



City of Arcata Water and Wastewater Rate Study

January 14, 2026 *Draft*



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS



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January 14, 2026

City of Arcata
736 F Street
Arcata, CA 95521

Attention: Tabatha Miller, Finance Director

Re: Water and Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to the City of Arcata (City) the attached Water and Wastewater Rate Study. The study presents Bartle Wells Associate's analysis of the operating and non-operating expenses of the City's water and wastewater enterprise funds and provides five-year cash flow projections and rates. The primary purpose of this study was to make recommendations that would achieve their financial sustainability while improving legal compliance and proportionality.

BWA finds that the rates and charges proposed in our report reflect the cost-of-service for each customer, follow generally accepted rate setting principles, and adhere to the substantive requirements of Proposition 218. BWA believes the proposed rates are fair and reasonable to the City's customers.

We have enjoyed working with the City on this rate study and appreciate the assistance of City staff members throughout the project. Please contact us with any future questions about this study and the rate recommendations.

Sincerely,

Erik Helgeson, MBA
Principal / Vice President

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Glossary of Terms

| Terms | Descriptions |
|--------------------------------|--|
| AWWA | American Water Works Association |
| BWA | Bartle Wells Associates |
| HCF | One Hundred Cubic Feet |
| CIP | Capital Improvement Projects |
| City | The City of Arcata |
| COS | Cost of Service |
| Cost Allocation | Apportioning expenses to utility user fees and rates in order to charge customers proportionally to the level of benefit they receive |
| CPI | Consumer Price Index/Indices |
| Enterprise Fund | Funds are established to account for governmental activities that provide goods or services primarily to the public at large on a consumer fee basis |
| Fixed Charges | A charge that is held constant over a period of time and applied at even intervals |
| FYE | Fiscal Year End (June 30) |
| General Fund | The main operating fund for the City |
| M1 Manual | "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1", 6 th edition published by AWWA |
| Meter Equivalent Ratios | The ratio of a water meter's maximum safe flow in comparison to a smaller water meter |
| Multi-family | Utility customers meeting the criteria of the multi-family class |
| O&M | Operations and maintenance |
| Prop. 218 | Proposition 218, Added Articles 13C & 13D to the California Constitution |
| R&R | Repair and Replacement |
| Rate Setting Period | Limited to five (5) years under Prop. 218. |
| Revenue Requirements | The amount of future funding which needs to be recovered from an enterprise's user fees/rates |
| Solvent | Able to pay long-term debts and other financial obligations |
| Volumetric Rates | Utility rate based on a metered volume of water |

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1 EXECUTIVE SUMMARY

1.1 Introduction

The City of Arcata provides water and wastewater services to an estimated population of approximately 19,000. The water and wastewater utilities are financially self-supporting enterprises that rely primarily on revenues from service charges to fund the costs of providing service. As such, the City's rates need to be set at adequate levels to a) fund the costs of operating and maintaining the water and wastewater systems, b) fund necessary capital improvements to keep the City's infrastructure in good operating condition, and c) meet annual debt service funding requirements.

In 2025, the City engaged BWA to perform a rate study analyzing the capital and operating costs associated with the City's water and wastewater utilities and to determine recovery of costs for providing water and wastewater utility services. Proposed rates are designed to fund the operating and capital needs of the City's utilities and equitably recover costs from all customers. Final recommendations incorporate input from City Staff.

1.2 Key Drivers of Proposed Rate Increases

The City is anticipating a number of financial challenges that will require rate increases in upcoming years. Key drivers of future rate increases are:

Ongoing Cost Inflation

The City's water and wastewater enterprises face ongoing operating cost inflation due to annual increases in a range of expenses including staffing, utilities, insurance, supplies, etc. On top of rate increases needed for other purposes, annual rate increases are needed to keep revenues aligned with cost inflation and prevent rates from falling behind the cost of providing service. Historically, inflation consistently hovered between 2% and 3%. Currently, inflation has mostly normalized after forty-year highs but remains near 3%. Given the recent volatility, BWA designed the inflation projections to be slightly conservative to leave the City in a strong financial position while not driving excessive rate increases.

Capital Improvement Needs & Rehabilitation of Aging Infrastructure

The City takes a proactive approach to maintaining its water and wastewater systems which requires a steady stream of repair, improvement, and replacement projects. Accounting for construction cost inflation, the City has identified approximately \$36.0 million of water improvement projects and \$51.4 million of wastewater improvement projects over the next 5 years.

This study assumes the City will finance the majority of project costs by issuing new debt. While the recommended rate increases ensure the City will meet its new debt servicing requirements, it is important to note that the additional debt servicing will impact the City's ability to use future rate revenues to fund other ongoing water and wastewater projects.

1.3 Rate Recommendations

Updated financial projections for the water and wastewater enterprises indicate a need for annual revenue increases over the next five years. This report details the proposed water rates for two different water rate revenue scenarios and the proposed wastewater rates. With the recommended rate increases, the City will be able to fund the capital projects necessary to continue providing a high level of service, pay for rising operating costs, and maintain the financial health of the utilities.

BWA reviewed the City's water and wastewater rates and has the following recommendations to align rates with the current cost of providing service and improve compliance with the requirements of Proposition 218:

- Update the fixed and variable rates to proportionally reflect the cost-of-service analysis in this report.
- Charge outside city customers the same rates charged to inside-city customers.

Due to the cost-of-service analysis and structure adjustments, there will be some variation in the impacts to each customer class in the first year of the recommended rates. The remaining four years of the recommended rate increases are applied on an across-the-board basis with the same percentage increase to all charges. The following tables show a schedule of proposed rates for the next five years.

Table 1. Scenario 1 Recommended Water Rates

| | 2025/26 <i>Current</i> | 5/1/2026 <i>Proposed</i> | 7/1/2027 <i>Proposed</i> | 7/1/2028 <i>Proposed</i> | 7/1/2029 <i>Proposed</i> | 7/1/2030 <i>Proposed</i> |
|----------------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Volumetric Rates (\$/HCF) | | | | | | |
| All Usage | \$7.15 | \$10.33 | \$10.33 | \$11.37 | \$12.50 | \$13.50 |
| Fixed Charges (\$/meter) | | | | | | |
| <u>Meter Size</u> | | | | | | |
| 5/8" and 3/4" | \$12.23 | \$18.05 | \$18.05 | \$19.85 | \$21.84 | \$23.58 |
| 1" | \$20.43 | \$30.14 | \$30.14 | \$33.15 | \$36.47 | \$39.39 |
| 1 1/2" | \$40.73 | \$60.10 | \$60.10 | \$66.11 | \$72.72 | \$78.53 |
| 2" | \$65.19 | \$96.19 | \$96.19 | \$105.81 | \$116.39 | \$125.70 |
| 3" | \$122.31 | \$180.47 | \$180.47 | \$198.52 | \$218.37 | \$235.84 |
| 4" | \$203.89 | \$300.85 | \$300.85 | \$330.93 | \$364.02 | \$393.14 |
| 6" | \$407.65 | \$601.51 | \$601.51 | \$661.66 | \$727.83 | \$786.05 |
| 8" | \$652.27 | \$962.45 | \$962.45 | \$1,058.70 | \$1,164.57 | \$1,257.73 |
| 10" | \$937.74 | \$1,383.67 | \$1,383.67 | \$1,522.04 | \$1,674.24 | \$1,808.18 |



Table 2. Scenario 2 Recommended Water Rates

| | 2025/26 | 5/1/2026 | 1/1/2027 | 1/1/2028 | 1/1/2029 | 1/1/2030 |
|----------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Current</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> |
| Volumetric Rates (\$/HCF) | | | | | | |
| All Usage | \$7.15 | \$8.83 | \$10.42 | \$11.67 | \$12.83 | \$14.12 |
| Fixed Charges (\$/meter) | | | | | | |
| <u>Meter Size</u> | | | | | | |
| 5/8" and 3/4" | \$12.23 | \$15.42 | \$18.19 | \$20.37 | \$22.41 | \$24.65 |
| 1" | \$20.43 | \$25.74 | \$30.38 | \$34.02 | \$37.42 | \$41.17 |
| 1 1/2" | \$40.73 | \$51.33 | \$60.57 | \$67.84 | \$74.63 | \$82.09 |
| 2" | \$65.19 | \$82.16 | \$96.95 | \$108.59 | \$119.45 | \$131.39 |
| 3" | \$122.31 | \$154.15 | \$181.90 | \$203.73 | \$224.10 | \$246.51 |
| 4" | \$203.89 | \$256.97 | \$303.23 | \$339.61 | \$373.58 | \$410.93 |
| 6" | \$407.65 | \$513.79 | \$606.27 | \$679.03 | \$746.93 | \$821.62 |
| 8" | \$652.27 | \$822.10 | \$970.07 | \$1,086.48 | \$1,195.13 | \$1,314.64 |
| 10" | \$937.74 | \$1,181.89 | \$1,394.63 | \$1,561.98 | \$1,718.18 | \$1,890.00 |

Table 3. Proposed Wastewater Rates

| Wastewater User | 2025/26 | 7/1/2026 | 7/1/2027 | 7/1/2028 | 7/1/2029 | 7/1/2030 |
|--|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Current</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> |
| Residential - Fixed Monthly Rate per Unit | | | | | | |
| Single Family | \$77.61 | \$82.31 | \$82.31 | \$86.43 | \$90.75 | \$95.29 |
| Multi-Family | n/a | 67.44 | 67.44 | 70.81 | 74.35 | 78.07 |
| Residential - Volumetric Rates per Hundred Cubic Feet (hcf) of Water Use Greater Than 4 HCF | | | | | | |
| Single Family | \$11.34 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Commercial - Volumetric Rates per Hundred Cubic Feet (hcf) of Water Use Greater Than 4 HCF | | | | | | |
| Low Strength | \$9.88 | \$11.91 | \$11.91 | \$12.51 | \$13.13 | \$13.79 |
| Medium Strength | 12.01 | 14.59 | 14.59 | 15.32 | 16.09 | 16.89 |
| High Strength | 20.14 | 20.24 | 20.24 | 21.25 | 22.31 | 23.43 |
| Commercial - Minimum Monthly Fixed Rate per Connection | | | | | | |
| Low Strength | \$81.05 | \$47.64 | \$47.64 | \$50.02 | \$52.52 | \$55.15 |
| Medium Strength | 81.05 | 58.38 | 58.38 | 61.29 | 64.36 | 67.58 |
| High Strength | 81.05 | 80.95 | 80.95 | 84.99 | 89.24 | 93.71 |

In future years, the City can re-evaluate its finances and revenue requirements and adjust rates as needed based on updated projections. However, while the City always has the flexibility to implement rate adjustments that are lower than adopted pursuant to Proposition 218, future rates cannot exceed adopted increases without going through the Proposition 218 process again. Rates adopted pursuant to Proposition 218 are essentially future rate caps.

2 BACKGROUND & OBJECTIVES

Background

The City of Arcata is framed by the Pacific Ocean on the west, forested hills on the east, the Mad River on the North, and Humboldt Bay to the south. It is situated in an 11 square mile area in the northern coast region of California at the western mid-point of Humboldt County and is located 275 miles north of San Francisco. The City provides water and wastewater services to an estimated population of approximately 19,000.

In 2025, the City engaged BWA to perform a rate study analyzing the capital and operating costs associated with the City's water and wastewater utilities and to determine recovery of costs for providing water and wastewater utility services. This report along with all included exhibits and appendixes presents BWA's analysis of the operating and non-operating expenses of the City's water and wastewater enterprises. The primary purpose of this study was to analyze the City's enterprise funds and make recommendations that enhance the financial sustainability of each enterprise and to review utility rates to ensure that they adhere to the State's legal requirements.

Rate Study Objectives

Key goals and objectives of the rate study include developing water and wastewater rates that:

- Capture enough revenues to move forward with and complete capital projects that will provide City of Arcata water rate payers with clean and safe drinking water.
- Capture enough revenues to move forward with and complete capital projects and that will ensure reliable wastewater collection and treatment services for City of Arcata wastewater rate payers.
- Recover the costs of providing utility services including operating costs, capital costs, and build prudent reserves to ensure the water and wastewater funds continue to operate as financially self-sustaining Enterprise Funds.
- Are fair and equitable to all customers.
- Are easy to understand and implement.
- Comply with the substantive cost-of-service requirements of the California Constitution, Article 13D, Section 6 (established by Proposition 218) and the general mandate of Article 10, Section 2 that prohibits the wasteful use of water.
- Support the City's long-term operational and financial stability.

This report summarizes key findings and recommendations for overall rate revenue increases over the next five years. The full set of tables are included in the appendix to this report.

3 LEGAL REQUIREMENTS & RATE METHODOLOGY

3.1 Constitutional Rate Requirements

The California Constitution includes two key articles that directly govern or impact the City's water and wastewater rates: Article 10 and Article 13D. The water rate recommendations developed in this study were designed to comply with constitutional mandates, provisions of the California Water Code and Government Code. In accordance with California constitutional provisions, the proposed rates are designed to a) recover the City's cost of providing service, b) recover revenues in proportion to the cost for serving each customer, and c) promote conservation and discourage waste.

Article 10, Section 2

Article 10, Section 2 of the California Constitution was established by voter-approval in 1976 and requires public agencies to maximize the beneficial use of water, prevent waste, and encourage conservation. Section 2 states that:

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 13D, Section 6

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility System Charges such as water, wastewater, and garbage rates. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts rates for water, wastewater, and garbage service from this voting requirement if the appropriate procedure is followed.

The substantive requirements of Article 13D, Section 6 require the City's water rates to meet the following conditions:

- 1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property-related service.
- 2) Revenues derived from 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 a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- 4) No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.

