4-1: Current Recycled Water Rates

| A | B | C |
|------|---|------------|
| Line | Recycled Water Rates | FY 2020 |
| 1 | Monthly Service Charge | |
| 2 | 2 inch | \$153.66 |
| 3 | 3 inch | \$288.09 |
| 4 | 4 inch | \$480.16 |
| 5 | 6 inch | \$960.24 |
| 6 | | |
| 7 | Retail Quantity Rates (\$/hcf) | |
| 8 | All Usage | \$5.23 |
| 9 | | |
| 10 | Wholesale Quantity Rates (\$/AF) | |
| 11 | All Usage | \$1,138.40 |

Customer Data

Table 4-2 and **Table 4-3** show the projected recycled water accounts and usage for each customer class during the study period. District staff provided recycled water accounts and usage data for FY 2019. Growth is not expected for all years of the study, which is reflected in the projections for FY 2020 and beyond.

Table 4-2: Projected Recycled Water Accounts

| A | B | C | D | E | F | G | H | I |
|------|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|
| Line | Recycled Water Accounts | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Recycled Water Retail | | | | | | | |
| 2 | 2 inch | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| 3 | 3 inch | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 4 inch | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 6 inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | Total - Recycled Water Retail | 105 | 105 | 105 | 105 | 105 | 105 | 105 |

Table 4-3: Projected Recycled Water Usage (hcf)

| A | B | C | D | E | F | G | H | I |
|------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Line | Recycled Water Usage | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Recycled Water Retail | | | | | | | |
| 2 | All Usage | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 |
| 3 | Total - Recycled Water Retail | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 | 355,027 |
| 4 | | | | | | | | |
| 5 | Recycled Water Wholesale | | | | | | | |
| 6 | All Usage | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 |
| 7 | Total - Recycled Water Wholesale | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 | 184,937 |
| 8 | | | | | | | | |
| 9 | Total - Recycled Water Usage | 539,964 | 539,964 | 539,964 | 539,964 | 539,964 | 539,964 | 539,964 |

Revenues

Table 4-4 shows the calculated recycled water revenues for FY 2021 and beyond at current rates. The current rates in Table 4-1 are multiplied by the meter counts in Table 4-2 and 12 months in a year (for the monthly meter charge) and the water usage in Table 4-3 (for the quantity rates) to determine the calculated recycled water rate revenues. Wholesale recycled water usage is converted from hcf to AF⁴ for the revenue calculation.

Table 4-4: Calculated Recycled Water Rate Revenues at Current Rates

| A | B | C | D | E | F | G |
|------|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Revenues | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | Recycled Water Retail | \$222,189 | \$222,189 | \$222,189 | \$222,189 | \$222,189 |
| 3 | Total - Monthly Service Charge | \$222,189 | \$222,189 | \$222,189 | \$222,189 | \$222,189 |
| 4 | | | | | | |
| 5 | Quantity Rates | | | | | |
| 6 | Recycled Water Retail | \$1,856,789 | \$1,856,789 | \$1,856,789 | \$1,856,789 | \$1,856,789 |
| 7 | Recycled Water Wholesale | \$483,316 | \$483,316 | \$483,316 | \$483,316 | \$483,316 |
| 8 | Total - Quantity Rates | \$2,340,105 | \$2,340,105 | \$2,340,105 | \$2,340,105 | \$2,340,105 |
| 9 | | | | | | |
| 10 | Total - Recycled Water Revenues | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |

To project non-rate revenues, such as miscellaneous revenues and interest earnings, Raftelis uses the revenue escalation factors in Table 4-5. Miscellaneous revenues are not inflated for future years, and the reserve interest rate is used to calculate the interest earnings based on the water or recycled water fund balances.

Table 4-5: Revenue Escalation Factors

| A | B | C | D | E | F | G |
|------|----------------------------|---------|---------|---------|---------|---------|
| Line | Revenue Escalation Factors | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Miscellaneous Revenue | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 2 | Reserve Interest Rate | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |

⁴ For the purposes of this study, one AF is approximately 435.6 hcf.

Table 4-6 shows the projected water revenues for the study period. Retail sales (Line 1), wholesale sales (Line 2) and service charge (Line 3) revenues for FY 2021 and beyond are based on the revenue calculation (**Table 4-4**, Lines 3, 6, and 7). Interest earnings (Line 4) is calculated based on the reserve interest rate (Table 4-5, Line 2) and the recycled water fund balance.

Table 4-6: Projected Recycled Water Revenues at Current Rates

| A | B | C | D | E | F | G | H |
|------|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Revenues | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Sales - Retail | \$1,796,435 | \$1,856,789 | \$1,856,789 | \$1,856,789 | \$1,856,789 | \$1,856,789 |
| 2 | Sales - Wholesale | \$483,316 | \$483,316 | \$483,316 | \$483,316 | \$483,316 | \$483,316 |
| 3 | Service Charges | \$209,281 | \$222,189 | \$222,189 | \$222,189 | \$222,189 | \$222,189 |
| 4 | Interest Earnings | \$0 | \$37,324 | \$39,879 | \$42,385 | \$44,828 | \$47,188 |
| 5 | Total - Recycled Water Revenues | \$2,489,032 | \$2,599,617 | \$2,602,172 | \$2,604,679 | \$2,607,121 | \$2,609,482 |

O&M Expenses

Table 4-7 shows the expense escalation factors used to inflate O&M expenses for future years. These factors were based on input from District staff.

Table 4-7: Expense Escalation Factors

| A | B | C | D | E | F | G |
|------|----------------------------|---------|---------|---------|---------|---------|
| Line | Expense Escalation Factors | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | General | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 2 | Salaries | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 3 | Benefits | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 4 | Water Supply | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 5 | Utilities | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 6 | Capital | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% |

Table 4-8 shows the recycled water production based on demand. Recycled water demand (Line 8) is increased by the water loss percentage (Line 1) to determine the amount of recycled water produced (Line 9). Recycled water demand is equal to that projected in FY 2021 and beyond (**Table 4-3**), converted from hcf to AF. District staff provided the percentage of recycled water purchased for Lake Sherwood and Oak Park (Lines 3-5). The amount of recycled water produced is multiplied by that percentage to determine the amount of recycled water purchased (Lines 11-14).

