



TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT

Water and Sewer Rate Study

FINAL REPORT
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SECTION 1: INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Background

The Town of Discovery Bay Community Services District (Town or District) provides water and wastewater (sewer) service to about 6,100 customers. The Town last conducted a water and wastewater rate study in 2020 which provided a schedule of rate adjustments through fiscal year (FY) 2024/25. A rate update is needed to keep up with inflationary operating cost increases and to fund major utility system improvements, particularly water pipeline replacements.

1.2 Requirements of Proposition 218

Proposition 218, the “Right to Vote on Taxes Act”, was approved by California voters in November 1996 and is codified as Articles XIII C and XIII D of the California Constitution. Proposition 218 establishes requirements for imposing any new or increasing any existing property-related fees and charges. For many years, there was no legal consensus on whether water and sewer service fees met the definition of “property-related fees.” In July 2007, the California Supreme Court essentially confirmed that Proposition 218 applies to water and wastewater service fees.

The Town must follow the procedural requirements of Proposition 218 for all utility rate increases. These requirements include:

1. **Noticing Requirement** – The Town must mail a notice of the proposed rate increases to all affected property owners or ratepayers. The notice must specify the amount of the fees, the basis upon which they were calculated, the reason for the fees, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
2. **Public Hearing** – The Town must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
3. **Rate Increases Subject to Majority Protest** – At the public hearing, the proposed rate increases are subject to majority protest. If more than 50% of affected property owners or ratepayers submit written protests against the proposed rate increases, the increases cannot be adopted.

In addition to filing a protest, property owners or ratepayers may file written objections prior to the public hearing to exhaust administrative remedies before filing a legal challenge. To be considered valid, any written objections must be submitted before the end of the public hearing and a failure to timely object in writing bars any right to challenge that fee or assessment through a legal proceeding. Pursuant to California Government Code 53759, a 120-day statute of limitations applies to any legal challenge to a new, increased, or extended fee.

Proposition 218 also established substantive requirements that apply to water and sewer rates and charges, including:

1. **Cost of Service** – Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the “cost of service”.
2. **Intended Purpose** – Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
3. **Proportional Cost Recovery** – The amount of the fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of service attributable to that parcel. Caselaw allows this determination to be made customer class-by-customer class rather than parcel-by-parcel.
4. **Availability of Service** – 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. Standby charges are approved as assessments on real property.
5. **General Government Services** – No property-related fee or charge may be imposed for general governmental services available to the public at large, as police and some fire services are.

Charges for water and sewer service are exempt from additional voting requirements of Proposition 218 for other property-related fees, provided the charges do not exceed the cost of providing service and are adopted pursuant to procedural requirements of Proposition 218.

1.3 Rate Study Process

A summary of the rate study process is provided below in Figure 1.

Figure 1: Comprehensive Cost of Service Study Process



The following is a brief description of the rate study process:

- **Revenue Requirements** - Revenue requirements are analyzed via financial plans developed from the best information currently available, such as the Water and Wastewater Fund budgets, audits, historical operating results, and input from staff. The financial plans serve as a roadmap for funding the Town's future operating and capital programs while maintaining long-term fiscal stability, all of which is calculated in this study to produce rates that will be necessary to recover only the projected cost of service per parcel under these proposed rates.
- **Cost of Service Allocation** - The cost-of-service process builds on the revenue requirement analysis and assigns water and wastewater system costs to functional cost components: *meters and services, fire protection, customer service, base demand, and extra demand* for water, and *customer service and treatment/disposal* for sewer.
- **Rate Design** - Rate design involves developing a rate structure that proportionately recovers costs from customers but does not exceed the proportional cost of service attributable to each parcel. Final rate recommendations are designed to fund the Town's short- and long-term costs of providing service and fairly allocate costs to all customers.

The rates recommended in this report are based on the best available information gathered from the Town's budgets, audits, and input from Town staff, the Finance Committee, and the Board of Directors and the ratemaking consultant's professional opinion. The cost allocations proposed herein are based on industry standard practice. The proposed rates are based on the reasonable cost of providing service and do not exceed the proportional cost of service attributable to each parcel.