3.2 Statute of Limitations

Pursuant to California Government Code 53759, there is a 120-day statute of limitations for challenging any new, increased, or extended fees. This statute of limitations applies to the wastewater rates proposed in this rate study and is included in the Proposition 218 Notice.

3.3 Water and Wastewater Rate-Setting Methodology

The California Constitution does not give agencies leeway to arbitrarily set rates purely based on policy preferences. Instead, it provides agencies with flexibility to implement rates within a framework established by Articles 10 and 13D. Together, these Articles establish that rates should both a) discourage waste and encourage conservation of water, and b) not exceed the costs of service attributable to each parcel or customer.

Water and wastewater utilities have used a wide range of approaches or perspectives for allocating and recovering their costs for providing service, and these costs are most commonly recovered from a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges varies for each agency. They should be proportional to each utility's expenditures and must not exceed the system's cost of providing service. A higher level of fixed charges provides better revenue stability and less dependence on variable sales. On the other hand, higher dependence on volumetric revenues provides a greater conservation incentive.

Depending on perspective, the same costs can reasonably be allocated one hundred percent to fixed revenue recovery, one hundred percent to variable rate recovery, or to some combination of the two. For example, debt service used to fund treatment facilities can legitimately be treated as a) a fixed annual cost that should be recovered from fixed charges, b) a cost related to providing supply to meet customer demand and therefore a cost that should be recovered from variable rates, or c) a cost that can be recovered from both fixed and variable rates in recognition of the two alternative perspectives.

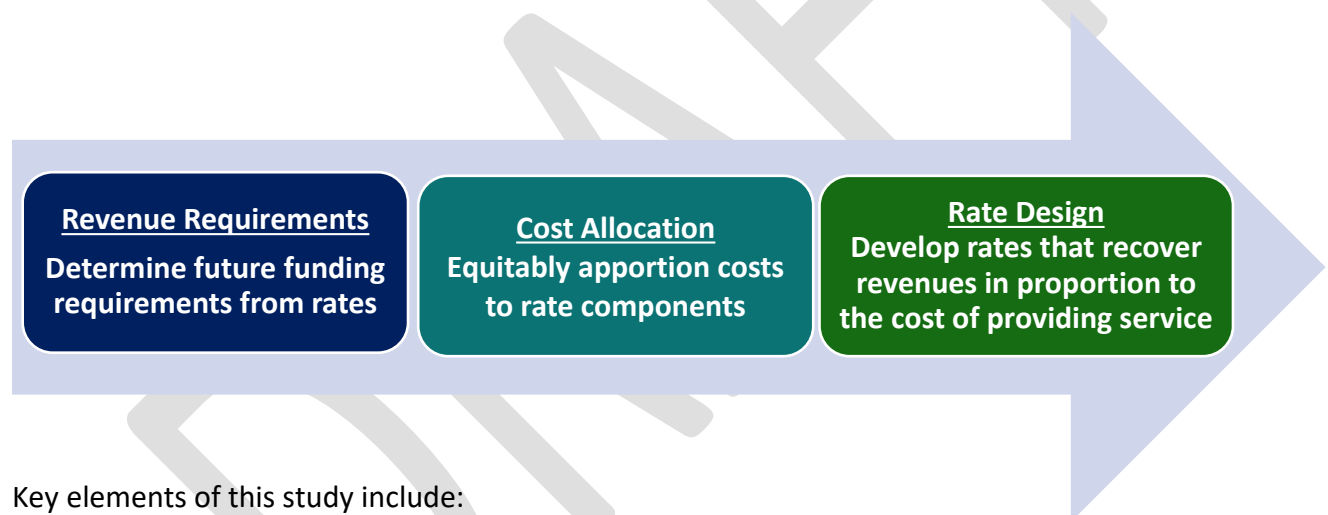
Many of the utility's costs are variable costs that vary by the size of the system including personnel, supplies, and utilities. However, a portion of these variable costs can reasonably be apportioned to fixed rate recovery, and vice versa with fixed costs. For example, a share of the fixed cost of salaries related to treatment plant operations can reasonably be recovered from usage-based charges as these costs are incurred to meet demand flows. For debt service, payments may be fixed annual costs, but it

is reasonable to recover some of these costs from usage-based rates as the costs are incurred to fund infrastructure that will improve the wastewater system. Ultimately, there is no single correct way to allocate or attribute costs. Hence, five similar agencies may have five different rate structures provided each agency can establish a reasonable cost basis for their own particular rate structure within the parameters of meeting the various requirements of the California Constitution.

While there is no single correct approach, BWA believes that costs should be allocated within a reasonable range of fixed and variable allocation that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

BWA uses a straightforward methodology to establish equitable charges that recover the cost of providing service and fairly apportion costs. The general methodology is summarized in the following figure.

Figure 1: Cost of Service Rate-Setting Methodology



Key elements of this study include:

- **Project Initiation and Data Collection** – Review financial policies; collect financial and other relevant data; and review rate structures;
- **Demand Analysis** – Analyze past customer demands and customer characteristics to forecast future demands;
- **Long Range Financial Plans** – Develop financial projections to evaluate annual revenue requirements from rates and the overall level of rate increases needed to fund the costs of providing service and support long-term financial stability;
- **Cost Allocation** – Group the City’s costs in terms of the function they serve as a basis to proportionally allocate the revenue requirement from rates;
- **Cost-of-Service Rate Design** – Develop rates that proportionately recover costs; and
- **Prop 218 Process** – Ensure compliance with the substantive and procedural requirements of Proposition 218.

4 WATER DEMAND AND CUSTOMER CHARACTERISTICS

4.1 Projected Water Demand

The City's primary water source is water purchased from Humboldt Bay Municipal Water District. Projected FY 25/26 water demand is based on historical metered demand but projected somewhat conservatively due to the financial challenges facing the water enterprise.

Table 4. Historic and Projected Metered Water Demand

| Metered Water Use | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|------------------------------|---------------|---------------|---------------|------------------|
| | <i>Actual</i> | <i>Actual</i> | <i>Actual</i> | <i>Projected</i> |
| Water Use (HCF) ¹ | 620,540 | 596,621 | 606,996 | 590,000 |

1, HCF = One Hundred Cubic Feet

4.2 Water Services and Equivalent Capacity

The size of a customer's meter reflects the portion they require of the water system's capacity. A significant percentage of the costs of any water system is related to its requirement to deliver water to any customer instantaneously at any time, up to the maximum safe flow capacity of a customer's meter. Simply put, as the size of a customer's water meter increases, the instantaneous demand it can place on the City's water system increases.

Fixed charges for each meter size are based on the capacity of a meter relative to the capacity of smallest meter size (e.g., a 5/8-inch meter) in the City's system. In this study, the relative capacity of a meter size, referred to as an Equivalent Demand Unit (EDU), is calculated by dividing the capacity of a given meter size by the capacity of a 5/8" meter. The meter equivalent ratios used are proportional to the maximum safe flow of a 5/8" meter. The sum of all EDU's reflects the total capacity of the water enterprise.

The following table contains the counts of water services and calculations of meter equivalent units. Total meter equivalent units for each meter size are derived by multiplying the meter equivalent ratio by the number of services at each meter size.

Table 5. Water Services and Meter Equivalent Units

| Meter Size | Total Meters | AWWA Capacity Factor¹ | Equivalent Demand Units (EDUs) | Annual EDUs |
|-------------------|---------------------|---|---------------------------------------|--------------------|
| 5/8" | 5,540 | 1.00 | 5,540 | 66,480 |
| 3/4" | 429 | 1.00 | 429 | 5,148 |
| 1" | 359 | 1.67 | 600 | 7,194 |
| 1 1/2" | 71 | 3.33 | 236 | 2,837 |
| 2" | 192 | 5.33 | 1,023 | 12,280 |
| 3" | 31 | 10.00 | 310 | 3,720 |
| 4" | 8 | 16.67 | 133 | 1,600 |
| 6" | 10 | 33.33 | 333 | 4,000 |
| 8" | 1 | 53.33 | 53 | 640 |
| 10" | 1 | 76.67 | 77 | 920 |
| Totals | 6,642 | | 8,735 | 104,820 |

1, Based on the safe maximum operating capacity as published by the American Water Works Association (AWWA).

5 WATER FINANCES & CASH FLOW PROJECTIONS

5.1 Water Financial Overview

Bartle Wells Associates conducted an independent evaluation of the water enterprise's finances. Key observations include:

- The approved loan from the Wastewater Fund is not sufficient to fund the capital projects that are under way. It is very helpful to temporarily bridge the gap until new debt funding can be secured after rate increases are effective.
- The water enterprise will need rate increases to keep revenues in line with rising costs and fund needed capital improvements.
- Over the next five years it is projected that priority capital projects will cost \$36.0 million.
- The enterprise needs to maintain prudent reserves to be prepared for water use fluctuations, remain able to operate during a disaster, and qualify for grants or low-cost financing.

BWA developed long-term cash flow projections to determine the water enterprise's annual revenue requirements and project required water rate revenue increases. The financial projections incorporate the latest information available as well as reasonable and slightly conservative assumptions. This report explores the financial plan and rates for two different revenue recovery scenarios which are described throughout the remainder of this report.

5.2 Water Financial Plan Assumptions

Assumptions were developed based on input from City Staff, historical escalation factors, and conservative projections for future escalation factors to reasonably ensure that the maximum rates adopted by the City will provide sufficient revenues to support the City's water operations.

Key information and assumptions include:

Reserves

- BWA recommends the City aim to maintain prudent fund reserves of a least one year of operating costs. BWA recommends the water enterprise maintain one year of operating expenses in reserves for cash flow and liquidity purposes in case of revenue loss/interruption, and to provide additional funds during unforeseen emergencies. Fund reserves will fluctuate based on the timing of revenues and expenses, but the proposed rates are projected to provide the water enterprise with sufficient fund reserves. At a minimum, the water enterprise should aim to hold at least three months of operating expenses in reserve.

Revenue Assumptions

- The water enterprise is projected to begin FY 2025-26 with \$9.2 million in reserves. This amount approximately meets BWA's recommended level of operating reserves.
- BWA did not escalate revenues for miscellaneous non-rate water revenues in its projections. Recommended rates are the maximum rates the City can adopt, which is why BWA uses conservative estimates when making revenue projections.
- As new construction can be unpredictable, BWA did not escalate revenues for growth or connection charges in its projections. Recommended rates are the maximum rates the City can adopt, which is why BWA uses conservative estimates when making revenue projections.
- Interest income is estimated based on projected reserve levels. Future projections are estimated based on a conservative interest earning estimate of 2%. Actual interest amounts will vary based on reserves and future interest earning rates.

Expense Assumptions

- Operating and maintenance costs are based on the FY 2025-26 budget and include updated estimates developed with the help of City Staff.
- General operating and capital cost inflation is projected to escalate at an annual rate of 4% in FY 2026-27 and at an annual rate of 4% thereafter. This is a conservative estimate to account for future cost inflation and is based on recent and historic inflation.
- The Water Enterprise will need to cash fund at least \$6.7 million in capital spending in the next five years.
- Debt service projections are based on outstanding debt schedules and projected issuances of new debt. The financial plan assumes the issuance of thirty-year bonds at 5.5% interest for \$9.5 million in FY 2025-26 and \$20.0 million in FY 2028-29 to fund critical waterline and tank improvement projects.

5.3 Financial Plan Drivers

The City is anticipating a number of financial challenges that will require rate increases in upcoming years. Key drivers of future rate increases are:

Current Capital Project Funding

The approved loan from the Wastewater Fund is not sufficient to fund the capital projects that are under way. It is very helpful to temporarily bridge the gap until new debt funding can be secured after rate increases are effective. BWA recommends implementing rate increases at the beginning of 2026 to support issuing bonds for \$9.5 million to be used for refunding the wastewater enterprise and maintaining prudent reserves. Without securing additional financing, the water fund reserves are expected to drop to \$500,000 which is imprudent and will have a significant impact on the ability of the enterprise to borrow funds in the future.

Capital Improvement Needs & Rehabilitation of Aging Infrastructure

The City takes a proactive approach to maintaining its water system which requires a steady stream of repair, improvement, and replacement projects. Accounting for construction cost inflation, the City has identified approximately \$36.0 million of capital improvement projects over the next 5 years.

The largest upcoming capital project is the Citywide Steel Waterline Replacement project. This project involves the removal and replacement of leaking steel and asbestos waterlines throughout the City, approximately 10% of the total water system. This study assumes the City will finance the majority of waterline replacement project costs by issuing new debt. While the recommended rate increases ensure the City will meet its new debt servicing requirements, it is important to note that the additional debt servicing will impact the City's ability to use future water revenues to fund other ongoing water projects.

The following table shows the projected capital funding sources for the next five years.

Table 6. Capital Funding Sources

| Capital Improvement Projects | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|--|---------------------|------------------|------------------|---------------------|---------------------|
| | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> |
| Total Project Cost (Inflation \$) | \$12,090,000 | \$572,000 | \$162,000 | \$11,368,000 | \$11,774,000 |
| Capital Funding | \$12,090,000 | \$572,000 | \$162,000 | \$11,368,000 | \$11,774,000 |
| Grants | \$0 | \$0 | \$0 | \$0 | \$0 |
| Use of New Debt Proceeds | 9,100,000 | 400,000 | 0 | 10,000,000 | 10,000,000 |
| Cash Funded | \$2,990,000 | \$172,000 | \$162,000 | \$1,368,000 | \$1,774,000 |

Ongoing Cost Inflation

The City's water enterprise faces ongoing operating cost inflation due to annual increases in a range of expenses including staffing, utilities, insurance, supplies, etc. On top of rate increases needed for other purposes, annual rate increases are needed to keep revenues aligned with cost inflation and prevent rates from falling behind the cost of providing service. Historically, inflation consistently hovered between 2% and 3%. Currently, inflation has mostly normalized after forty-year highs, but remains near 3%. Given the recent volatility, BWA designed the inflation projections to be slightly conservative to leave the City in a strong financial position while not driving excessive rate increases.