Table 4-8: Recycled Water Production

| A | B | C | D | E | F | G |
|------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Line | Recycled Water Production | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Water Loss Percentage | 5% | 5% | 5% | 5% | 5% |
| 2 | | | | | | |
| 3 | Supply Source Proportion | | | | | |
| 4 | Lake Sherwood | 26% | 26% | 26% | 26% | 26% |
| 5 | Oak Park | 74% | 74% | 74% | 74% | 74% |
| 6 | | | | | | |
| 7 | Water Production (AF) | | | | | |
| 8 | Demanded | 1,240 | 1,240 | 1,240 | 1,240 | 1,240 |
| 9 | Produced | 1,305 | 1,305 | 1,305 | 1,305 | 1,305 |
| 10 | | | | | | |
| 11 | Water Purchased (AF) | | | | | |
| 12 | Lake Sherwood | 340 | 340 | 340 | 340 | 340 |
| 13 | Oak Park | 965 | 965 | 965 | 965 | 965 |
| 14 | Total - Water Purchased (AF) | 1,305 | 1,305 | 1,305 | 1,305 | 1,305 |

Table 4-9 shows the recycled water supply cost calculation for FY 2021 and beyond. The variable costs (Lines 1-3) were provided by District staff and inflated by the water supply escalation factor in future years (Table 4-7, Line 4). The amount of water purchased (**Table 4-8**, Lines 12-13) is multiplied by the variable costs to determine the recycled water supply cost (Lines 5-8).

Table 4-9: Recycled Water Supply Cost

| A | B | C | D | E | F | G |
|------|--|------------------|------------------|------------------|------------------|------------------|
| Line | Recycled Water Supply Cost | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Water Supply Variable Costs (\$/AF) | | | | | |
| 2 | Lake Sherwood | \$523.47 | \$549.64 | \$577.12 | \$605.98 | \$636.28 |
| 3 | Oak Park | \$523.47 | \$549.64 | \$577.12 | \$605.98 | \$636.28 |
| 4 | | | | | | |
| 5 | Recycled Water Supply Costs | | | | | |
| 6 | Lake Sherwood | \$177,913 | \$186,809 | \$196,149 | \$205,957 | \$216,255 |
| 7 | Oak Park | \$505,121 | \$530,377 | \$556,896 | \$584,741 | \$613,978 |
| 8 | Total - Recycled Water Supply Costs | \$683,034 | \$717,186 | \$753,045 | \$790,697 | \$830,232 |

Table 4-10 shows the projected recycled water O&M expenses. District staff provided the budget for FY 2020; the budgeted values are inflated for future years using the expense escalation factors (Table 4-7). Note that the water purchase cost (Line 23) is equal to the calculated water supply cost (**Table 4-9**, Line 8) for FY 2021 and beyond.

Table 4-10: Projected Recycled Water Expenses

| A | B | C | D | E | F | G | H |
|------|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Expenses | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Administration | | | | | | |
| 2 | Overhead cost allocation | \$210,445 | \$216,758 | \$223,261 | \$229,959 | \$236,858 | \$243,963 |
| 3 | Membership and dues | \$1,000 | \$1,030 | \$1,061 | \$1,093 | \$1,126 | \$1,159 |
| 4 | Insurance | \$24,287 | \$25,016 | \$25,767 | \$26,540 | \$27,336 | \$28,156 |
| 5 | Permits | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | Contract services - VRSD | \$1,889 | \$1,946 | \$2,005 | \$2,065 | \$2,127 | \$2,190 |
| 7 | Subtotal - Administration | \$237,622 | \$244,751 | \$252,093 | \$259,656 | \$267,446 | \$275,469 |
| 8 | | | | | | | |
| 9 | Billing and CS | | | | | | |
| 10 | Professional Services | \$15,210 | \$15,666 | \$16,136 | \$16,620 | \$17,119 | \$17,633 |
| 11 | Contract services - VRSD | \$86,203 | \$88,790 | \$91,453 | \$94,197 | \$97,023 | \$99,933 |
| 12 | Subtotal - Billing and CS | \$101,413 | \$104,456 | \$107,589 | \$110,817 | \$114,142 | \$117,566 |
| 13 | | | | | | | |
| 14 | Distribution | | | | | | |
| 15 | Contract services - VRSD | \$157,717 | \$162,449 | \$167,322 | \$172,342 | \$177,512 | \$182,837 |
| 16 | Subtotal - Distribution | \$157,717 | \$162,449 | \$167,322 | \$172,342 | \$177,512 | \$182,837 |
| 17 | | | | | | | |
| 18 | Pumping | | | | | | |
| 19 | Utilities | \$55,000 | \$57,750 | \$60,638 | \$63,669 | \$66,853 | \$70,195 |
| 20 | Subtotal - Pumping | \$55,000 | \$57,750 | \$60,638 | \$63,669 | \$66,853 | \$70,195 |
| 21 | | | | | | | |
| 22 | Supply | | | | | | |
| 23 | Water Purchase | \$714,625 | \$683,034 | \$717,186 | \$753,045 | \$790,697 | \$830,232 |
| 24 | Subtotal - Supply | \$714,625 | \$683,034 | \$717,186 | \$753,045 | \$790,697 | \$830,232 |
| 25 | | | | | | | |
| 26 | Total - Recycled Water Expenses | \$1,266,377 | \$1,252,439 | \$1,304,828 | \$1,359,529 | \$1,416,649 | \$1,476,300 |

Debt Service

Table 4-11 shows the existing recycled water debt service, provided by District staff. The District does not expect to incur additional debt for the recycled water enterprise during this study period.

Table 4-11: Existing Recycled Water Debt Service

| A | B | C | D | E | F | G | H |
|------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| Line | Recycled Water Existing Debt | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | 2017 Lease Purchase Agreement - Tax Exempt | \$805,346 | \$805,346 | \$805,346 | \$805,346 | \$805,346 | \$805,346 |
| 2 | 2017 Lease Purchase Agreement - Taxable | \$172,052 | \$172,052 | \$172,052 | \$172,052 | \$172,052 | \$172,052 |
| 3 | Total - Recycled Water Existing Debt | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |

Capital Projects

Table 4-12 shows the recycled water CIP for all years of the study. District staff provided capital costs for the study period; these costs are inflated for future years using the capital expense escalation factor (Table 4-7, Line 6). Since the District does not plan to incur additional debt during this study period, all capital costs will be funded by rates.