1.4 Proposed Rates and Bill Impacts

The current and proposed water and wastewater rates are provided in Table 1 and Table 2, respectively. Rate increases are proposed to go into effect July 1 of each year from 2025 through 2029. For water service, the Town charges a fixed meter fee based on the size of the meter plus a volume rate billed to each 100 cubic feet (ccf) of water used. By December 2017, about half of the Town was transitioned from unmetered to metered service. Newly metered customers pay \$8.01 per month in addition to the other rates and charges. The meter installation fee for these customers is not proposed to change and will be phased out at the end of fiscal year (FY) 2026/27. For wastewater service, the Town bills residential customers a flat fee annually on the property tax roll. Commercial customers are billed volumetric wastewater rates based on estimated flow. Vacant parcels are charged a fee for the Town's water and sewer utilities. The vacant parcel fees are not proposed to change over the next five years.

Table 1: Current and Proposed Monthly Water Rates

WATER	Current 1-Jul-24	PROPOSED				
		FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)
Vacant	\$14.67	\$14.67	\$14.67	\$14.67	\$14.67	\$14.67
Non-irrigation[1] Account Charge:						
5/8 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
3/4 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
1 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
1 1/2 Inch Meter	\$42.98	\$63.66	\$71.30	\$79.86	\$89.44	\$100.17
2 Inch Meter	\$66.94	\$98.18	\$109.96	\$123.16	\$137.94	\$154.49
3 Inch Meter	\$130.80	\$190.25	\$213.08	\$238.65	\$267.29	\$299.36
4 Inch Meter	\$202.64	\$293.82	\$329.08	\$368.57	\$412.80	\$462.34
6 Inch Meter	\$402.22	\$581.52	\$651.30	\$729.46	\$817.00	\$915.04
Irrigation[2] Account Charge:						
5/8 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
3/4 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
1 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
1 1/2 Inch Meter	\$38.18	\$50.22	\$56.25	\$63.00	\$70.56	\$79.03
2 Inch Meter	\$59.24	\$76.68	\$85.88	\$96.19	\$107.73	\$120.66
3 Inch Meter	\$115.73	\$147.24	\$164.91	\$184.70	\$206.86	\$231.68
4 Inch Meter	\$180.27	\$226.62	\$253.81	\$284.27	\$318.38	\$356.59
6 Inch Meter	\$359.54	\$447.12	\$500.77	\$560.86	\$628.16	\$703.54
Metered Usage Charge:						
All Usage (\$/ccf)	\$2.577	\$2.605	\$2.918	\$3.268	\$3.660	\$4.099
Newly Metered Customers						
Meter Install Fee (10-year payback)	\$8.01	\$8.01	\$8.01			

ccf = 100 cubic feet = 748 gallons

1 – primarily indoor water use for health and sanitation

2 – dedicated meter solely for outdoor water use for landscape irrigation

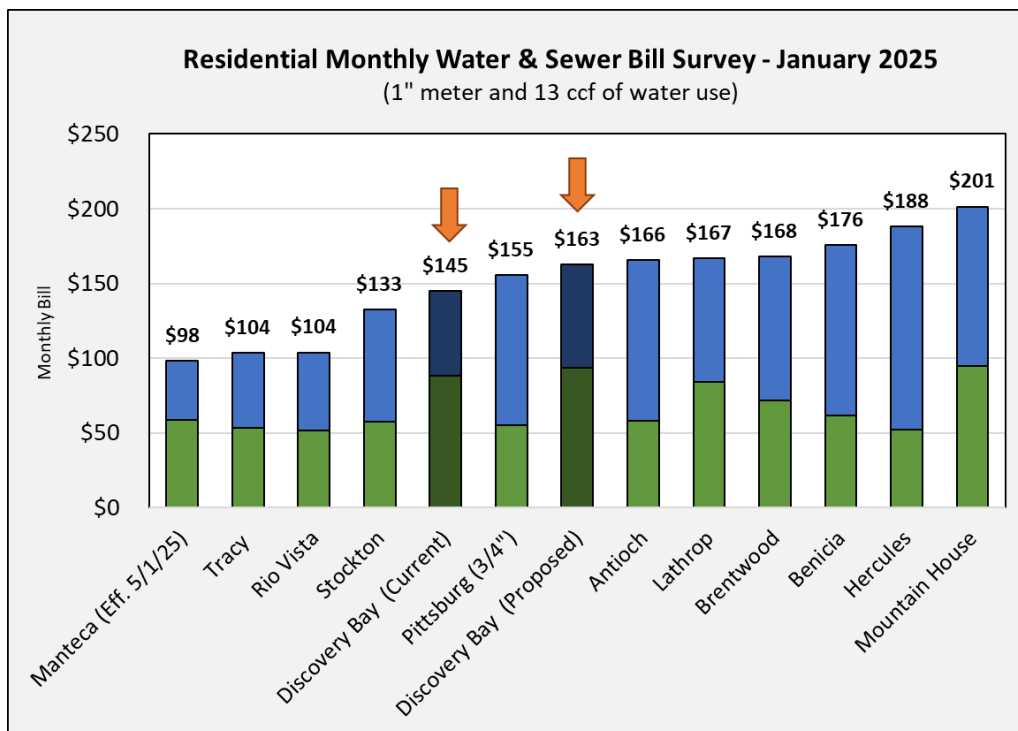
Table 2: Current and Proposed Monthly Wastewater Rates