5.4 Cash Flow Projection Scenarios

Long-term cash flow projections were developed based on the assumptions and key drivers of future rate increases described above. The projections were used to determine the water utility's annual revenue requirements and project required water rate revenue increases. The long-term cash flow projections incorporate the latest information available from the City's budget, annual reports, capital spending projections, metered water demand data, as well as a number of reasonable assumptions developed with input from the City. The overall rate revenue increases are designed to fund the City's cost of providing service, maintain roughly balanced budgets, maintain healthy debt service coverage, and maintain prudent reserves.

The projections indicate the need for rate increases. Actual impacts to customers water bills will vary based meter size and water use due to the outcome of the updated cost-of-service analysis.

This report explores the financial plan and rates for two different rate revenue scenarios which are as follows:

- **Scenario 1, Immediate Revenue Increase** – In this scenario rate revenues are increased as soon as possible, at the beginning of 2026 but the next increase is not until (July 1, 2027). There are also increases at the beginning of the following two fiscal years. In FY 2029-30, the final year of noticed rate increases, this scenario will have the lowest rates and highest reserve level of the two scenarios.
- **Scenario 2, Phased-In Revenue Increase** – In this scenario, rate revenues are increased as soon as possible, at the beginning of 2026 and then on January 1st of the subsequent four years. In final year of noticed rate increases, this scenario will have the highest rates and lowest reserve level of the two scenarios.

The following table shows a comparison of the two scenarios.

Table 7. Water Cash Flow Scenario Comparison

| Water Rate Scenarios | FY 25-26* | FY 26-27 | FY 27-28 | FY 28-29 | FY 29-30 |
|---|--------------|--------------|--------------|--------------|--------------|
| Scenario 1: Immediate Revenue Recovery | | | | | |
| Rates Effective: | May 1, 2026 | Jul. 1, 2027 | Jul. 1, 2028 | Jul. 1, 2029 | Jul. 1, 2030 |
| Rate Revenue Increase (\$) | \$1,017,063 | \$0 | \$798,857 | \$878,743 | \$773,294 |
| Rate Revenue Increase (%) | 44.0% | 0.0% | 10.0% | 10.0% | 8.0% |
| Ending Reserve Balance | \$6,935,088 | \$7,745,508 | \$9,088,705 | \$9,127,187 | \$8,516,465 |
| Scenario 2: Phased-In Revenue Recovery | | | | | |
| Rates Effective: | Apr. 1, 2026 | Jan. 1, 2027 | Jan. 1, 2028 | Jan. 1, 2029 | Jan. 1, 2030 |
| Rate Revenue Increase (\$) | \$531,647 | \$614,121 | \$483,109 | \$450,901 | \$495,992 |
| Rate Revenue Increase (%) | 23.0% | 18.0% | 12.0% | 10.0% | 10.0% |
| Ending Reserve Balance | \$6,449,671 | \$6,699,504 | \$7,769,227 | \$7,584,132 | \$6,918,910 |

* Initial bill impacts will vary based on customer class and usage due to rate structure adjustments realigning rates with cost of service.

In future years, the City can re-evaluate its finances and revenue requirements and adjust rates as needed based on updated projections. However, while the City always has the flexibility to implement rate adjustments that are lower than adopted pursuant to Proposition 218, future rates cannot exceed adopted increases without going through the Proposition 218 process again. Rates adopted pursuant to Proposition 218 are essentially future rate caps.

5.5 Water Financial Plan Scenario 1: Immediate Revenue Increase

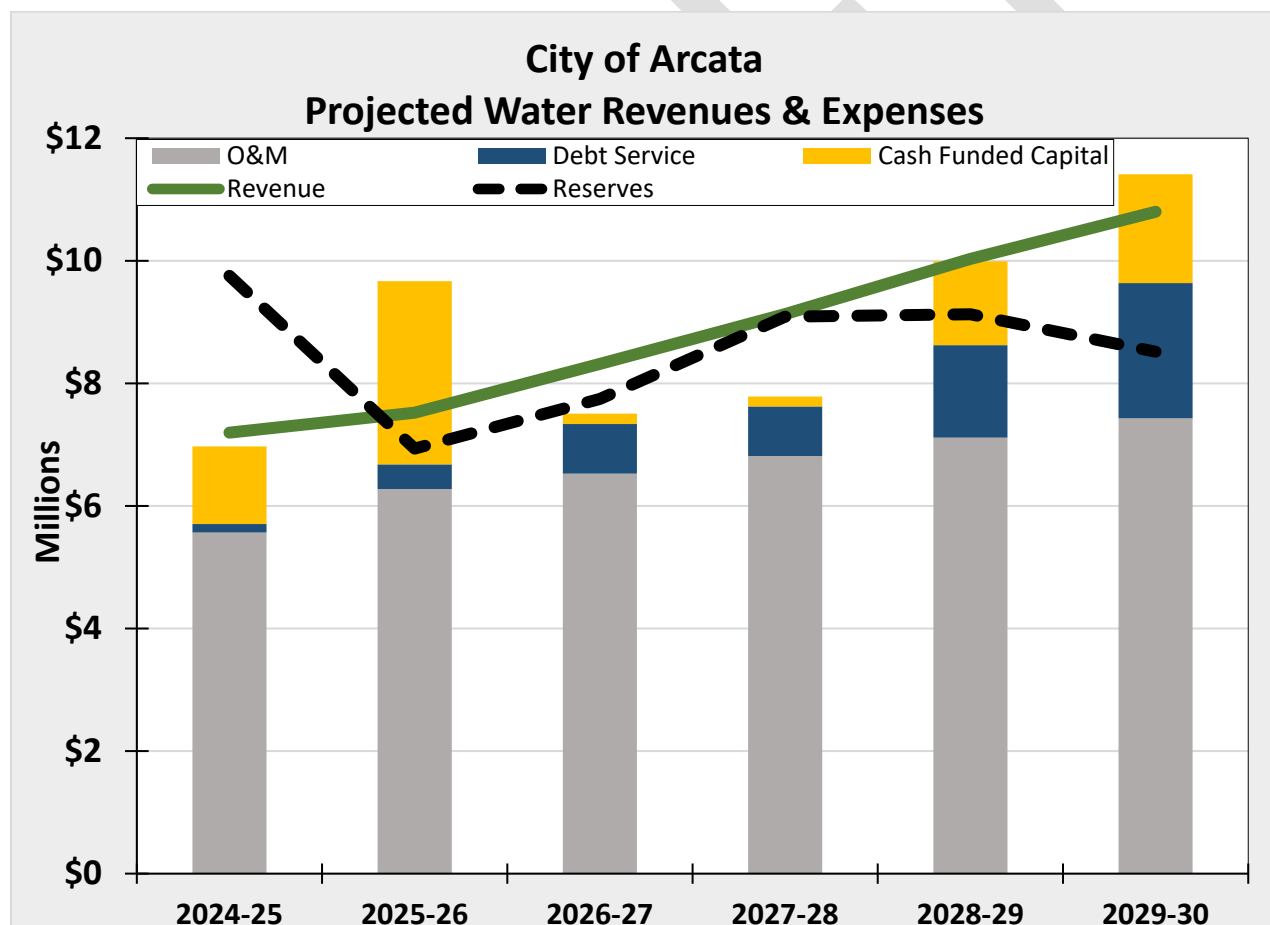
The following section presents a financial plan for the water enterprise for a scenario which immediately recovers the annual operating revenue requirements. A summary of the key elements of the five-year cash flow projection for this scenario is displayed in the following table.

Table 8. Water Scenario 1 Cash Flow Projection Summary

| Scenario 1: Immediate Revenue Increase | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|
| | FY 25-26 | FY 26-27 | FY 27-28 | FY 28-29 | FY 29-30 |
| Ending Reserves | \$6,935,088 | \$7,745,508 | \$9,088,705 | \$9,127,187 | \$8,516,465 |
| Rate Revenue Increase | \$1,017,063 | \$0 | \$798,857 | \$878,743 | \$773,294 |

The following figure shows cash flow projections incorporating the assumptions described above.

Figure 2: Water Scenario 1 Projected Cash Flow Graph



The rate projections shown on the following table are designed to fund the City's cost of providing service while maintaining balanced budgets and building prudent minimal levels of fund reserves each year.

Table 9. Projected Revenues & Expenses: Water Scenario 1

| Fiscal Year | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---------------------------------------|----------------------|--------------------|--------------------|---------------------|---------------------|
| <i>Proposed Revenue Increase</i> | <i>44.0%</i> | <i>0.0%</i> | <i>10.0%</i> | <i>10.0%</i> | <i>8.0%</i> |
| Beginning Reserve Balance | \$9,179,175 | \$6,935,088 | \$7,745,508 | \$9,088,705 | \$9,127,187 |
| REVENUES | | | | | |
| Rate Revenues | | | | | |
| Current Rate Revenue | \$5,547,618 | \$7,988,570 | \$7,988,570 | \$8,787,426 | \$9,666,169 |
| <i>Revenue from Rate Increases</i> | <i>2,440,952</i> | <i>0</i> | <i>798,857</i> | <i>878,743</i> | <i>773,294</i> |
| <i>Timing adjustment ¹</i> | <i>(\$1,423,889)</i> | <i>-</i> | <i>-</i> | <i>-</i> | <i>-</i> |
| Total Rate Revenues | \$6,564,681 | \$7,988,570 | \$8,787,426 | \$9,666,169 | \$10,439,463 |
| Non-Rate Revenues | | | | | |
| Connection Fees | \$680,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 |
| Other Revenues | 93,800 | 89,950 | 85,965 | 81,841 | 77,572 |
| Interest on Pooled Cash ² | <u>\$183,584</u> | <u>\$138,702</u> | <u>\$154,910</u> | <u>\$181,774</u> | <u>\$182,544</u> |
| Total Non-Rate Revenues | \$957,384 | \$328,652 | \$340,875 | \$363,615 | \$360,116 |
| Total Revenue | \$7,522,064 | \$8,317,221 | \$9,128,302 | \$10,029,784 | \$10,799,579 |
| EXPENDITURES | | | | | |
| Total O&M | \$6,276,646 | \$6,525,387 | \$6,813,700 | \$7,115,048 | \$7,430,033 |
| Existing Debt Service | 139,089 | 138,562 | 138,551 | 139,028 | 138,666 |
| New Debt Service | 261,250 | 670,853 | 670,853 | 1,369,227 | 2,067,602 |
| Interfund Loan | 99,167 | 0 | 0 | 0 | 0 |
| Rate Funded Capital | \$2,990,000 | \$172,000 | \$162,000 | \$1,368,000 | \$1,774,000 |
| Total Expenditures | \$9,766,152 | \$7,506,802 | \$7,785,104 | \$9,991,303 | \$11,410,301 |
| Net Revenue | (\$2,244,087) | \$810,420 | \$1,343,198 | \$38,481 | (\$610,722) |
| Ending Fund Balance | \$6,935,088 | \$7,745,508 | \$9,088,705 | \$9,127,187 | \$8,516,465 |
| <i>Debt Service Coverage</i> | <i>2.49</i> | <i>2.21</i> | <i>2.86</i> | <i>1.93</i> | <i>1.53</i> |

1, Reflects rates effective May 1, 2026, and July 1 each year thereafter.

2, 2% earnings on fund balance.