Table 4-12: Recycled Water Capital Projects

| A | B | C | D | E | F | G | H |
|------|--|------------|------------------|------------------|------------------|------------------|------------------|
| Line | Recycled Water Capital Projects | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Regency Hills Pump Station | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | Pipeline Rehabilitation | \$0 | \$108,160 | \$112,486 | \$116,986 | \$121,665 | \$126,532 |
| 3 | Reservoir Rehabilitation | \$0 | \$54,080 | \$56,243 | \$58,493 | \$60,833 | \$63,266 |
| 4 | Total - Recycled Water Capital Projects | \$0 | \$162,240 | \$168,730 | \$175,479 | \$182,498 | \$189,798 |

Reserve Policy

The District's existing reserve policy is robust and ensures financial resilience in the face of unexpected events, such as natural disasters, asset failures, or reduced revenues. The reserve policy for recycled water includes the following components:

- » Operating reserve – 50 percent of annual O&M expenses
- » Capital reserve – 5-year average rate-funded CIP costs
- » Debt service – 1 year of annual debt service
- » Rate stabilization reserve – 3 (minimum) to 6 (maximum) months of operating revenues

Reserves allow the District to have better ratings and lower interest rates if it issues debt.

Status Quo Financial Plan

Table 4-13 shows the recycled water financial plan under the status quo or “do nothing” scenario. This scenario shows no additional revenue adjustments. Net cash flow (Line 33) is equal to revenue (Line 17) less O&M expenses (Line 25) and debt and capital costs (Line 31). Net revenue (Line 34) is equal to revenues less O&M expenses. Net revenue, which is positive for all years of the study, shows that the District’s existing recycled water rate revenues are sufficient to fund all O&M expenses. Net cash flow is also positive for the five years of the study. However, the debt coverage ratio (Line 36) falls below the required level in FY 2024.

Rate and miscellaneous revenues (Lines 12-17) are from **Table 4-6**. Note that the interest earnings in the status quo scenario are lower, due to lower fund balances. O&M expenses (Lines 19-25) are from **Table 4-10**. Debt service (Lines 28-29) are from **Table 4-11**. Capital project costs (Line 30) are from **Table 4-12**.

Table 4-13: Recycled Water Financial Plan, Status Quo

| A | B | C | D | E | F | G | H |
|------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Financial Plan | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 2 | | | | | | | |
| 3 | Revenue Adjustments | | | | | | |
| 4 | FY 2020 - 0.0% | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 5 | FY 2021 - 0.0% | | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | FY 2022 - 0.0% | | | \$0 | \$0 | \$0 | \$0 |
| 7 | FY 2023 - 0.0% | | | | \$0 | \$0 | \$0 |
| 8 | FY 2024 - 0.0% | | | | | \$0 | \$0 |
| 9 | FY 2025 - 0.0% | | | | | | \$0 |
| 10 | Total - Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 11 | | | | | | | |
| 12 | Revenues | | | | | | |
| 13 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 14 | Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 15 | Other Revenues | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 16 | Interest Earnings | \$0 | \$37,068 | \$38,846 | \$40,041 | \$40,619 | \$40,548 |
| 17 | Total - Revenues | \$2,489,032 | \$2,599,361 | \$2,601,140 | \$2,602,334 | \$2,602,913 | \$2,602,842 |
| 18 | | | | | | | |
| 19 | O&M Expenses | | | | | | |
| 20 | Administration | \$237,622 | \$244,751 | \$252,093 | \$259,656 | \$267,446 | \$275,469 |
| 21 | Billing and Customer Service | \$101,413 | \$104,456 | \$107,589 | \$110,817 | \$114,142 | \$117,566 |
| 22 | Distribution | \$157,717 | \$162,449 | \$167,322 | \$172,342 | \$177,512 | \$182,837 |
| 23 | Pumping | \$55,000 | \$57,750 | \$60,638 | \$63,669 | \$66,853 | \$70,195 |
| 24 | Supply | \$714,625 | \$683,034 | \$717,186 | \$753,045 | \$790,697 | \$830,232 |
| 25 | Total - O&M Expenses | \$1,266,377 | \$1,252,439 | \$1,304,828 | \$1,359,529 | \$1,416,649 | \$1,476,300 |
| 26 | | | | | | | |
| 27 | Debt and Capital | | | | | | |
| 28 | Existing Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 29 | Proposed Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 30 | Rate Funded Capital Projects | \$0 | \$162,240 | \$168,730 | \$175,479 | \$182,498 | \$189,798 |
| 31 | Total - Debt and Capital | \$977,398 | \$1,139,638 | \$1,146,127 | \$1,152,876 | \$1,159,896 | \$1,167,196 |
| 32 | | | | | | | |
| 33 | Net Cash Flow | \$245,257 | \$207,285 | \$150,185 | \$89,929 | \$26,368 | (\$40,653) |
| 34 | Net Revenue | \$1,222,654 | \$1,346,922 | \$1,296,312 | \$1,242,805 | \$1,186,264 | \$1,126,542 |
| 35 | | | | | | | |
| 36 | Calculated Debt Coverage | 1.25 | 1.38 | 1.33 | 1.27 | 1.21 | 1.15 |
| 37 | Required Debt Coverage | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |

Table 4-14 shows the projected recycled water fund balances under the status quo scenario. The recycled water ending balance (Line 17) is above reserve target levels (Line 18-19) for all years of the study. The minimum reserve target is the sum of Lines 22, 23, 24, 26 and the maximum reserve target is the sum of Lines 22, 23, 24, 27.