WASTEWATER	Current	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Residential Unmetered	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Single Family	\$88.46	\$93.79	\$99.41	\$105.38	\$111.70	\$118.40
Multiple Family/Condos	\$72.40	\$76.69	\$81.29	\$86.17	\$91.34	\$96.82
Nonresidential Metered	Use (\$/ccf)	Use (\$/ccf)	Use (\$/ccf)	Use (\$/ccf)	Use (\$/ccf)	Use (\$/ccf)
Business/Government/Clubs	\$7.50	\$7.90	\$8.37	\$8.88	\$9.41	\$9.97
Restaurants/Bars/Dining	\$19.70	\$20.48	\$21.71	\$23.01	\$24.39	\$25.86
Schools	\$6.85	\$7.39	\$7.96	\$8.58	\$9.25	\$9.97
Other Domestic Strength Users	\$7.50	\$8.16	\$8.88	\$9.66	\$10.51	\$11.44

ccf = 100 cubic feet = 748 gallons

The typical monthly water use of a single family customer is 13 ccf per month and the most common residential meter size is 1". Based on these parameters, the Town's current typical combined utility bill (water and sewer) is \$144.98 per month. Under the proposed rate increases, the typical single family residential customer bill will increase to \$162.55 per month, about a 12% increase. As shown in Figure 2 below, the Town's current and proposed bills are in the mid-range of utility bills charged by other local agencies.

Figure 2: Residential Monthly Water & Sewer Bill Survey



SECTION 2: CURRENT RATES AND CUSTOMER BASE

This section provides an overview of the Town’s current water and wastewater rates, customer base, water usage statistics, and current rate revenues.

2.1 Current Water Rates

Customers are charged for water service based on the size of their water meter ranging from 5/8” up to 6” and the type of service - non-irrigation (domestic) or irrigation. Domestic meter service fees are slightly higher than irrigation meter fees to account for domestic users receiving fire protection benefits. All customers are charged these fixed charges regardless of water consumption to reflect costs the Town incurs associated with maintaining each connection and meeting capacity requirements. The Town charges a uniform volume rate of \$2.577/ccf for all water consumption.

Prior to 2017, approximately half the Town was unmetered and was billed a flat rate for water service. December 2017, the Town completed its meter roll-out and remaining unmetered customers were transitioned to metered service. To fund the installation of meters, the Town issued revenue bonds in addition to expending available reserves. Meter installation costs are repaid via a \$8.01 monthly service fee charged to newly metered customers over a ten-year period. The meter installation fee is not proposed to change and will be phased out by the end of fiscal year (FY) 2026/27.

2.2 Water Usage Statistics and Customer Base

Table 3 provides the current monthly water rates as well as estimated current water usage statistics, billing data, and service charge revenues. About 98.6% of meters are non-irrigation meters and 1.4% are irrigation meters. The majority of customers have 1” or smaller non-irrigation (domestic) meters, representing about 97% of the total customer base. The 1” meter is considered the standard meter in Discovery Bay and was the meter size provided to the newly metered customers in 2017. Less delinquency fees, the Town expects to collect about \$5 million in annual service charge revenues at current rates and water usage, of which about 42% will be collected from fixed meter fees (including the meter installation fees) and 58% will be collected from volume rates.

Based on Town billing records, the current average monthly residential water use is 13 ccf per month. Based on a typical home with a 1” meter and 13 ccf of water use, the average water bill is \$56.52 per month.