5.6 Water Financial Plan Scenario 2: Phased-In Revenue Increase

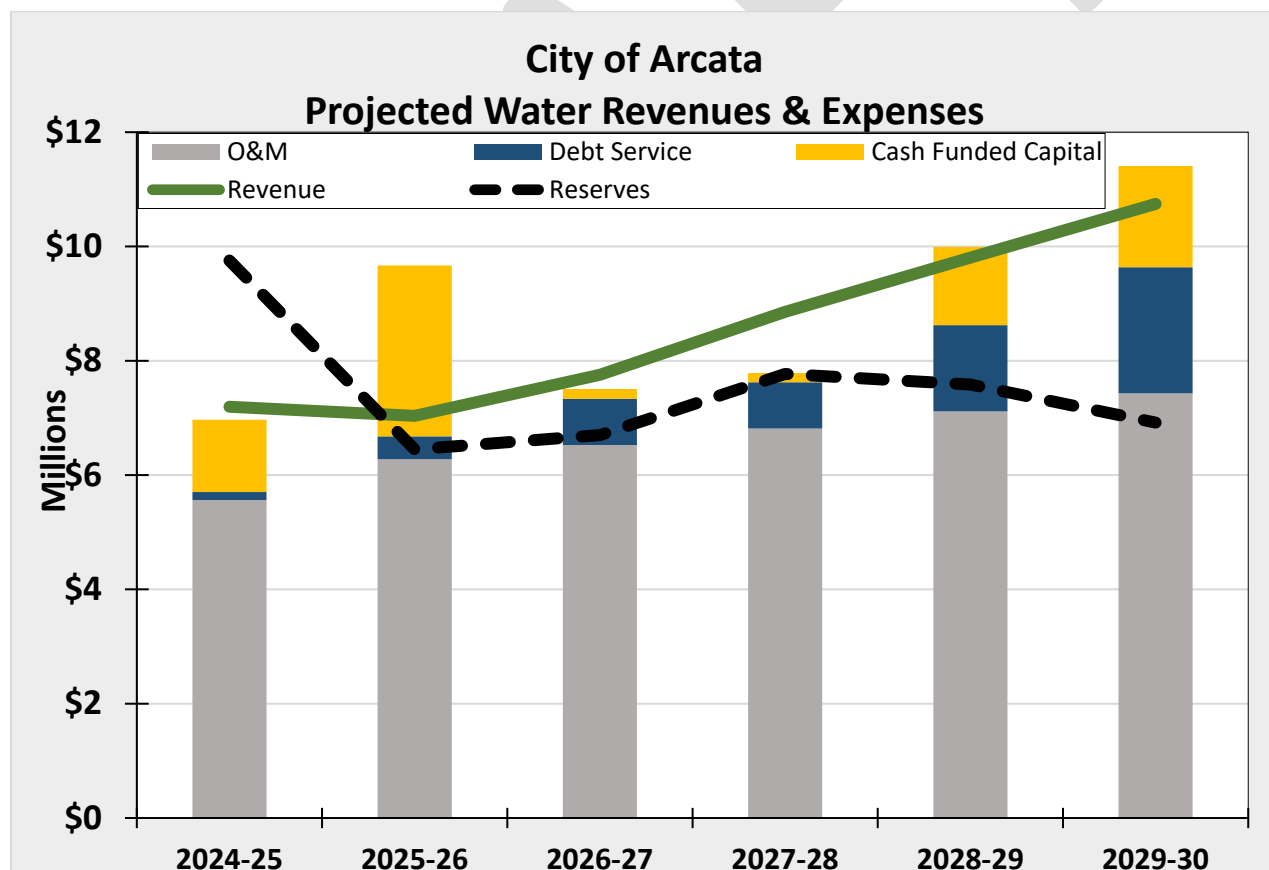
The following section presents a financial plan for the water enterprise for a scenario which includes a prolonged schedule for recovery of financial sustainability for the water enterprise than Scenario 1. A summary of the key elements of the long-term cash flow projections for this scenario is displayed in the following table.

Table 10. Water Scenario 2 Cash Flow Projection Summary

| Scenario 2: Phased-In Revenue Recovery | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| | FY 25-26 | FY 26-27 | FY 27-28 | FY 28-29 | FY 29-30 |
| Ending Reserves | \$6,449,671 | \$6,699,504 | \$7,769,227 | \$7,584,132 | \$6,918,910 |
| Rate Revenue Increase | \$531,647 | \$614,121 | \$483,109 | \$450,901 | \$495,992 |

The following figure shows cash flow projections incorporating the assumptions described above. The rate projections shown on the following table are designed to fund the City's cost of providing service.

Figure 3: Water Scenario 2 Projected Cash Flow Graph



Detailed, long-term, cash flow projections for this scenario are shown in the following table.

Table 11. Projected Revenues & Expenses: Water Scenario 2

| Fiscal Year | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---------------------------------------|----------------------|--------------------|--------------------|--------------------|---------------------|
| <i>Proposed Revenue Increase</i> | <i>23.0%</i> | <i>18.0%</i> | <i>12.0%</i> | <i>10.0%</i> | <i>10.0%</i> |
| Beginning Reserve Balance | \$9,179,175 | \$6,449,671 | \$6,699,504 | \$7,769,277 | \$7,584,132 |
| REVENUES | | | | | |
| Rate Revenues | | | | | |
| Current Rate Revenue | \$5,547,618 | \$6,823,570 | \$8,051,812 | \$9,018,030 | \$9,919,833 |
| <i>Revenue from Rate Increases</i> | 1,275,952 | 1,228,243 | 966,217 | 901,803 | 991,983 |
| <i>Timing adjustment</i> ¹ | (\$744,305) | (\$614,121) | (\$483,109) | (\$450,901) | (\$495,992) |
| Total Rate Revenues | \$6,079,264 | \$7,437,691 | \$8,534,921 | \$9,468,931 | \$10,415,824 |
| Non-Rate Revenues | | | | | |
| Connection Fees | \$680,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 |
| Other Revenues | 93,800 | 89,950 | 85,965 | 81,841 | 77,572 |
| Interest on Pooled Cash ² | \$183,584 | \$128,993 | \$133,990 | \$155,386 | \$151,683 |
| Total Non-Rate Revenues | \$957,384 | \$318,943 | \$319,955 | \$337,227 | \$329,255 |
| Total Revenue | \$7,036,648 | \$7,756,635 | \$8,854,876 | \$9,806,158 | \$10,745,080 |
| EXPENDITURES | | | | | |
| Total O&M | \$6,276,646 | \$6,525,387 | \$6,813,700 | \$7,115,048 | \$7,430,033 |
| Existing Debt Service | 139,089 | 138,562 | 138,551 | 139,028 | 138,666 |
| New Debt Service | 261,250 | 670,853 | 670,853 | 1,369,227 | 2,067,602 |
| Interfund Loan | 99,167 | 0 | 0 | 0 | 0 |
| Rate Funded Capital | \$2,990,000 | \$172,000 | \$162,000 | \$1,368,000 | \$1,774,000 |
| Total Expenditures | \$9,766,152 | \$7,506,802 | \$7,785,104 | \$9,991,303 | \$11,410,301 |
| Net Revenue | (\$2,729,504) | \$249,833 | \$1,069,772 | (\$185,145) | (\$665,221) |
| Ending Fund Balance | \$6,449,671 | \$6,699,504 | \$7,769,277 | \$7,584,132 | \$6,918,910 |
| <i>Debt Service Coverage</i> | <i>1.52</i> | <i>1.52</i> | <i>2.52</i> | <i>1.78</i> | <i>1.50</i> |

1, Reflects rates effective May 1, 2026 and January 1 for each year thereafter.

2, 2% earnings on fund balance.

6 WATER COST OF SERVICE RATE DERIVATION

6.1 Cost of Service Analysis

There must be a cost-based nexus between the revenue requirement from the cash flow and the proposed rates. This section describes the steps BWA took to determine the rate revenue requirement need from each customer class that is proportional to their cost of service.

6.2 Cost Allocation Rate Revenue Requirements

Cost allocation categories are groupings of the water enterprise's non-rate revenues and expenses that are then allocated to the utility's functional components (capacity, all volume, as all other, described below). A functional component reflects a grouping of the utility's expenses whose magnitude is driven by the quantity of a specific unit-of-measure. For example, costs allocated to the all volume functional component are driven in part by the volume of water purchases cost component.

The functional components used in this study are as follows:

- **Capacity** – Fixed costs are recovered per meter. Fixed costs or costs related to system capacity were allocated to this category.
- **All Volume** – Costs reasonably recovered volumetrically were allocated to this category. Volumetric costs are recovered per unit of volume (HCF) based on all projected demand.
- **As All Other** – Items in this category do not impact the functional allocation because they are driven by the overall activity of the utility. This includes interest earnings on fund balances. Interest is allocated entirely to the "As All Other" functional component and does not impact the allocation.

To ensure the rates derived for the next five years are proportional to the costs, the amounts in the cost allocation categories are based on an average of the projected revenues and expenses for the next five years. For each cost allocation category, the expenses are reduced by non-rate revenues to determine the amount in each cost allocation category that needs to be funded by rates.

Related expenses and non-rate revenues were grouped into the following allocation categories before being allocated to each functional category:

- **Administration** – Expenses were allocated 40% to Capacity and 60% to All Volume to reflect that these costs are driven by the overall capacity of the system which is driven both by the projected volume of water sold and the standing capacity in the system.
- **Maintenance** – Expenses are related to maintaining and operating the water system. These costs are allocated 25% to Capacity and 75% to All Volume because these costs related to the overall capacity of the system which is driven both by the projected volume of water sold and the standing capacity in the system.
- **Utilities** – The allocation represents that most of these costs are variable and caused by pumping and treatment, but some of these costs are fixed. Utility expenses are allocated 10% to Capacity

and 90% to All Volume because these costs related primarily driven by the projected volume of water sold.

- **Water Purchases** – Expenses consist of imported water purchases. They are allocated 100% to All Volume to reflect that these costs are driven by the projected volume of water sold.
- **Water Treatment** – Expenses consist of the cost to treat water to potable standards. They are allocated 100% to All Volume to reflect that these costs are incurred to meet the volumetric needs of the City.
- **Interest** – Interest earned on fund balance is allocated entirely to the “As All Other” functional component and does not impact the allocation because interest is driven by the overall activity of the utility.
- **Debt Service** – Expenses are allocated 15% to Capacity and 85% to All Volume because these costs related to the overall capacity of the system both by the projected volume of water sold and the standing capacity in the system.
- **Capital** – Expenses are allocated 15% to Capacity and 85% to All Volume because these costs related to the overall capacity of the system both by the projected volume of water sold and the standing capacity in the system.

6.3 Functional Allocation

The following table shows a breakdown of the water utility’s expenses and offsetting revenues and how they are allocated by function. The proportional allocation is then applied to the rate revenue requirement so that the rates are proportional to the cost of service provided.

Table 12. Functional Allocation

| Allocation Category | 5-Year Average | | | Capacity | All Volume | Total |
|---------------------------------|----------------|------------------------------|------------------------|--------------------|--------------------|--------------------|
| | Expenses | Less Non- Rate Revenue | Revenue Requirement | | | |
| Administration | \$4,258,016 | \$254,128 | \$4,003,888 | 40% | 60% | 100% |
| Maintenance | 434,812 | 0 | 434,812 | 25% | 75% | 100% |
| Utilities | 92,077 | 0 | 92,077 | 10% | 90% | 100% |
| Water Purchases | 1,925,476 | 0 | 1,925,476 | 0% | 100% | 100% |
| Water Treatment | 121,781 | 0 | 121,781 | 0% | 100% | 100% |
| Debt Service | 1,103,134 | 0 | 1,103,134 | 15% | 85% | 100% |
| Capital | 1,293,200 | 216,000 | 1,077,200 | 15% | 85% | 100% |
| Functional Allocation \$ | | | | \$2,046,516 | \$6,711,852 | \$8,758,368 |
| Functional Allocation % | | | | 23.37% | 76.63% | 100.00% |
| Revenue Requirement | | | | \$1,296,279 | \$4,251,339 | \$5,547,618 |

6.4 Water Rate Structure Recommendations

Bartle Wells Associates reviewed the City's water rates and recommends charging outside city customers the same rates charged to inside city customers to improve compliance with the requirements of Proposition 218.

6.5 Rate Derivation

The allocated revenue requirements need to be recovered on a reasonable per unit basis to be proportional to the service provided.

Monthly Fixed Service Charge

This charge applies to all active services. It recovers the Capacity functional component revenue requirement on a per EDU basis. The unit costs per EDU varies by meter size. EDU ratios are based on the AWWA meter equivalent ratio for each meter size as described in Section 4.

Volumetric Charge

This charge applies to every unit of water sold. It recovers the All Volume functional component revenue requirement on a unit (hundred cubic feet, HCF) basis.

The following table shows the unit rate derivation of the fixed and volumetric charges.

Table 13. Unit Rate Derivation

| Allocation Units | Capacity | All Volume |
|----------------------------|-----------------|-------------------|
| <i>Unit of Measure</i> | <i>EDU</i> | <i>HCF</i> |
| Allocation Units | 104,820 | 590,000 |
| Revenue Requirement | \$1,296,279 | \$4,251,339 |
| Unit Cost (\$/Unit) | \$12.53 | \$7.18 |

While the All Volume unit rate can be recovered on the basis of every HCF sold, the EDU rate must be calculated for each meter size. This is shown in the following table.

Table 14. Fixed Rate Derivation

| Meter Size | AWWA Capacity | Monthly |
|------------|---------------|-----------------|
| | Ratio | Fixed Charge |
| 5/8" | 1.00 | \$12.53 |
| 3/4" | 1.00 | \$12.53 |
| 1" | 1.67 | \$20.93 |
| 1 1/2" | 3.33 | \$41.73 |
| 2" | 5.33 | \$66.80 |
| 3" | 10.00 | \$125.33 |
| 4" | 16.67 | \$208.92 |
| 6" | 33.33 | \$417.72 |
| 8" | 53.33 | \$668.37 |
| 10" | 76.67 | \$960.88 |

6.6 Recommended Water Rates

The recommended rates incorporate some modifications to the City's water rate structure designed to align rates with the current cost of providing service and reflect policy input provided by the City. Due to these modifications, impacts to water bills will vary based on customer class and water use when the first-year proposed rates are implemented.

The following tables show a 5-year schedule of recommended water rates for each scenario.