Table 4-14: Recycled Water Fund Balances, Status Quo

| A | B | C | D | E | F | G | H |
|------|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Fund Balances | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Beginning Balance | \$3,376,391 | \$3,621,648 | \$3,828,932 | \$3,979,117 | \$4,069,046 | \$4,095,414 |
| 2 | | | | | | | |
| 3 | Sources of Funds | | | | | | |
| 4 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 5 | Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | Other Revenues | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 7 | Debt Proceeds | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 8 | Interest Earnings | \$0 | \$37,068 | \$38,846 | \$40,041 | \$40,619 | \$40,548 |
| 9 | Total - Sources of Funds | \$2,489,032 | \$2,599,361 | \$2,601,140 | \$2,602,334 | \$2,602,913 | \$2,602,842 |
| 10 | | | | | | | |
| 11 | Uses of Funds | | | | | | |
| 12 | O&M Expenses | \$1,266,377 | \$1,252,439 | \$1,304,828 | \$1,359,529 | \$1,416,649 | \$1,476,300 |
| 13 | Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 14 | Capital Projects | \$0 | \$162,240 | \$168,730 | \$175,479 | \$182,498 | \$189,798 |
| 15 | Total - Uses of Funds | \$2,243,775 | \$2,392,077 | \$2,450,955 | \$2,512,405 | \$2,576,545 | \$2,643,495 |
| 16 | | | | | | | |
| 17 | Ending Balance | \$3,621,648 | \$3,828,932 | \$3,979,117 | \$4,069,046 | \$4,095,414 | \$4,054,760 |
| 18 | Minimum Reserve Target | \$2,370,634 | \$2,419,939 | \$2,453,164 | \$2,487,826 | \$2,523,989 | \$2,561,722 |
| 19 | Maximum Reserve Target | \$2,992,891 | \$3,060,513 | \$3,093,737 | \$3,128,399 | \$3,164,563 | \$3,202,296 |
| 20 | | | | | | | |
| 21 | Reserve Target | | | | | | |
| 22 | Operating | \$633,189 | \$626,219 | \$652,414 | \$679,765 | \$708,325 | \$738,150 |
| 23 | Capital | \$137,789 | \$175,749 | \$182,779 | \$190,090 | \$197,694 | \$205,601 |
| 24 | Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 25 | Rate Stabilization | | | | | | |
| 26 | Minimum | \$622,258 | \$640,573 | \$640,573 | \$640,573 | \$640,573 | \$640,573 |
| 27 | Maximum | \$1,244,516 | \$1,281,147 | \$1,281,147 | \$1,281,147 | \$1,281,147 | \$1,281,147 |

Figure 4-1 shows the recycled water financial plan under the status quo scenario in a graphical format. Current revenues are represented as the dotted line; O&M expenses, debt service, and capital expenses are represented as the turquoise, grey, and yellow stacked bars, respectively. The District will add to and draw down its reserves during the study period. The change in reserves is shown as the green bars.

Figure 4-1: Recycled Water Financial Plan, Status Quo

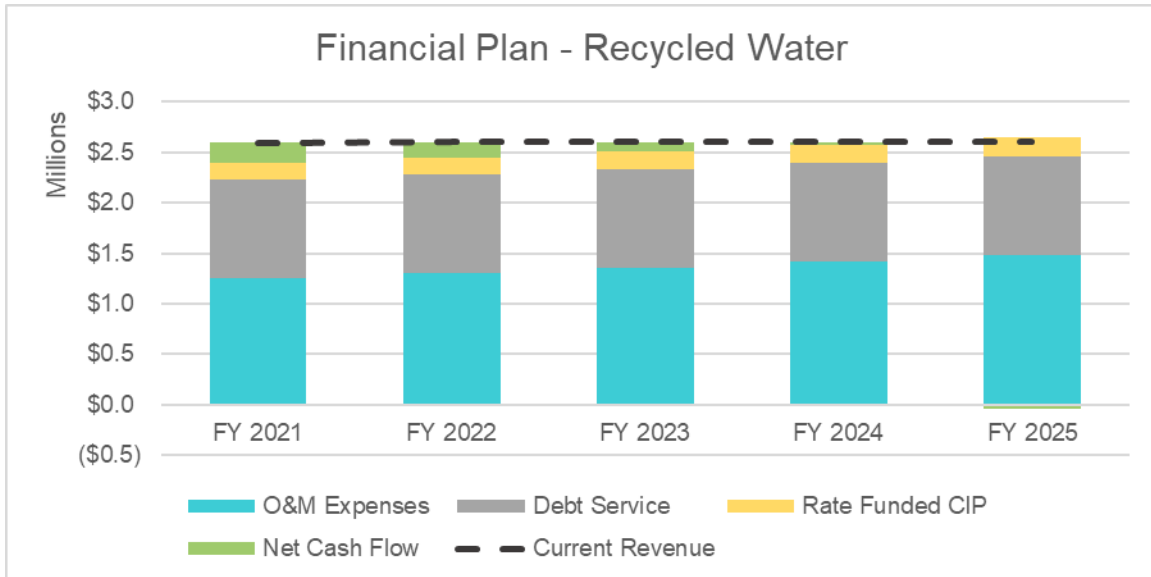


Figure 4-2 shows the recycled water debt coverage under the status quo scenario in a graphical format. The debt coverage ratio falls below the required 1.25 ratio in FY 2024 without additional revenue adjustments.