Table 3: Current Water Service Charge Revenues

Meter Size	# of Meters	Monthly Fee	Meter Fee Annual Revenue	Estimated Annual Water Use (ccf)	Annual Water Use Fees
				Metered Rate (\$/ccf)	\$2.577
Non-Irrigation					
Up to 1"	6,057	\$23.02	\$1,673,186		
1.5"	32	\$42.98	\$16,504		
2"	46	\$66.94	\$36,951		
3"	7	\$130.80	\$10,987		
4"	<u>10</u>	<u>\$202.64</u>	<u>\$24,317</u>		
Subtotal Non-irrigation	6,152		\$1,761,945	931,420	\$2,400,000
Irrigation					
Up to 1"	19	\$20.62	\$4,701		
1.5"	25	\$38.18	\$11,454		
2"	34	\$59.24	\$24,170		
3"	2	\$115.73	\$2,778		
4"	<u>7</u>	<u>\$180.27</u>	<u>\$15,143</u>		
Subtotal Irrigation	87		\$58,245	212,561	\$548,000
Meter Installation Fee	3,487	\$8.01	\$335,218		
Total Metered Customers	6,239		\$2,155,408	1,143,981	\$2,948,000
			42%		58%
Property Tax Roll	# of	Monthly	Total Annual		
Unmetered Water	Parcels	Fee	Revenues		
Vacant & Waterways	21	\$14.67	\$3,697		
Summary					\$1,820,190
			Metered	\$5,103,408	
			2% Delinquency	(\$102,000)	
			Vacant	<u>\$3,697</u>	
			Total	\$5,005,105	

2.3 Current Wastewater Rates

The Town's wastewater (sewer) utility provides service to about 6,100 single family, condominium (multiple family), and commercial parcels or accounts within the Town. Residential sewer customers are billed a flat annual fixed charge on a per dwelling unit basis collected on the annual property tax roll. Commercial customers are billed a volumetric wastewater rate based on estimated wastewater flow. There are four sub-categories of commercial wastewater customers: business/government/clubs, restaurants/bars/dining facilities, schools, and other domestic strength users. Current wastewater rates are provided in Table 4.

Table 4 also provides estimated current annual Wastewater Fund Revenues by rate category. The Town is projected to collect a total of about \$6.5 million in revenues from wastewater service charges. About \$6.4 million in revenues, or about 98%, is collected from fixed charges to residential and vacant parcel customers. Volumetric charges from commercial customers are estimated to generate about \$106,000, or about 2% of total wastewater rate revenue.

Table 4: Current Wastewater Service Charge Revenues

Unmetered Wastewater	Number of Parcels		Annual Fee	Annual Revenues
Single Family - Each DU	5,816		\$1061.52	\$6,174,000
Multiple Family/Condos - Each DU	224		\$868.00	\$195,000
Vacant	<u>30</u>		\$224.00	<u>\$7,000</u>
Subtotal	6,070			\$6,376,000
Metered Sewer	Number of Customers	Annual ccf	Rate \$/ccf	Annual Revenues
Business/Government/Clubs	22	1,043	\$7.501	\$7,821
Restaurants/Bars/Dining Facilities	11	4,663	\$19.696	\$91,851
Schools	3	800	\$6.853	\$5,482
Other Domestic Strength Users	<u>2</u>	<u>125</u>	\$7.501	<u>\$940</u>
Subtotal	38	6,631		\$106,094
Total Rate Revenues				\$6,482,094

DU - dwelling unit

SECTION 3: RESERVES

Proposition 218 requires that utility rates be based on the reasonable cost of providing service to customers. The cost of service includes annual operating expenses, debt service payments, capital projects, and the accumulation of appropriate reserves. The Town maintains Operating Reserves and Capital Reserves for each utility. In general, the Town's policy is to prudently use reserves to smooth cash flow and mitigate impacts to the ratepayers. Operating reserves are typically held at four months of operating expenses or greater. Operating reserves are intended to cover emergency operating costs and/or cover revenue shortfalls. The Town has capital reserves for general water and sewer improvements, pumps and motors, generators, facilities, and vehicles.

The Town is estimated to have approximately \$16.9 million in total utility reserves, with \$6.1 million allocated to water and \$10.8 million allocated to sewer as summarized in Table 5. Thus, the water utility comprises about 36% of total reserves, while the wastewater utility represents 64% of the total.