Table 15. Scenario 1 Recommended Water Rates

| | 2025/26 | 5/1/2026 | 7/1/2027 | 7/1/2028 | 7/1/2029 | 7/1/2030 |
|----------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Current</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> |
| Volumetric Rates (\$/HCF) | | | | | | |
| All Usage | \$7.15 | \$10.33 | \$10.33 | \$11.37 | \$12.50 | \$13.50 |
| Fixed Charges (\$/meter) | | | | | | |
| Meter Size | | | | | | |
| 5/8" and 3/4" | \$12.23 | \$18.05 | \$18.05 | \$19.85 | \$21.84 | \$23.58 |
| 1" | \$20.43 | \$30.14 | \$30.14 | \$33.15 | \$36.47 | \$39.39 |
| 1 1/2" | \$40.73 | \$60.10 | \$60.10 | \$66.11 | \$72.72 | \$78.53 |
| 2" | \$65.19 | \$96.19 | \$96.19 | \$105.81 | \$116.39 | \$125.70 |
| 3" | \$122.31 | \$180.47 | \$180.47 | \$198.52 | \$218.37 | \$235.84 |
| 4" | \$203.89 | \$300.85 | \$300.85 | \$330.93 | \$364.02 | \$393.14 |
| 6" | \$407.65 | \$601.51 | \$601.51 | \$661.66 | \$727.83 | \$786.05 |
| 8" | \$652.27 | \$962.45 | \$962.45 | \$1,058.70 | \$1,164.57 | \$1,257.73 |
| 10" | \$937.74 | \$1,383.67 | \$1,383.67 | \$1,522.04 | \$1,674.24 | \$1,808.18 |

Table 16. Scenario 2 Recommended Water Rates

| | 2025/26 | 5/1/2026 | 1/1/2027 | 1/1/2028 | 1/1/2029 | 1/1/2030 |
|----------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Current</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> |
| Volumetric Rates (\$/HCF) | | | | | | |
| All Usage | \$7.15 | \$8.83 | \$10.42 | \$11.67 | \$12.83 | \$14.12 |
| Fixed Charges (\$/meter) | | | | | | |
| Meter Size | | | | | | |
| 5/8" and 3/4" | \$12.23 | \$15.42 | \$18.19 | \$20.37 | \$22.41 | \$24.65 |
| 1" | \$20.43 | \$25.74 | \$30.38 | \$34.02 | \$37.42 | \$41.17 |
| 1 1/2" | \$40.73 | \$51.33 | \$60.57 | \$67.84 | \$74.63 | \$82.09 |
| 2" | \$65.19 | \$82.16 | \$96.95 | \$108.59 | \$119.45 | \$131.39 |
| 3" | \$122.31 | \$154.15 | \$181.90 | \$203.73 | \$224.10 | \$246.51 |
| 4" | \$203.89 | \$256.97 | \$303.23 | \$339.61 | \$373.58 | \$410.93 |
| 6" | \$407.65 | \$513.79 | \$606.27 | \$679.03 | \$746.93 | \$821.62 |
| 8" | \$652.27 | \$822.10 | \$970.07 | \$1,086.48 | \$1,195.13 | \$1,314.64 |
| 10" | \$937.74 | \$1,181.89 | \$1,394.63 | \$1,561.98 | \$1,718.18 | \$1,890.00 |

6.7 Bill Impacts

The following tables show the impacts of the proposed water rates for each scenario on a range of single-family customers with different levels of consumption.

Table 17. Scenario 1 Bill Impacts

| Rate Category | Existing Rates | Proposed Rates | | |
|----------------------|-----------------------|-----------------------|--------------------|-------------------|
| All Usage | \$7.15 | \$10.33 | | |
| 5/8" Monthly Fixed | \$12.23 | \$18.05 | | |
| Water Use | Existing Rates | Proposed Rates | Change (\$) | Change (%) |
| 2 HCF | \$26.53 | \$38.71 | \$12.18 | 46% |
| 5 HCF | \$47.98 | \$69.70 | \$21.72 | 45% |
| 10 HCF | \$83.73 | \$121.35 | \$37.62 | 45% |
| 20 HCF | \$155.23 | \$224.65 | \$69.42 | 45% |

Table 18. Scenario 2 Bill Impacts

| Rate Category | Existing Rates | Proposed Rates | | |
|----------------------|-----------------------|-----------------------|--------------------|-------------------|
| All Usage | \$7.15 | \$8.83 | | |
| 5/8" Monthly Fixed | \$12.23 | \$15.42 | | |
| Water Use | Existing Rates | Proposed Rates | Change (\$) | Change (%) |
| 2 HCF | \$26.53 | \$33.08 | \$6.55 | 25% |
| 5 HCF | \$47.98 | \$59.57 | \$11.59 | 24% |
| 10 HCF | \$83.73 | \$103.72 | \$19.99 | 24% |
| 20 HCF | \$155.23 | \$192.02 | \$36.79 | 24% |

The following figures summarize the bill impacts presented in the previous tables.

Figure 4: Scenario 1 Bill Impacts

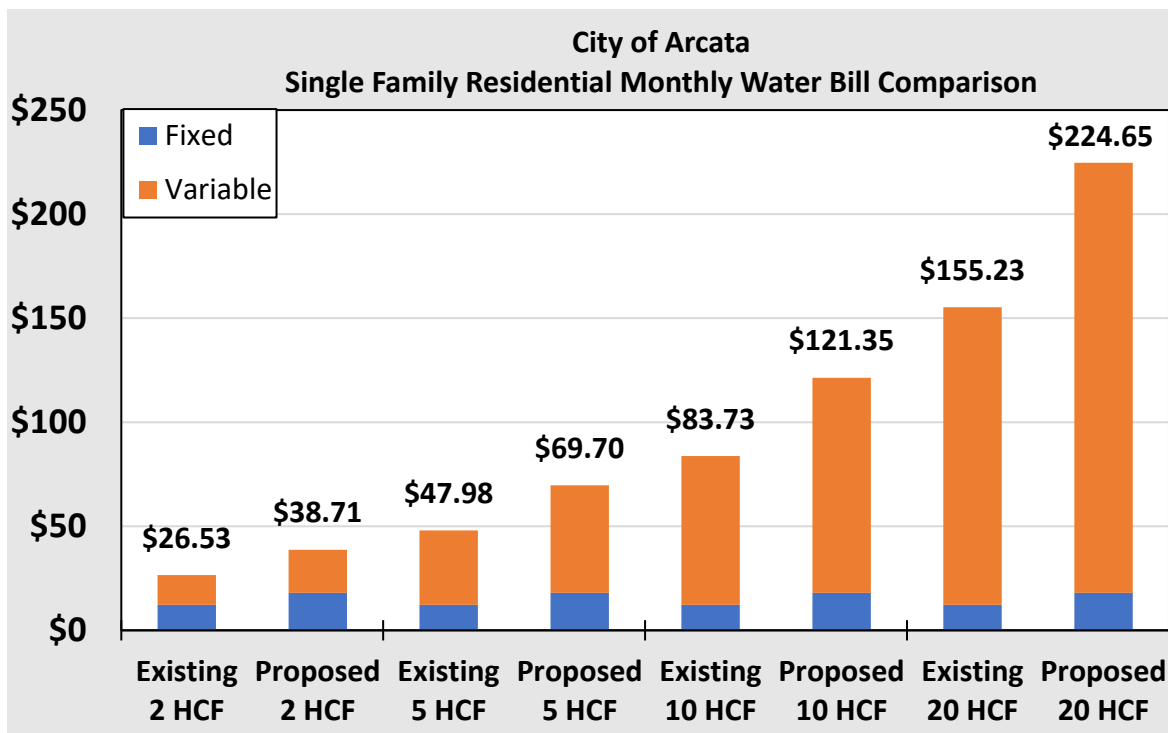
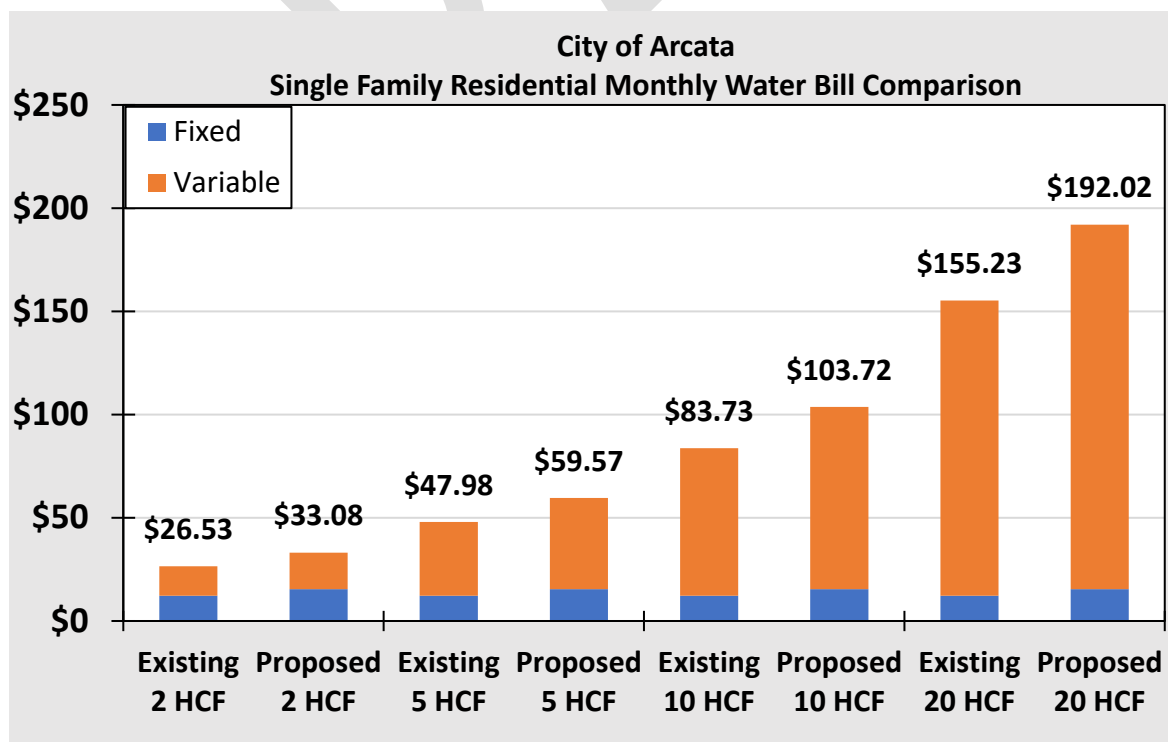


Figure 5: Scenario 2 Bill Impacts



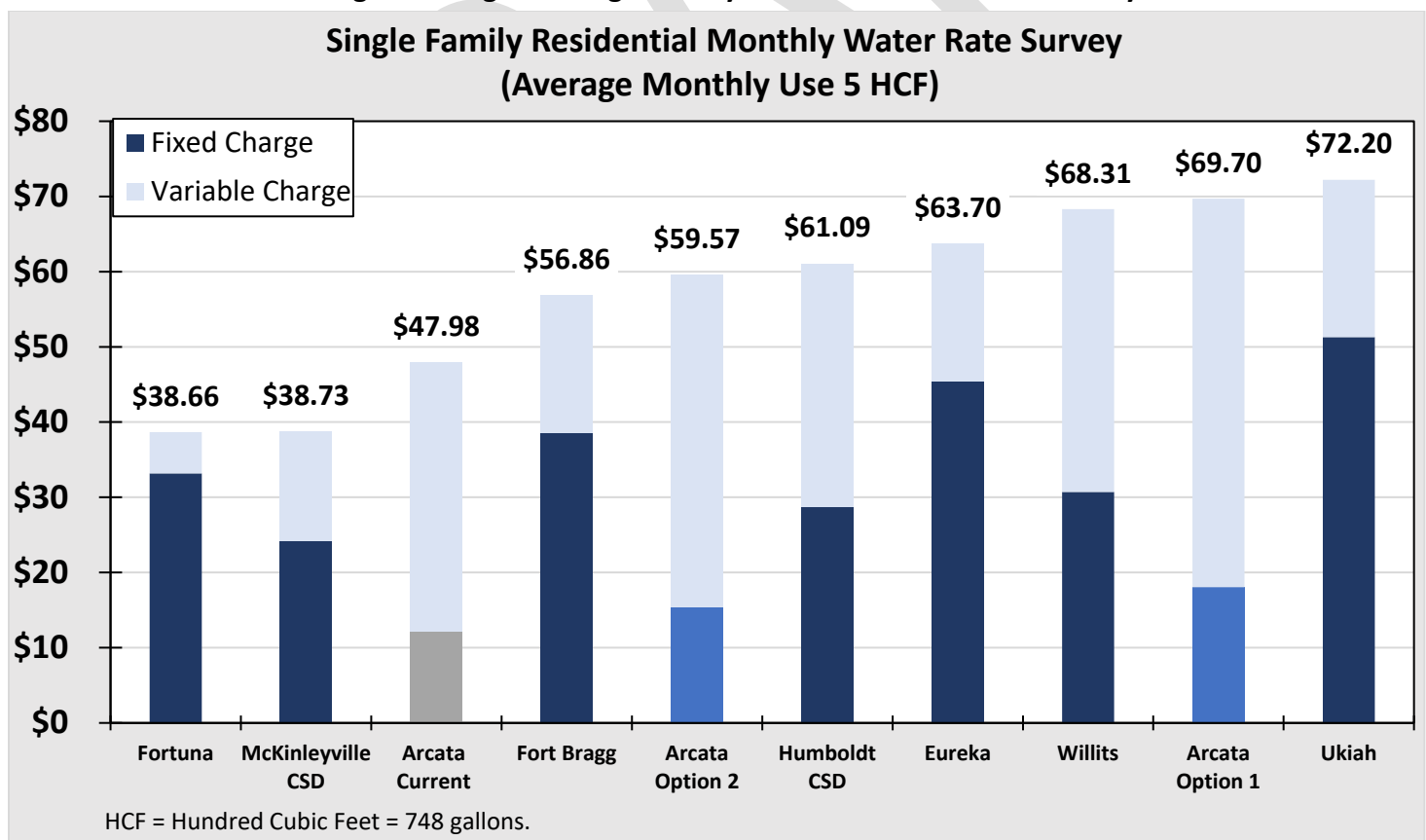
7 WATER SUMMARY AND RECOMMENDATIONS

7.1 Regional Water Rate Survey

BWA conducted a survey of current water rates for single-family residences including the City and other regional water systems. Unfortunately, due to time and cost restrictions, the survey is limited to only providing data in the form of the typical monthly billing amount of each water provider for a single-family residence. This limited comparison does not account for any of the differences that are highly likely to exist among the systems. The City of Arcata currently applies monthly water charges based on meter size and use. While other water agencies use similar metrics, each agency would have developed their own fixed and volumetric rates based on their own cost of service to account for the specific operating, treatment, and infrastructure needs of their water system. Nevertheless, regional surveys can still be used as an informational tool as long as agencies are mindful of the differences that exist in the development of an agency's water rates.