Figure 4-2: Recycled Water Debt Coverage, Status Quo

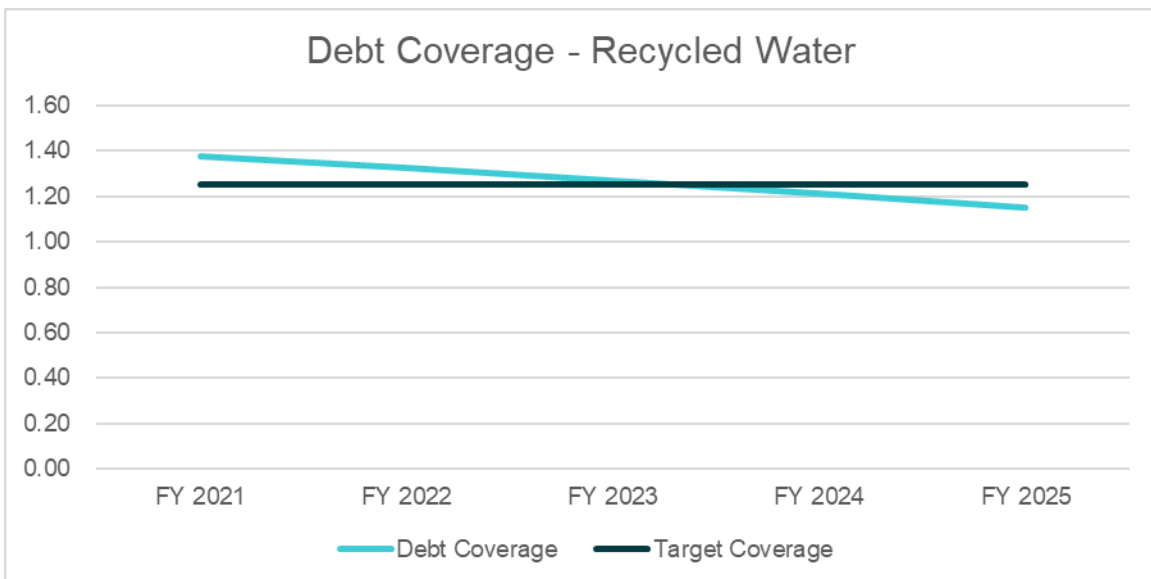
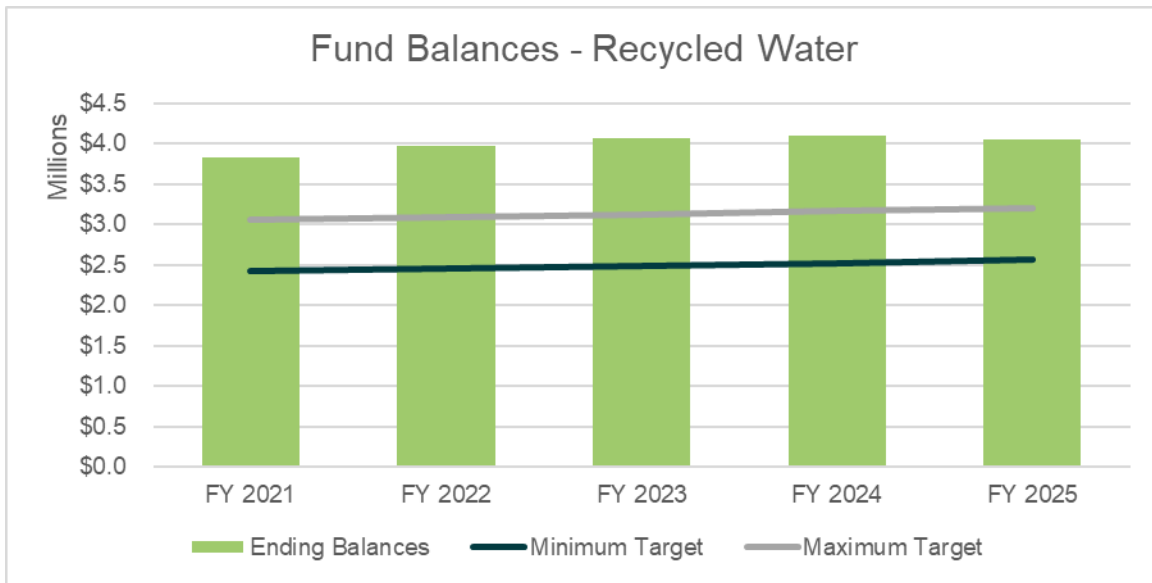


Figure 4-3 shows the recycled water fund balances under the status quo scenario in a graphical format. The fund balances are represented as the green bars; the minimum and maximum reserve targets are represented as the navy and grey lines, respectively. The District’s recycled water funds exceed all reserve targets for all years of the study.

Figure 4-3: Recycled Water Fund Balances, Status Quo



Proposed Financial Plan

Table 4-15 shows the proposed adjustments to the financial plan.

Table 4-15: Proposed Revenue Adjustments

| A | B | C |
|------|------------------------------|----------------|
| Line | Proposed Revenue Adjustments | Recycled Water |
| 1 | FY 2021 | 2.0% |
| 2 | FY 2022 | 2.0% |
| 3 | FY 2023 | 2.0% |
| 4 | FY 2024 | 2.0% |
| 5 | FY 2025 | 2.0% |

Table 4-16 shows the recycled water financial plan with the proposed adjustments. Net cash flow (Line 33) and net revenue (Line 34) are positive for all years of the study, which means that the District’s recycled water revenues are sufficient to fund all operating and capital costs. Calculated debt coverage (Line 36) is also above the debt coverage requirement for all years of the study.

Table 4-16: Recycled Water Financial Plan, Proposed Adjustments

| A | B | C | D | E | F | G | H |
|------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Financial Plan | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 2 | | | | | | | |
| 3 | Revenue Adjustments | | | | | | |
| 4 | FY 2020 - 0.0% | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 5 | FY 2021 - 2.0% | | \$51,246 | \$51,246 | \$51,246 | \$51,246 | \$51,246 |
| 6 | FY 2022 - 2.0% | | | \$52,271 | \$52,271 | \$52,271 | \$52,271 |
| 7 | FY 2023 - 2.0% | | | | \$53,316 | \$53,316 | \$53,316 |
| 8 | FY 2024 - 2.0% | | | | | \$54,383 | \$54,383 |
| 9 | FY 2025 - 2.0% | | | | | | \$55,470 |
| 10 | Total - Revenue Adjustments | \$0 | \$51,246 | \$103,517 | \$156,833 | \$211,215 | \$266,686 |
| 11 | | | | | | | |
| 12 | Revenues | | | | | | |
| 13 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 14 | Revenue Adjustments | \$0 | \$51,246 | \$103,517 | \$156,833 | \$211,215 | \$266,686 |
| 15 | Other Revenues | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 16 | Interest Earnings | \$0 | \$37,324 | \$39,879 | \$42,385 | \$44,828 | \$47,188 |
| 17 | Total - Revenues | \$2,489,032 | \$2,650,863 | \$2,705,689 | \$2,761,512 | \$2,818,337 | \$2,876,167 |
| 18 | | | | | | | |
| 19 | O&M Expenses | | | | | | |
| 20 | Administration | \$237,622 | \$244,751 | \$252,093 | \$259,656 | \$267,446 | \$275,469 |
| 21 | Billing and Customer Service | \$101,413 | \$104,456 | \$107,589 | \$110,817 | \$114,142 | \$117,566 |
| 22 | Distribution | \$157,717 | \$162,449 | \$167,322 | \$172,342 | \$177,512 | \$182,837 |
| 23 | Pumping | \$55,000 | \$57,750 | \$60,638 | \$63,669 | \$66,853 | \$70,195 |
| 24 | Supply | \$714,625 | \$683,034 | \$717,186 | \$753,045 | \$790,697 | \$830,232 |
| 25 | Total - O&M Expenses | \$1,266,377 | \$1,252,439 | \$1,304,828 | \$1,359,529 | \$1,416,649 | \$1,476,300 |
| 26 | | | | | | | |
| 27 | Debt and Capital | | | | | | |
| 28 | Existing Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 29 | Proposed Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 30 | Rate Funded Capital Projects | \$0 | \$162,240 | \$168,730 | \$175,479 | \$182,498 | \$189,798 |
| 31 | Total - Debt and Capital | \$977,398 | \$1,139,638 | \$1,146,127 | \$1,152,876 | \$1,159,896 | \$1,167,196 |
| 32 | | | | | | | |
| 33 | Net Cash Flow | \$245,257 | \$258,787 | \$254,734 | \$249,106 | \$241,792 | \$232,672 |
| 34 | Net Revenue | \$1,222,654 | \$1,398,424 | \$1,400,861 | \$1,401,983 | \$1,401,687 | \$1,399,868 |
| 35 | | | | | | | |
| 36 | Calculated Debt Coverage | 1.25 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 |
| 37 | Required Debt Coverage | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |

Table 4-17 shows the projected recycled water fund balances under the proposed scenario. The recycled water ending balance (Line 17) is above reserve target levels (Line 18-19) for all years of the study. The minimum reserve target is the sum of Lines 22, 23, 24, 26 and the maximum reserve target is the sum of Lines 22, 23, 24, 27.

Table 4-17: Recycled Water Fund Balances, Proposed Adjustments

| A | B | C | D | E | F | G | H |
|------|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Line | Recycled Water Fund Balances | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Beginning Balance | \$3,376,391 | \$3,621,648 | \$3,880,434 | \$4,135,168 | \$4,384,275 | \$4,626,066 |
| 2 | | | | | | | |
| 3 | Sources of Funds | | | | | | |
| 4 | Rate Revenues | \$2,489,032 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 | \$2,562,294 |
| 5 | Revenue Adjustments | \$0 | \$51,246 | \$103,517 | \$156,833 | \$211,215 | \$266,686 |
| 6 | Other Revenues | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 7 | Debt Proceeds | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 8 | Interest Earnings | \$0 | \$37,324 | \$39,879 | \$42,385 | \$44,828 | \$47,188 |
| 9 | Total - Sources of Funds | \$2,489,032 | \$2,650,863 | \$2,705,689 | \$2,761,512 | \$2,818,337 | \$2,876,167 |
| 10 | | | | | | | |
| 11 | Uses of Funds | | | | | | |
| 12 | O&M Expenses | \$1,266,377 | \$1,252,439 | \$1,304,828 | \$1,359,529 | \$1,416,649 | \$1,476,300 |
| 13 | Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 14 | Capital Projects | \$0 | \$162,240 | \$168,730 | \$175,479 | \$182,498 | \$189,798 |
| 15 | Total - Uses of Funds | \$2,243,775 | \$2,392,077 | \$2,450,955 | \$2,512,405 | \$2,576,545 | \$2,643,495 |
| 16 | | | | | | | |
| 17 | Ending Balance | \$3,621,648 | \$3,880,434 | \$4,135,168 | \$4,384,275 | \$4,626,066 | \$4,858,739 |
| 18 | Minimum Reserve Target | \$2,370,634 | \$2,432,751 | \$2,479,043 | \$2,527,034 | \$2,576,793 | \$2,628,394 |
| 19 | Maximum Reserve Target | \$2,992,891 | \$3,086,136 | \$3,145,495 | \$3,206,815 | \$3,270,170 | \$3,335,638 |
| 20 | | | | | | | |
| 21 | Reserve Target | | | | | | |
| 22 | Operating | \$633,189 | \$626,219 | \$652,414 | \$679,765 | \$708,325 | \$738,150 |
| 23 | Capital | \$137,789 | \$175,749 | \$182,779 | \$190,090 | \$197,694 | \$205,601 |
| 24 | Debt Service | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 | \$977,398 |
| 25 | Rate Stabilization | | | | | | |
| 26 | Minimum | \$622,258 | \$653,385 | \$666,453 | \$679,782 | \$693,377 | \$707,245 |
| 27 | Maximum | \$1,244,516 | \$1,306,770 | \$1,332,905 | \$1,359,563 | \$1,386,755 | \$1,414,490 |

Figure 4-4 shows the recycled water financial plan with proposed adjustments in a graphical format. The dotted and solid lines represent the current and proposed revenues, respectively. The stacked bars represent operating, debt, and capital expenses. The green bar shows the additional reserve funding for the study period.

Figure 4-4: Recycled Water Financial Plan, Proposed Adjustments

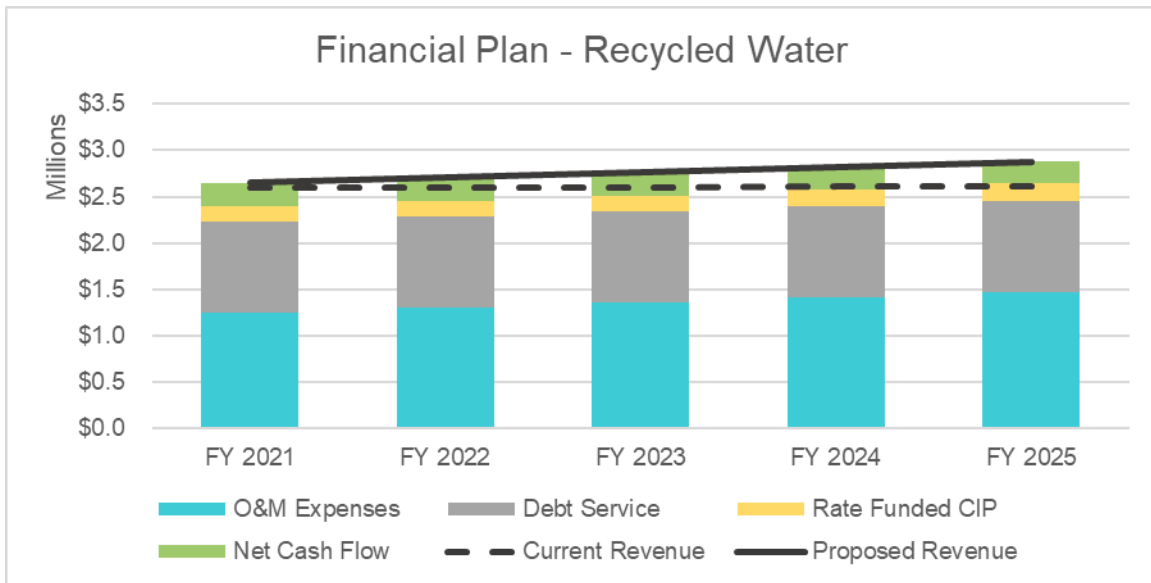


Figure 4-5 shows the recycled water debt coverage under the proposed scenario in a graphical format. Debt coverage is above the required ratio of 1.25 for all years of the study.