Table 5: Estimated Reserves

	Water	Sewer
Operations	\$1,774,815	\$1,740,799
Capital	<u>\$4,373,991</u>	<u>\$9,025,644</u>
Total	\$6,148,806	\$10,766,443

SECTION 4: WATER COST OF SERVICE

This section provides an analysis of the revenues and expenses that make up the water utility's total cost of service to be recovered via water rates. The cost of service is expressed in cash flow tables that illustrate revenue increases needed to keep up with operating and capital expenses and promote financial health. Over the five-year rate study period, water rate increases are proposed so that the Town can fund capital improvements, pay for operating costs, and maintain prudent reserves, all of which are calculated in this study to produce rates that will be necessary to recover only the actual cost of the water service per parcel under these proposed water rates.

4.1 Capital Improvement Plan

As part of the rate study process, the Town developed a capital improvement project list and determined the timeline and cost of each project. A summary of project costs through FY 2029/30 is provided in Table 6. The Town intends to fund about \$32.51 million in capital projects over the next five years. The highest cost items are pipeline replacements and the pipeline underwater crossing. As shown below, the Town intends to fund \$3.5 million per year of pipeline replacements during most years – this equals about one mile per year of line replacements. The Town will also install a solar system at the water treatment plant (WTP) which will provide energy savings once completed. In FY 2025/26, the Town will construct a new Administration Building. The construction cost allocated to the Town's utilities is about \$5 million which is split 50%/50% between the water and sewer utilities.

Table 6: Summary of Water Capital Projects

Project Categories	Projected FY 2025/26	Projected FY 2026/27	Projected FY 2027/28	Projected FY 2028/29	Projected FY 2029/30	5-Year Total
Mainline Pipe	400,000	3,500,000	2,000,000	3,500,000	3,500,000	12,900,000
Underwater Crossing	0	0	764,000	4,992,000	0	5,756,000
Solar System at WTP	3,340,000	1,344,000	941,000	0	0	5,625,000
Admin Building	2,508,000	0	0	0	0	2,508,000
Well 2	250,000	250,000	2,000,000	0	0	2,500,000
Well 8	1,000,000	0	0	0	0	1,000,000
Other Projects	<u>505,000</u>	<u>389,000</u>	<u>407,000</u>	<u>393,000</u>	<u>528,000</u>	<u>2,222,000</u>
Total Projects	8,003,000	5,483,000	6,112,000	8,885,000	4,028,000	32,511,000

WTP – water treatment plant

4.2 Capital Cash Flow

The projects shown in Table 6 will be funded through a combination of reserves, capacity fees, rate revenues, and new debt. Table 7 lists the capital revenue sources through FY 2029/30. The Town is projected to use about \$3.8 million in existing capital fund reserves. The water utility has reserves beyond its minimum targets. These reserves were accumulated over time from service charge revenues and should be used judiciously for the benefit of the ratepayers. The Town is expected to experience growth over the next five years. For planning purposes, it is assumed that the Town will collect capacity fee revenues from approximately 10 new homes annually.¹ This rate plan assumes the Town will fund \$2.8 million of project costs from rate revenues, \$5.6 million with subsidized state loans, and \$20 million from market rate bonds. To fund the solar system at the water treatment plant, the Town expects to secure a \$2.9 million loan at 1% interest over 16 years from the California Energy Commission plus a second loan of about \$2.7 million at 4% interest over 20 years from the California Infrastructure Bank (iBank). At current rate revenues, the water utility generates positive net revenues which can be used to fund capital improvements and/or provide additional debt capacity. L&T worked closely with Town staff, the Finance Committee, and the Town's bond underwriting team to develop debt service estimates.

Table 7: Water Capital Funding Sources

Revenue Source	5-Year Total	% of Total
Existing Capital Reserves	\$3,766,000	12%
Capacity Fees	\$280,000	1%
Rate Revenues	\$2,840,000	9%
New Debt		
CEC Loan	\$2,937,000	9%
iBank Loan	\$2,688,000	8%
Market Rate Bonds	<u>\$20,000,000</u>	<u>62%</u>
Total Funding	\$32,511,000	100%
Total Capital Projects	\$32,511,000	

Table 8 provides water capital cash flows over the next five years. It is anticipated that the Town will issue bonds annually from FY 2026/27 through FY 2029/30 primarily to fund the long-term pipeline replacement program and the underwater crossing project. By issuing bonds in tranches (rather than in one large issuance), the Town's debt service obligation will slowly increase over time and allow the Town to phase-in rate increases more gradually. FY 2025/26 through FY 2027/28, it is projected that the Town will fund both phases of the solar system project through loan proceeds. By the end of FY 2029/30, it is projected that the capital reserves will be drawn down by about \$3.8 million relative to the beginning balance in FY2025/26.