The following chart compares the monthly water bills for a typical single-family home to those of other regional agencies. The City's current water rates are at the lower end of the range compared to other regional agencies surveyed.

Figure 6: Regional Single Family Residential Water Rate Survey



While the proposed water rates developed in this study are higher than the existing rates, they are developed to reflect the current cost of service for the City's water system. It is also important to note that many of the agencies included in the survey are facing similar financial pressures and are either in the middle of multi-year rate increases or are anticipating raising rates in upcoming years.

7.2 Water Summary and Recommendations

The water enterprise is facing the need to increase rate revenues in order to 1) have revenues exceed expenses and not need financial support from the Wastewater Fund and 2) have revenues to fund capital and 3) qualify for financing and grants to reduce the burden on the City's rate payers.

BWA has the following recommendations for the water enterprise:

- The approved loan from the Wastewater Fund is not sufficient to fund the capital projects that are under way. BWA recommends implementing rate increases at the beginning of 2026 to support issuing bonds for \$9.5 million to be used for refunding the wastewater enterprise and maintaining prudent reserves. Without securing additional financing, the water fund reserves are expected to drop to \$500,000 which is imprudent and will have a significant impact on the ability of the enterprise to borrow funds in the future.
- The City should raise water rates in an amount large enough to pay for operating expenses, capital projects and to maintain prudent reserves.
- After the water enterprise's finances are stabilized, BWA recommends the City continue to adopt consistent, incremental increases to prevent the need for larger, one-time rate increases.
- When adopting new rates, BWA recommends the City adopt the recommended rate structure changes to bring the water enterprise's rates into greater compliance with Prop. 218.

8 WASTEWATER FINANCES & CASH FLOW PROJECTIONS

8.1 Wastewater Financial Overview

Bartle Wells Associates conducted an independent evaluation of the wastewater enterprise finances. Key observations include:

- The wastewater enterprise is in overall good financial health but will need rate increases to keep revenues in line with rising costs and to cash fund needed capital improvements.
- The City projects capital expenses of \$51.4 million from FY 2025-26 through FY 2029-30.
- Projected grant funding for Capital projects from FY 2025-26 through FY 2029-30 is \$26.5 million.

BWA developed long-term cash flow projections to determine the wastewater enterprise's annual revenue requirements and project required wastewater rate revenue increases. The financial projections incorporate the latest information available as well as reasonable and slightly conservative assumptions.

8.2 Wastewater Financial Plan Assumptions

Assumptions were developed based on input from City Staff, historical escalation factors, and conservative projections for future escalation factors to reasonably ensure that the maximum rates adopted by the City will provide sufficient revenues to support the City's water operations. Key information and assumptions include:

Reserves

- BWA recommends the City maintain prudent fund reserves. BWA recommends the wastewater enterprise maintain one year of operating expenses in reserves for cash flow and liquidity purposes in case of revenue loss/interruption, and to be able to cover costs during unforeseen emergencies. Fund reserves will fluctuate based on the timing of revenues and expenses, but the proposed rates are projected to provide the wastewater enterprise sufficient fund reserves. At a minimum, the wastewater enterprise should aim to hold at least three months of operating expenses in reserve.

Revenue Assumptions

- The wastewater enterprise is projected to begin FY 2025-26 with \$14.5 million in reserves.
- BWA did not escalate revenues for miscellaneous non-rate wastewater revenues in its projections. Recommended rates are the maximum rates the City can adopt, which is why BWA uses conservative estimates when making revenue projections.
- As new construction can be unpredictable, BWA did not escalate revenues for growth, connection charges, or building permit revenue in its projections. Recommended rates are the maximum rates

the City can adopt, which is why BWA uses conservative estimates when making revenue projections.

- Interest income is estimated based on projected reserve levels. Future projections are estimated based on conservative interest earning estimate of 2.0%. Actual interest amounts will vary based on reserves and future interest earning rates.
- Projected grant funding for Capital projects from FY 2025-26 through FY 2029-30 is \$26.5 million.

Expense Assumptions

- Operating and maintenance costs are based on the FY 2025-2026 budget and include updated estimates developed with the help of City Staff.
- General operating and capital cost inflation is projected to escalate at an annual rate of 4% in FY 2026-2027 and at an annual rate of 4% thereafter. This is a conservative estimate to account for future cost inflation and is based on recent and historic inflation.
- The Wastewater Enterprise will need to cash fund at least \$16.9 million in capital spending in the next five years.
- The wastewater enterprise does not have any outstanding debt. Debt service projections are based on projected issuances of new debt. The financial plan assumes the issuance of \$8 million in FY 2028-29 to fund critical wastewater treatment facility and system improvement projects.

8.3 Financial Plan Drivers

The City is anticipating a number of financial challenges that will require rate increases in upcoming years. Key drivers of future rate increases are:

Ongoing Cost Inflation

The City's wastewater enterprise faces ongoing operating cost inflation due to annual increases in a range of expenses including staffing, utilities, insurance, supplies, etc. On top of rate increases needed for other purposes, annual rate increases are needed to keep revenues aligned with cost inflation and prevent rates from falling behind the cost of providing service. Historically, inflation consistently hovered between 2% and 3%. Currently, inflation has mostly normalized after forty-year highs, but remains near 3%. Given the recent volatility, BWA designed the inflation projections to be slightly conservative to leave the City in a strong financial position while not driving excessive rate increases.

Capital Improvement Needs & Rehabilitation of Aging Infrastructure

The City takes a proactive approach to maintaining its wastewater system which requires a steady stream of repair, improvement, and replacement projects. Accounting for construction cost inflation, the City has identified approximately \$51.4 million of capital improvement projects over the next 5 years.

There are two critical upcoming capital projects for the wastewater system. The first major project is the Arcata Wastewater Treatment Facility (AWTF) project. The AWTF is located in close proximity to the Humboldt Bay and is at increased risk for flooding events, sea level rise, and other environmental catastrophes such as severe storms, earthquakes, and tsunamis. The AWTF project includes major facility infrastructure upgrades and enhancements to the existing levee protecting the facility's structural and operational integrity. The second major upcoming capital project is the sewer inflow and infiltration (I&I) reduction project which aims to reduce sewer overflow events by identifying and replacing leaky, undersized, and unlined sewer pipes. This study assumes the City will finance the majority of project costs by issuing new debt. While the recommended rate increases ensure the City will meet its new debt servicing requirements, it is important to note that the additional debt servicing will impact the City's ability to use future wastewater revenues to fund other ongoing wastewater projects.

The following table shows the projected capital funding sources for the next five years.

Table 19. Capital Funding Sources

| Capital Improvement Projects | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|--|---------------------|--------------------|---------------------|--------------------|---------------------|
| | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> |
| Total Project Cost (Inflation \$) | \$12,000,000 | \$5,902,000 | \$11,610,000 | \$9,436,000 | \$12,470,000 |
| Capital Funding | \$12,000,000 | \$5,902,000 | \$11,610,000 | \$9,436,000 | \$12,470,000 |
| Grants | \$11,500,000 | \$5,000,000 | \$10,000,000 | \$0 | \$0 |
| Use of New Debt Proceeds | 0 | 0 | 0 | 4,000,000 | 4,000,000 |
| Cash Funded | \$500,000 | \$902,000 | \$1,610,000 | \$5,436,000 | \$8,470,000 |

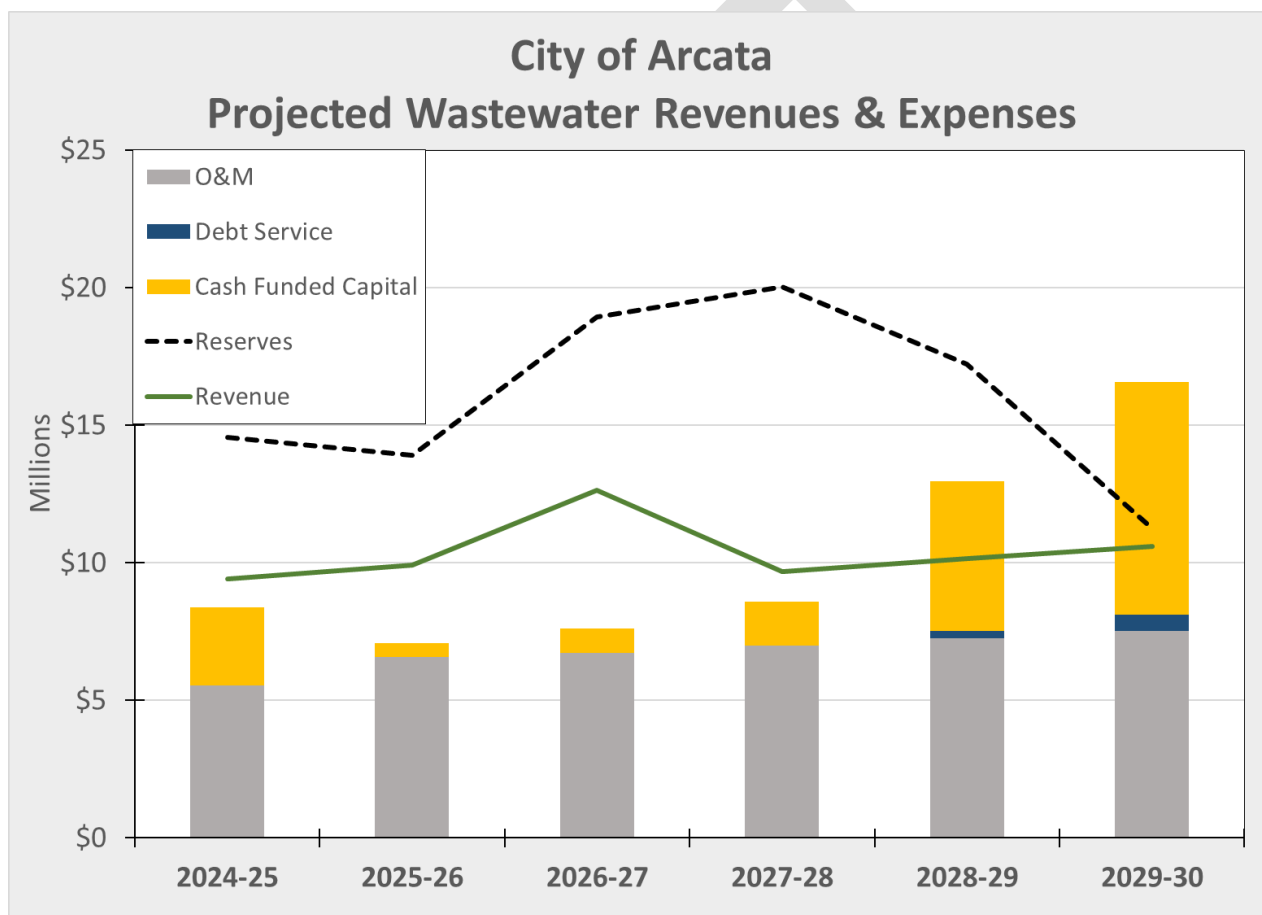
8.4 Wastewater Cash Flow Projections

Long-term cash flow projections were developed based on the assumptions and key drivers of future rate increases described above. The projections were used to determine the wastewater utility's annual revenue requirements and project required wastewater rate revenue increases. The long-term cash flow projections incorporate the latest information available from the City's budget, annual reports, capital spending projections, flow data, as well as a number of reasonable assumptions developed with input from the City. The overall rate revenue increases are designed to fund the City's cost of providing service, maintain roughly balanced budgets, maintain healthy debt service coverage, and maintain prudent reserves.

The projections indicate the need for rate increases. Actual impacts to customers wastewater bills will vary based on demand and wastewater strength, due to the outcome of the updated cost-of-service analysis. In future years, the City can re-evaluate its finances and revenue requirements and adjust rates as needed based on updated projections. However, while the City always has the flexibility to implement rate adjustments that are lower than adopted, pursuant to Proposition 218, future rates cannot exceed adopted increases without going through the Proposition 218 process again.

The following figure shows cash flow projections incorporating the assumptions described above.

Figure 7: Projected Wastewater Revenues & Expenses



The rate projections shown on the following table are designed to fund the City’s cost of providing service while maintaining balanced budgets and building prudent minimal levels of fund reserves each year.