Figure 4-5: Recycled Water Debt Coverage, Proposed Adjustments

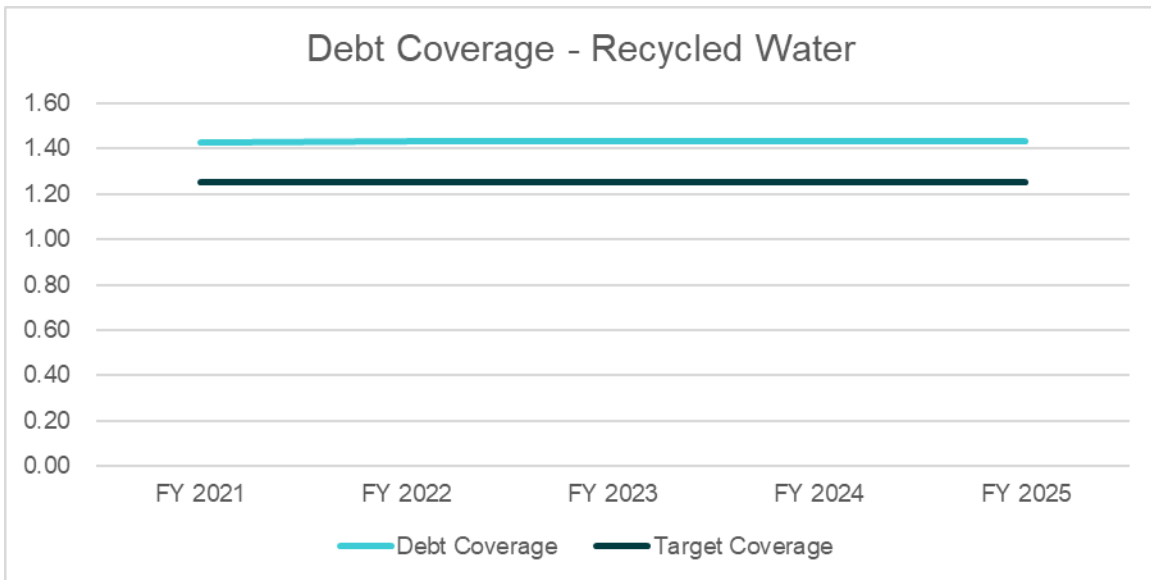
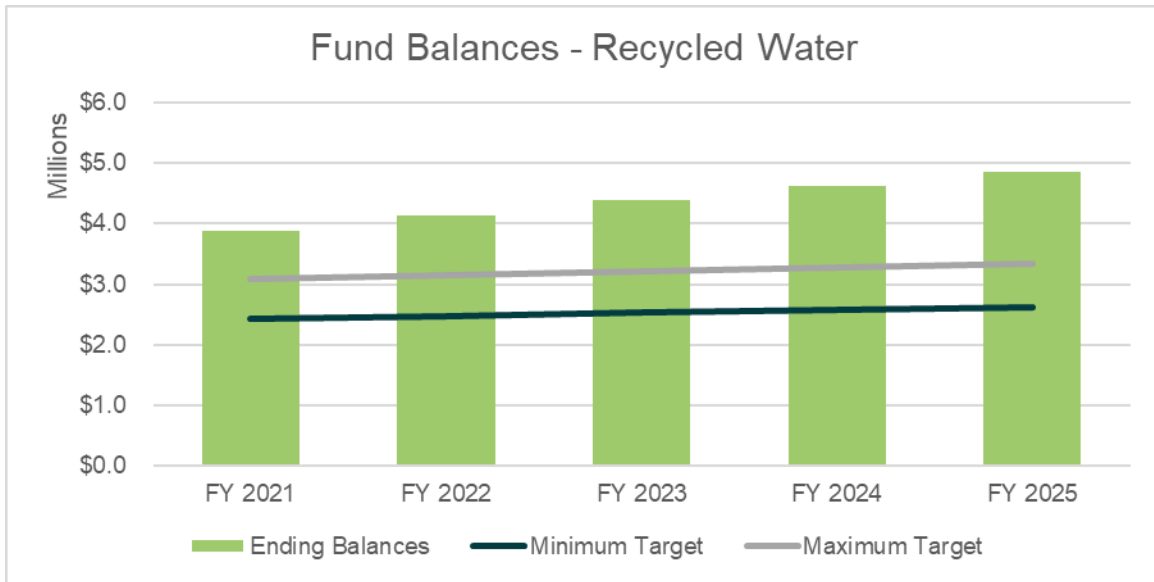


Figure 4-6 shows the recycled water fund balances under the proposed scenario in a graphical format. The District's recycled water funds exceed all reserve targets for all years of the study.

Figure 4-6: Recycled Water Fund Balances, Proposed Adjustments



5. Recycled Water Cost of Service Analysis and Rate Design

This section of the report details the cost of service analysis and rate design process for the proposed recycled water rates. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report. All rates shown in this section are rounded up to the nearest cent.

Proposed Adjustments

Table 5-1 shows the proposed revenue adjustments from the recycled water financial plans. These revenue adjustment percentages are used to derive the proposed rates for this study.

Table 5-1: Proposed Revenue Adjustments

| A | B | C |
|------|------------------------------|----------------|
| Line | Proposed Revenue Adjustments | Recycled Water |
| 1 | FY 2021 | 2.0% |
| 2 | FY 2022 | 2.0% |
| 3 | FY 2023 | 2.0% |
| 4 | FY 2024 | 2.0% |
| 5 | FY 2025 | 2.0% |

Cost of Service Analysis

The proposed revenue adjustment for the recycled water utility applies to the total amount of recycled water revenues as opposed to the individual components of the rate structure. The District’s recycled water rate structure includes a monthly service charge and uniform quantity rate for retail customers and a uniform quantity rate for wholesale customers.