¹ Capacity fee revenues can only be used to fund facilities that benefit growth. L&T did not conduct an independent evaluation to determine which projects are growth-related.

Table 8: Water Capital Cash Flow

	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Beginning Balance	4,374,000	3,000	918,000	1,803,000	76,000
Revenues					
Capacity Fees	52,000	54,000	56,000	58,000	60,000
Transfer from Operating	240,000	0	0	1,100,000	1,500,000
CEC Loan Proceeds	2,937,000	0	0	0	0
iBank Loan Proceeds	403,000	1,344,000	941,000		
New Debt Proceeds	<u>0</u>	<u>5,000,000</u>	<u>6,000,000</u>	<u>6,000,000</u>	<u>3,000,000</u>
Total Revenues	3,632,000	6,398,000	6,997,000	7,158,000	4,560,000
Capital Improvements					
Water Supply Capacity					
Well 2	250,000	250,000	2,000,000	0	0
Well 8	<u>1,000,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Water Supply Capacity	1,250,000	250,000	2,000,000	0	0
Upgrades for Existing Water Supply					
Filter Replacement (Newport Filter A)	0	389,000	0	0	0
Stabilization Soils- Willow Lake WTP	0	0	0	0	176,000
Well 2 Upgrade Electrical Panel	259,000	0	0	0	0
Install Filter 2	0	0	0	0	352,000
Newport WTP Valve Replacement	112,000	0	0	0	0
Well 6 Upgrade from SSRV to VFD	<u>0</u>	<u>0</u>	<u>0</u>	<u>393,000</u>	<u>0</u>
Total Existing Water Supply	371,000	389,000	0	393,000	528,000
Distribution/Pipeline Replacements					
Mainline Pipeline	400,000	3,500,000	2,000,000	3,500,000	3,500,000
Newport & Sandpoint Crossing	<u>0</u>	<u>0</u>	<u>764,000</u>	<u>4,992,000</u>	<u>0</u>
Total Distribution/Pipeline Replacements	400,000	3,500,000	2,764,000	8,492,000	3,500,000
Additional Distribution Improvements					
Solar System at WTP	2,937,000	0	0	0	0
Solar System at WTP Phase II	403,000	1,344,000	941,000		
Willow Lake WTP SCADA	0	0	407,000	0	0
Cathodic Protection System	<u>134,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Distribution Improvements	3,474,000	1,344,000	1,348,000	0	0
Other Projects					
Town Administration Building	<u>2,508,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Building Rehab/Relocation	2,508,000	0	0	0	0
Total Capital Improvements	8,003,000	5,483,000	6,112,000	8,885,000	4,028,000
Total Net Revenues	(4,371,000)	915,000	885,000	(1,727,000)	532,000
Ending Balance	3,000	918,000	1,803,000	76,000	608,000

4.3 Operating Cash Flow

The water fund operating cash flows beginning in FY 2025/26 and spanning the next five years are provided in Table 9. The Town is projected to begin FY 2025/26 with an operating balance of about \$1.8 million. The minimum fund balance target for the end of each year is based on four months of O&M expenses. This rate plan is intended to both maintain a balanced budget with positive net revenues and to meet the minimum fund balance target in each year except FY 2025/26.

Rate increases annually over the five-year rate study period are proposed to fund capital projects, fund operating costs, fund debt service costs, maintain necessary debt service coverage, and maintain necessary fund reserves. The first proposed rate revenue increase is an increase of 20% on July 1, 2025. Following the first rate increase, 12% annual revenue increases are proposed to go into effect each July 1 from 2026 through 2029. The proposed annual revenue increases represent the water system average revenue increases. Not every customer will receive a rate increase equal to the percentage shown. The rate change for individual customers will depend on customer meter sizes, service type (domestic or irrigation), and water use.