Table 20. Projected Wastewater Revenues & Expenses

| Fiscal Year | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|--------------------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| <i>Proposed Rate Increase</i> | <i>0.0%</i> | <i>0.0%</i> | <i>5.0%</i> | <i>5.0%</i> | <i>5.0%</i> |
| Beginning Fund Balance | \$14,554,148 | \$13,899,822 | \$13,925,486 | \$11,218,753 | \$9,133,986 |
| REVENUES | | | | | |
| Rate Revenues | | | | | |
| Current Wastewater Rates | \$8,800,000 | \$8,800,000 | \$8,800,000 | \$9,240,000 | \$9,702,000 |
| <i>Proposed Rates</i> | <u>0</u> | <u>0</u> | <u>440,000</u> | <u>462,000</u> | <u>485,100</u> |
| Total Rate Revenues | \$8,800,000 | \$8,800,000 | \$9,240,000 | \$9,702,000 | \$10,187,100 |
| Non-Rate Revenues | | | | | |
| Interest on Pooled Cash ² | \$291,083 | \$277,996 | \$378,510 | \$400,455 | \$344,426 |
| Connection Fees | 750,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Water Loan Repayment | 99,167 | 3,500,000 | 0 | 0 | 0 |
| Other Revenues | <u>(\$23,800)</u> | <u>(\$33,800)</u> | <u>(\$33,800)</u> | <u>(\$33,800)</u> | <u>(\$33,800)</u> |
| Total Non-Rate Revenues | <u>\$1,116,450</u> | <u>\$3,844,196</u> | <u>\$444,710</u> | <u>\$466,655</u> | <u>\$410,626</u> |
| Total Revenues | \$9,916,450 | \$12,644,196 | \$9,684,710 | \$10,168,655 | \$10,597,726 |
| EXPENDITURES | | | | | |
| Total O&M | \$6,570,775 | \$6,716,532 | \$6,977,458 | \$7,248,550 | \$7,530,206 |
| Loan to Water Fund | 3,500,000 | 0 | 0 | 0 | 0 |
| Existing Debt Service | 0 | 0 | 0 | 0 | 0 |
| New Debt Service | 0 | 0 | 0 | 285,542 | 571,085 |
| Rate Funded Capital | \$500,000 | \$902,000 | \$1,610,000 | \$5,436,000 | \$8,470,000 |
| Total Expenditures | \$10,570,775 | \$7,618,532 | \$8,587,458 | \$12,970,093 | \$16,571,291 |
| Net Revenue | (\$654,325) | \$5,025,664 | \$1,097,252 | (\$2,801,438) | (\$5,973,565) |
| Ending Fund Balance | \$13,899,822 | \$18,925,486 | \$20,022,738 | \$17,221,300 | \$11,247,736 |
| <i>Debt Service Coverage</i> | <i>N/A</i> | <i>N/A</i> | <i>N/A</i> | <i>10.23</i> | <i>5.37</i> |

1, Reflects rates effective July 1, 2026, and July 1 each year thereafter.

2, 2% earnings on fund balance.

9 WASTEWATER COST OF SERVICE ANALYSIS AND RATE DERIVATION

9.1 Wastewater Cost of Service Rate Derivation Process

BWA derived updated wastewater rates that account for both a) the overall rate increases identified in the financial projections, and b) proposed rate structure modifications. The proposed rates are designed to equitably apportion and recover costs from the City's customer base. The basic methodology used to develop new rates includes the steps summarized in the figure below.

Figure 8: Wastewater Cost of Service Analysis and Rate Derivation Process

Estimate Wastewater Flow & Strength Loadings

Wastewater flow volume, Biochemical Oxygen Demand (BOD) concentrations, and Total Suspended Solids (TSS) concentrations were determined for each customer class.

Allocate Cost to Functional Component

Each cost was allocated to function: fixed (per customer), flow, BOD, and TSS.

Derive Unit Rates for Functional Components Based on FY 25/26 Revenue

Divide costs allocated for recovery from functional components by allocation units to derive unit costs for functional components.

Determine FY 25/26 Rate Revenue Requirements by Customer Classes

Multiply functional unit rates by the billing units associated with each functional component for each customer class to determine the revenue requirement of each class.

Residential Rate Derivation

Fixed and volumetric portions of the residential revenue requirement were identified. Rates were derived for single family residences by dividing the total revenue requirement allocated by the total number of residential units.

Commercial Rate Derivation

Fixed and volumetric portions of the commercial revenue requirement were identified by customer class. Fixed rates were derived based on the identified fixed portion of the revenue requirement divided by the number of customers in each class. Volumetric rates were derived to recover the remaining revenue requirement divided by the projected demand flows and estimated wastewater strength of each class.

9.2 Customer Flows and Loadings

Estimated flows and loadings of each customer class are based on analysis of recent annual water consumption data by fiscal year and wastewater strength assignments for each customer class.

- Single Family Residential flows per unit are based on the average winter water use per unit. Residential wastewater strength concentrations are based on estimates previously published by the State Water Resources Control Board (SWRCB), adjusted for water conservation, City specific demands, and input from City Staff.
- Commercial flows are estimated based on projected water use. A return to sewer factor (RTS) is applied to adjust water use to estimated flows into the wastewater system. Wastewater strength assumptions for the customer classes are based on the type of customers grouped in each class.

The resulting flow and strength projections for all wastewater customer classes are shown on the following tables. These projections provide the basis for allocating costs and deriving equitable wastewater rates for each customer class.

Table 21. Wastewater Flows

| Customer Class | Accounts | Units | Est. Mo Flow ¹ | Projected | <u>Projected Wastewater Flow</u> | | | |
|----------------|----------|-------|---------------------------|----------------------------|----------------------------------|---------|-----------------|------------------|
| | | | | Water Use | Flow Factor ⁴ | HCF | MG ⁵ | GPD ⁶ |
| | | | | (hcf per EDU) ² | (hcf) ³ | (%) | | |
| Residential | | | | | | | | |
| Single-Family | 4,949 | 4,949 | 4.00 | 237,552 | 100% | 237,552 | 178 | 486,853 |
| Multi-Family | 98 | 1,352 | 3.20 | 51,917 | 100% | 51,917 | 39 | 106,401 |
| Commercial | | | | | | | | |
| Low | 381 | | | 91,116 | 80% | 72,893 | 55 | 149,390 |
| Medium | 136 | | | 84,100 | 80% | 67,280 | 50 | 137,887 |
| High | 48 | | | 16,115 | 80% | 12,892 | 10 | 26,422 |
| Total | 5,612 | | | | | 442,533 | 331 | 906,954 |

Table 22. Wastewater Strength Loadings

| Customer Class | <i><u>Projected</u></i> <i><u>Wastewater Flow</u></i> | <i><u>Strength (mg/l)¹</u></i> | | <i><u>Loadings (lbs)</u></i> | | Annual Bills (#) |
|----------------|--|---|----------------------------|------------------------------|--------------|---------------------|
| | GPD | BOD ² (mg/l) | TSS ³ (mg/l) | BOD (lbs) | TSS (lbs) | |
| Residential | | | | | | |
| Single-Family | 486,853 | 300 | 300 | 444,973 | 444,973 | 59,388 |
| Multi-Family | 106,401 | 300 | 300 | 97,248 | 97,248 | 16,224 |
| Commercial | | | | | | |
| Low | 149,390 | 200 | 200 | 91,026 | 91,026 | 4,572 |
| Medium | 137,887 | 300 | 300 | 126,026 | 126,026 | 1,632 |
| High | 26,422 | 600 | 600 | 48,299 | 48,299 | 576 |
| Total | 906,954 | | | 807,572 | 807,572 | 82,392 |

¹ State Water Resource Control Board (SWRCB) Guidelines for Wastewater Agencies.

² "BOD" stands for biochemical oxygen demand.

³ "TSS" stands for total suspended solids.

9.3 Cost of Service Analysis

There must be a cost-based nexus between the revenue requirement from the cash flow and the proposed rates. This section describes the steps BWA took to determine the rate revenue requirement need from each customer class that is proportional to their cost of service.

9.3.1 Cost Allocation Rate Revenue Requirements

Cost allocation categories are groupings of the wastewater enterprise's non-rate revenues and expenses that are then allocated to the utility's functional components (Fixed, Flow, BOD & TSS, described in the next section).

To ensure the rates derived for the next five years are proportional to the costs, the amounts in the allocation categories are based on an average of the projected revenues and expenses for the next five years. The expenses are reduced by non-rate revenues to determine the amount in each cost allocation category that needs to be funded by rates and then dividing each functional component's revenue requirements by the allocations units most reasonably related to each function.

Related expenses were grouped into the following cost allocation categories before being allocated to each functional category:

- **Collection** – Expenses in this category are related to the wastewater collection system. These costs are largely driven by the volume of wastewater flow.

- **Treatment** – Expenses in this category are related to wastewater treatment. These costs are largely driven by the volume and strength of wastewater flows.
- **Debt Service** – Expenses in this category reflect annual debt service payments. Expenses in this category are allocated to the flow and strength functional components based on the blend of capital collection and treatment projects.
- **Capital** – Expenses in this category reflect costs for capital projects. These costs are largely driven by the volume of wastewater flow and also impacted by the number of connections to the system. Expenses in this category are allocated to the fixed and flow and strength functional components based on the blend of capital collection and treatment projects.

9.3.2 Functional Allocation

The purpose of the functional allocation is to determine the portion of rate revenues needed to support each function of the wastewater system. A functional component reflects a grouping of the utility's expenses whose magnitude is driven by the quantity of a specific unit-of-measure. For example, costs allocated to the flow functional component are driven by the volume of wastewater flows.

The functional components used in this study are as follows:

- **Fixed** – Costs related to providing service to each customer were allocated to this functional component. These costs are related to the number of customers served by the City.
- **Flow** – Costs related to system flows were allocated to this functional component. These costs are related to the volume of wastewater flows.
- **BOD** – Costs related to treating biochemical oxygen demand are allocated to this functional component. These costs are allocated related to the pounds of BOD loadings treated.
- **TSS** – Costs related to treating total suspended solids are allocated to this functional component. These costs are allocated related to the pounds of TSS loadings treated.

Wastewater system costs net of non-rate revenues are assigned to each allocation category for rate revenue recovery via the functional cost components of fixed, flow, BOD, and TSS. While there is no single correct approach for cost allocation, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified. This process is intended to proportionately allocate costs to each functional component to determine the revenue requirement for each component. The allocations to each functional component were based on input from City staff.

The following table shows a breakdown of the wastewater utility's expenses and offsetting revenues i.e., the revenue recovery needed from rates for each cost category allocated by function. The proportional allocation is then applied to the rate revenue requirement so that the rates are

proportional to the cost of service provided. The result of this allocation is the percent of the revenue requirement associated with each functional allocation category.

Table 23. Rate Revenue Requirements by Functional Components

| Wastewater Cost Component | 5-Year Average | Fixed | Flow | BOD | TSS |
|----------------------------------|-----------------------|------------------|--------------------|--------------------|--------------------|
| Operating Costs | | | | | |
| Collection | \$2,251,662 | 10% | 85% | 5% | 5% |
| Treatment | 4,757,043 | 10% | 30% | 30% | 30% |
| Non-Operating Costs | | | | | |
| Debt Service | 85,663 | 0% | 33% | 33% | 33% |
| Cash-Funded Capital Spending | 3,383,600 | 10% | 85% | 5% | 5% |
| Sources | | | | | |
| Connection Fees | (230,000) | 10% | 85% | 5% | 5% |
| Use of Reserves | (661,282) | 10% | 85% | 5% | 5% |
| Functional Allocation \$ | \$9,586,685 | \$950,102 | \$5,488,049 | \$1,692,866 | \$1,692,866 |
| Functional Allocation % | | 7.44% | 57.25% | 17.66% | 17.66% |
| Revenue Requirement | \$8,800,000 | \$654,402 | \$5,037,699 | \$1,553,949 | \$1,553,949 |

Approximately \$644,000 of the wastewater utility's costs are fixed expenses that do not vary with changes in customer flow and strength characteristics.

9.3.3 Functional Component Unit Costs

The table below calculates the unit rates for each cost component by function. The wastewater rate revenue requirements from the prior table for each functional component are divided by the units related to each function.

Table 24. Functional Component Unit Costs

| Allocation Units | Flow | BOD | TSS | Fixed |
|------------------------------|----------------|---------------|---------------|-------------------|
| | <i>(hcf)</i> | <i>(lbs)</i> | <i>(lbs)</i> | <i>(per bill)</i> |
| Demand Units | 442,533 | 807,572 | 807,572 | 82,392 |
| Revenue Requirement | \$5,037,699 | \$1,553,949 | \$1,553,949 | \$654,402 |
| Functional Unit Rates | \$11.38 | \$1.92 | \$1.92 | \$7.94 |

9.3.4 Rate Revenue Requirements by Customer Class

The total revenue requirement for each customer class is calculated by multiplying the unit rate for each functional cost component by the units related to each function.

The table below details the units related to each function for each customer class.

Table 25. Functional Allocation Units by Class

| Allocation Units | Flow | BOD | TSS | Annual Bills |
|-------------------------|--------------|--------------|--------------|---------------------|
| | <i>(hcf)</i> | <i>(lbs)</i> | <i>(lbs)</i> | <i>(#)</i> |
| Residential | | | | |
| Single-Family | 237,552 | 444,973 | 444,973 | 59,388 |
| Multi-Family | 51,917 | 97,248 | 97,248 | 16,224 |
| Commercial | | | | |
| Low Strength | 72,893 | 91,026 | 91,026 | 4,572 |
| Medium Strength | 67,280 | 126,026 | 126,026 | 1,632 |
| High Strength | 12,892 | 48,299 | 48,299 | 576 |

The table below details the total revenue requirements by functional cost component for each customer class.

Table 26. Total Functional Rate Revenue Requirements by Class

| Revenue Requirements | Flow | BOD | TSS | Variable Revenue Requirement | Fixed Revenue Requirement | Total Revenue Requirement |
|-----------------------------|--------------|--------------|--------------|-------------------------------------|----------------------------------|----------------------------------|
| | <i>(hcf)</i> | <i>(lbs)</i> | <i>(lbs)</i> | | | <i>(\$)</i> |
| Residential | | | | | | |
| Single-Family | \$2,704,237 | \$856,227 | \$856,227 | \$4,416,692 | \$471,692 | \$4,888,384 |
| Multi-Family | \$591,009 | \$187,128 | \$187,128 | \$965,264 | \$128,860 | \$1,094,124 |
| Commercial | | | | | | |
| Low Strength | \$829,792 | \$175,155 | \$175,155 | \$1,180,102 | \$36,313 | 1,216,415 |
| Medium Strength | \$765,899 | \$242,502 | \$242,502 | \$1,250,903 | \$12,962 | 1,263,865 |
| High Strength | \$146,763 | \$92,937 | \$92,937 | \$332,637 | \$4,575 | 337,212 |

9.4 Rate Derivation

This section describes how rates for each customer sub-class are derived to reflect the proportional cost of providing wastewater service.