Table 5-2 shows the recycled water revenue requirement for retail and wholesale customers. The recycled water wholesale quantity rate is based on 80 percent of the CMWD Tier 1 rate, which is inflated each year by the water supply expense escalation factor (**Table 4-7**, Line 4). The estimated wholesale quantity rate (Line 1) is multiplied by the projected wholesale water usage in AF (Line 2) to determine the estimated revenues from wholesale customers.

The total recycled water revenue requirement (Line 5) is equal to the rate revenues including revenue adjustments for FY 2021 (**Table 4-16**, Lines 13-14). The retail revenue requirement (Line 7) is equal to the total revenue requirement less estimated wholesale revenues. The current meter and retail revenues (Lines 9-10) is equal to the projected retail revenues (**Table 4-4**, Column C, Lines 2 and 6) for FY 2021.

The percentage difference between the retail revenue requirement and the current retail revenues is equal to the retail percent increase in FY 2021 (Line 13).

Table 5-2: Recycled Water Retail Revenue Requirement

| A | B | C |
|------|---|--------------------|
| Line | Recycled Water Retail Revenue Requirement | FY 2021 |
| 1 | Estimated Wholesale Quantity Rate (\$/AF) | \$1,236.48 |
| 2 | Projected Wholesale Usage (AF) | 425 |
| 3 | Estimated Wholesale Revenues | \$524,956 |
| 4 | | |
| 5 | Total Revenue Requirement (2%) | \$2,613,540 |
| 6 | Estimated Wholesale Revenues | \$524,956 |
| 7 | Retail Revenue Requirement | \$2,088,583 |
| 8 | | |
| 9 | Current Meter Revenues | \$222,189 |
| 10 | Current Retail Revenues | \$1,856,789 |
| 11 | Total Current Retail Revenues | \$2,078,978 |
| 12 | | |
| 13 | Retail Percent Increase | 0.5% |

Rate Calculation

Table 5-3 shows the proposed recycled water rates based on the recycled water retail percent increase (Table 5-2, Line 13). The monthly service charge (Lines 5-9) and the retail quantity rate (Line 12) is increased by the retail revenue adjustment (Line 2). Wholesale recycled water rates are calculated each year based on CMWD rates.

Table 5-3: Recycled Water Rate Calculation

| A | B | C | D | E | F | G | H |
|------|---|------------|---------------------------------|---------------------------------|------------|------------|------------|
| Line | Recycled Water Rates | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Total Revenue Adjustments | | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% |
| 2 | Proposed Revenue Adjustments - Retail | | 0.5% | 2.0% | 2.0% | 2.0% | 2.0% |
| 3 | Estimated Calleguas Rate Increase - Wholesale | | 5.0% | <i>Based on Calleguas Rates</i> | | | |
| 4 | | | | | | | |
| 5 | Monthly Service Charge | | | | | | |
| 6 | 2 inch | \$153.66 | \$154.37 | \$157.46 | \$160.61 | \$163.83 | \$167.11 |
| 7 | 3 inch | \$288.09 | \$289.43 | \$295.22 | \$301.13 | \$307.16 | \$313.31 |
| 8 | 4 inch | \$480.16 | \$482.38 | \$492.03 | \$501.88 | \$511.92 | \$522.16 |
| 9 | 6 inch | \$960.24 | \$964.68 | \$983.98 | \$1,003.66 | \$1,023.74 | \$1,044.22 |
| 10 | | | | | | | |
| 11 | Retail Quantity Rates (\$/hcf) | | | | | | |
| 12 | All Usage | \$5.23 | \$5.26 | \$5.37 | \$5.48 | \$5.59 | \$5.71 |
| 13 | | | | | | | |
| 14 | Wholesale Quantity Rates (\$/AF) | | | | | | |
| 15 | All Usage | \$1,138.40 | <i>Based on Calleguas Rates</i> | | | | |

Customer Impacts

Table 5-4 shows the monthly bill impacts for a recycled water customer with a 2 inch meter at various levels of usage. The average recycled water retail customer, with a 2 inch meter using 210 hcf of recycled water, will see an increase of approximately \$7 per month.

Table 5-4: Recycled Water Customer Bill Impacts, 2 inch

| A | B | C | D | E |
|------|-----------------------------|--------------|---------------|----------------|
| Line | Recycled Water Bill Impacts | Current Bill | Proposed Bill | Monthly Impact |
| 1 | 50 hcf | \$415.16 | \$417.37 | \$2.21 |
| 2 | 100 hcf | \$676.66 | \$680.37 | \$3.71 |
| 3 | 210 hcf (average) | \$1,251.96 | \$1,258.97 | \$7.01 |
| 4 | 500 hcf | \$2,768.66 | \$2,784.37 | \$15.71 |
| 5 | 1000 hcf | \$5,383.66 | \$5,414.37 | \$30.71 |

Proposed Rates

Table 5-5 shows the proposed recycled water rates for the study period. The first year of rates are proposed to be implemented on July 1, 2020 and in July of every year thereafter.

Table 5-5: Proposed Recycled Water Rates

| A | B | C | D | E | F | G |
|------|---|--|----------|------------|------------|------------|
| Line | Recycled Water Rates | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| 1 | Monthly Service Charge | | | | | |
| 2 | 2 inch | \$154.37 | \$157.46 | \$160.61 | \$163.83 | \$167.11 |
| 3 | 3 inch | \$289.43 | \$295.22 | \$301.13 | \$307.16 | \$313.31 |
| 4 | 4 inch | \$482.38 | \$492.03 | \$501.88 | \$511.92 | \$522.16 |
| 5 | 6 inch | \$964.68 | \$983.98 | \$1,003.66 | \$1,023.74 | \$1,044.22 |
| 6 | | | | | | |
| 7 | Retail Quantity Rates (\$/hcf) | | | | | |
| 8 | All Usage | \$5.26 | \$5.37 | \$5.48 | \$5.59 | \$5.71 |
| 9 | | | | | | |
| 10 | Wholesale Quantity Rates (\$/AF) | | | | | |
| 11 | All Usage | <i>Based on Calleguas Municipal Water District rates</i> | | | | |

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