9.4.1 Current Residential Rates

Currently the residential rate class applies to only single-family residential customers which are charged a monthly fixed rate and a volumetric rate.

Monthly Fixed Service Charge

This charge applies to all active services for single-family residences. It recovers the rate revenue requirement on a per customer basis.

Volumetric Charges

These charges apply to every unit of monthly water use. There are no use charges for the first four HCF of water use. After the first four units of use per month, the City adjusts for potential irrigation by establishing a monthly sewer cap for each customer. The cap reflects residential sewer flow charges based on water consumption during the winter months (February-April), the period when single family residential customers typically do not have high outdoor water use. The amount a customer is billed in each of the following summer months (June-September), the period when outdoor water use is likely, is based on their usage *up to* their cap to reflect the lesser of their winter use or actual water use. Essentially, the cap adjusts for irrigation use by setting the maximum units of use that a single-family residence will be charged during the period when outdoor water use is likely. There is no irrigation adjustment made to non-summer months (October-January).

9.4.2 Residential Rate Structure Recommendations

BWA reviewed the City's residential wastewater rates and water demands and has the following recommendations to improve proportionality:

1. Remove all volumetric charges for single-family wastewater customers; and
2. Establish a fixed monthly rate for all single-family wastewater customers
3. Establish a multi-family class with a fixed monthly rate for all residential wastewater customers with more than one dwelling unit on a per dwelling unit basis; and
4. Charge any outside city customers the same rates charged to inside city customers.

9.4.3 Residential Rate Derivation

The total revenue requirements for single-family and multi-family customer classes were calculated above. The monthly rates are derived by dividing the revenue requirements by the number of dwelling unit bills (dwelling units x 12 months). The following table details the calculation for residential wastewater rates.

Table 27. Residential Rate Derivation

| Residential Rate Derivation | Revenue Requirement | Annual Bills | Reallocated FY 2024/25 Rate |
|------------------------------------|----------------------------|---------------------|------------------------------------|
| | <i>(\$)</i> | <i>(#)</i> | <i>(\$ per bill)</i> |
| Single-Family | \$4,888,384 | 59,388 | \$82.31 |
| Multi-Family | \$1,094,124 | 16,224 | \$67.44 |

9.4.4 Current Commercial Rates

Customers in this class are grouped into three different subclasses based on their strength and flow characteristics.

Monthly Fixed Service Charge

This charge applies to all active commercial customers. It recovers the revenue requirement on a per customer basis.

Volumetric Charges

These charges apply to every unit of monthly water use. There are no use charges for the first four HCF of water use. After the first four units of use per month, customers are charged a quantity rate per HCF based on estimated wastewater discharge characteristics.

9.4.5 Commercial Rate Structure Recommendations

BWA reviewed the City's commercial wastewater rates and has the following recommendations to improve compliance with the requirements of Proposition 218:

1. Set a minimum monthly fixed service charge for each customer subclass based on the minimum fixed costs of each subclass.
2. Charge any outside city customers the same rates charged to inside city customers.

9.4.6 Customer Class Rate Derivation

The total revenue requirement for this class is calculated above. The fixed revenue recovery was set to reflect the fixed costs identified for each customer subclass.

The remaining portion of the revenue requirement was allocated proportionally, based on the wastewater system allocation to flow, BOD and TSS. The volumetric unit cost per HCF is calculated based on strength estimates and the flow, BOD and TSS unit costs for each commercial customer subclass. Volumetric costs are adjusted by the estimated return to sewer factor for each sub-class, this adjustment is necessary to account for the estimated sewer discharge of commercial customers based on year-round water use data, which includes some water use that does not enter the sewer system.

The following table displays the derivation of commercial wastewater rates.

Table 28. Commercial Rate Derivation

| Commercial Class | Variable Revenue Requirement | Units | Unit Rate | Minimum Charge Monthly Charge per Connection |
|------------------|------------------------------|--------|---------------|--|
| Rate Units | | | | |
| | (\$) | (HCF) | (\$ per unit) | (Up to 4 HCF) |
| Low Strength | \$1,180,102 | 91,116 | \$12.95 | \$51.81 |
| Medium Strength | 1,250,903 | 84,100 | 14.87 | 59.50 |
| High Strength | 332,637 | 16,115 | 20.64 | 82.56 |

| Commercial Fixed Rate Derivation | Minimum Charge Monthly Charge per Connection | Fixed Unit Cost | Total Monthly Fixed Charge |
|----------------------------------|--|--------------------|----------------------------|
| | (per monthly bill) | (per monthly bill) | (per monthly bill) |
| Low Strength | \$51.81 | \$7.94 | \$59.75 |
| Medium Strength | \$59.50 | \$7.94 | \$67.44 |
| High Strength | \$82.56 | \$7.94 | \$90.51 |

| Volumetric Rev Requirements | Minimum Charge per Bill | Annual Bills | Revenue From Minimum Charge | Remaining Variable Revenue Requirement | Demand >4 HCF | Variable Rate |
|-----------------------------|-------------------------|--------------|-----------------------------|--|---------------|----------------|
| | (Up to 4 HCF) | (#) | | | (HCF) | (per HCF >4) |
| Low Strength | \$51.81 | 4,572 | \$236,860.44 | \$943,241.09 | 79,199 | \$11.91 |
| Medium Strength | \$59.50 | 1,632 | \$97,097.61 | \$1,153,805.11 | 79,060 | \$14.59 |
| High Strength | \$82.56 | 576 | \$47,556.93 | \$285,080.10 | 14,087 | \$20.24 |

9.5 Recommended Wastewater Rates

The recommended rates incorporate some modifications to the City's wastewater rate structure designed to align rates with the current cost of providing service and reflect policy input provided by the City. Due to these modifications, impacts to wastewater bills will vary based on customer class and water use when the first-year proposed rates are implemented.

The following table shows a 5-year schedule of recommended wastewater rates.

Table 29. Proposed Wastewater Rates

| Wastewater User | 2025/26 | 7/1/2026 | 7/1/2027 | 7/1/2028 | 7/1/2029 | 7/1/2030 |
|--|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Current</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> | <i>Proposed</i> |
| Residential - Fixed Monthly Rate per Unit | | | | | | |
| Single Family | \$77.61 | \$82.31 | \$82.31 | \$86.43 | \$90.75 | \$95.29 |
| Multi-Family | n/a | 67.44 | 67.44 | 70.81 | 74.35 | 78.07 |
| Residential - Volumetric Rates per Hundred Cubic Feet (HCF) of Water Use Greater Than 4 HCF | | | | | | |
| Single Family | \$11.34 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Commercial - Volumetric Rates per Hundred Cubic Feet (HCF) of Water Use Greater Than 4 HCF | | | | | | |
| Low Strength | \$9.88 | \$11.91 | \$11.91 | \$12.51 | \$13.13 | \$13.79 |
| Medium Strength | 12.01 | 14.59 | 14.59 | 15.32 | 16.09 | 16.89 |
| High Strength | 20.14 | 20.24 | 20.24 | 21.25 | 22.31 | 23.43 |
| Commercial - Minimum Monthly Fixed Rate per Connection | | | | | | |
| Low Strength | \$81.05 | \$47.64 | \$47.64 | \$50.02 | \$52.52 | \$55.15 |
| Medium Strength | 81.05 | 58.38 | 58.38 | 61.29 | 64.36 | 67.58 |
| High Strength | 81.05 | 80.95 | 80.95 | 84.99 | 89.24 | 93.71 |

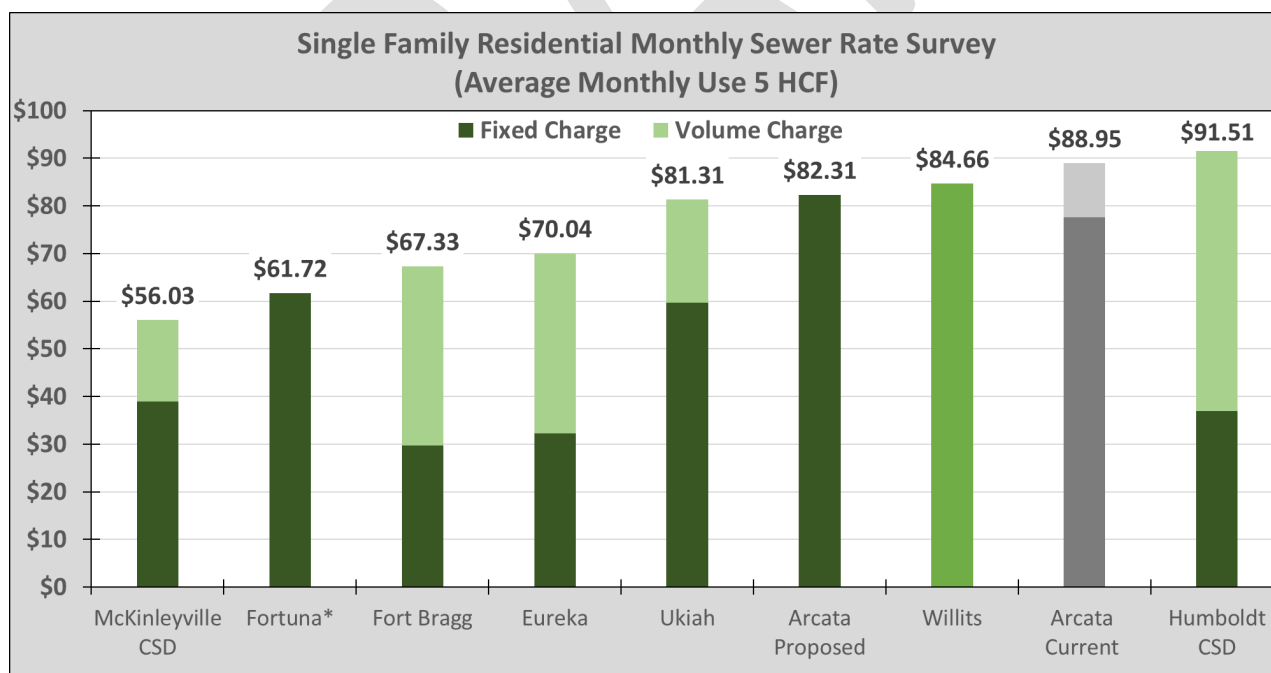
10 WASTEWATER SUMMARY AND RECOMMENDATIONS

10.1 Regional Wastewater Rate Survey

BWA conducted a survey of current wastewater rates for single-family residences including the City and other regional wastewater systems. Unfortunately, due to time and cost restrictions, the survey is limited to only providing data in the form of the typical monthly billing amount of each wastewater provider for a single-family residence. This limited comparison does not account for any of the differences that are highly likely to exist among the systems. The City of Arcata currently applies monthly wastewater charges based on customer and flow and strength characteristics. While other wastewater agencies use similar metrics, each agency would have developed their own fixed and volumetric rates based on their own cost of service to account for the specific operating, treatment, and infrastructure needs of their wastewater system. Nevertheless, regional surveys can still be used as an informational tool as long as agencies are mindful of the differences that exist in the development of an agency's wastewater rates.

The following chart compares the monthly wastewater bills for a typical single-family home to those of other regional agencies.

Figure 9: Regional Single Family Residential Wastewater Rate Survey



While the proposed wastewater rates developed in this study are higher than the existing rates, they are developed to reflect the current cost of service for the City's wastewater system. It is also important to note that many of the agencies included in the survey are facing similar financial

pressures and are either in the middle of multi-year rate increases or are anticipating raising rates in upcoming years.

10.2 Wastewater Summary and Recommendations

The wastewater enterprise is facing the need to increase rate revenues in order to 1) have revenues exceed expenses and 2) have revenues to fund capital and 3) qualify for financing and grants to reduce the burden on the City's rate payers.

BWA has the following recommendations for the wastewater enterprise:

- Modify the wastewater rate structure to improve proportionality and administrative efficiency.
- The City should raise wastewater rates in an amount large enough to pay for operating expenses, capital projects and to maintain prudent reserves.
- After the wastewater enterprise's finances are stabilized, BWA recommends the City continue to adopt consistent, incremental increases to prevent the need for larger, one-time rate increases.
- When adopting new rates, BWA recommends the City adopt the recommended rate structure changes to bring the wastewater enterprise's rates into greater compliance with Prop. 218.

11 CONCLUSION & RECOMMENDATIONS

In conclusion, the City's water and wastewater utilities will need rate increases in upcoming years to provide adequate funding for high-priority capital improvement needs and keep rates aligned with escalating costs of operations. The proposed 5-year schedule of rates are designed to recover the costs of providing service while supporting roughly balanced budgets in future years.

Many other regional agencies are facing similar financial challenges with cost inflation and the need to increase investment in aging infrastructure and are also anticipating rate increases in upcoming years.

General rate recommendations for the utilities include:

- BWA recommends the City adopt the proposed rates starting May 1, 2026.
- The City should update the water and wastewater financial projections within the next five years to evaluate funding needs and rate increases in subsequent years.
- After the proposed rates are implemented, the City should continue to adopt annual rate increases to keep revenues in line with the cost of providing service and minimize the need for larger, periodic rate spikes.