The Town's main revenue source for the Operations Fund is water rate revenues. Rate revenues are estimated at \$5.7 million in FY 2025/26, making up nearly 92% of total revenues. Rate revenue estimates also include projections for customer growth in each year. Major expenses include staffing, administration, utilities, and the service contract with Veolia Water. Most operating expenses are projected to increase 3% annually due to inflation, apart from staffing and consulting services which are projected to increase 5% annually and utilities which are projected to decrease until FY 2027/28 due to savings realized from the solar project before increasing 10% annually thereafter. In FY 2025/26, staffing expenses are expected to increase by an additional \$150,000 above the 5% annual increase because the Town is expected to hire an additional staff member or consultant for regulatory compliance.

Other expenses include debt service for the 2017 and 2022 bonds and new debt service estimated to begin in FY 2027/28. For financial planning purposes, it is assumed that debt service costs for the new state loans will begin the year after project completion. For market rate bonds, debt service payments are assumed to begin the year after issuance.

Table 9: Water Operating Cash Flow

	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Beginning Operating Balance	\$1,775,000	\$1,774,000	\$2,531,000	\$3,277,400	\$2,921,300
Proposed Rate Revenue Increase	20%	12%	12%	12%	12%
Revenues					
Rate Revenue	5,722,000	6,409,000	7,178,000	8,039,000	9,004,000
New Customers	<u>3,000</u>	<u>6,000</u>	<u>9,000</u>	<u>12,000</u>	<u>15,000</u>
Rate Rev Subtotal	5,725,000	6,415,000	7,187,000	8,051,000	9,019,000
Less Delinquency (2%)	(114,000)	(128,000)	(144,000)	(161,000)	(180,000)
Vacant Parcel	4,000	4,000	4,000	4,000	4,000
Meter Reimbursements	336,000	336,000	0	0	0
Interest Income	204,000	100,000	100,000	100,000	100,000
Other & Misc	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>
Total Revenues	6,225,000	6,797,000	7,217,000	8,064,000	9,013,000
% increase in operating expenses [1]	3.0%	3.0%	3.0%	3.0%	3.0%
Expenses					
Operating Expenses					
Admin & Inter Govt. & Board	465,000	479,000	493,000	508,000	523,000
Staffing & Consulting Serv [2]	1,860,000	1,953,000	2,051,000	2,154,000	2,262,000
Meters Reading	124,000	128,000	132,000	136,000	140,000
Operations & Maint	1,109,000	1,142,000	1,176,000	1,211,000	1,247,000
Utilities [3]	827,000	706,000	587,000	646,000	711,000
Service Contract & Pass Through	<u>1,057,000</u>	<u>1,089,000</u>	<u>1,122,000</u>	<u>1,156,000</u>	<u>1,191,000</u>
Total Operating Expenses	5,442,000	5,497,000	5,561,000	5,811,000	6,074,000
Net Operating Revenues	783,000	1,300,000	1,656,000	2,253,000	2,939,000
Debt Service					
2017 Bonds	171,000	168,000	0	0	0
2022 Bonds	290,000	291,000	292,000	292,000	292,000
2022B (2012 refinance) Bonds	83,000	84,000	83,000	83,000	83,000
New CEC Loan (1% over 16 years)	0	0	200,000	200,000	200,000
New Ibank Loan (4% over 20 years)	0	0	0	198,000	198,000
New Debt Service Phase I [4]	<u>0</u>	<u>0</u>	<u>334,600</u>	<u>736,100</u>	<u>1,137,600</u>
Total Debt Service	544,000	543,000	909,600	1,509,100	1,910,600
Debt Service Coverage	1.44	2.39	1.82	1.49	1.54
Total O&M + Debt	5,986,000	6,040,000	6,470,600	7,320,100	7,984,600
Total Net Revenues	239,000	757,000	746,400	743,900	1,028,400
Transfer to Capital	240,000	0	0	1,100,000	1,500,000
O&M Ending balance	1,774,000	2,531,000	3,277,400	2,921,300	2,449,700
Minimum balance target [5]	1,814,000	1,832,000	1,854,000	1,937,000	2,025,000

1 - Most operating expenses are projected to increase by 3% annually

2 - New additional staff member or consultant cost of \$150,000 in FY2025/26; 5% annual increases to the total staffing cost per year

3 - Chemicals and electric; 10% annual increases; savings begin in first year of operation from solar project

4 - 5.25% interest, 30-year term for all new debt and \$250,000 in issuance costs

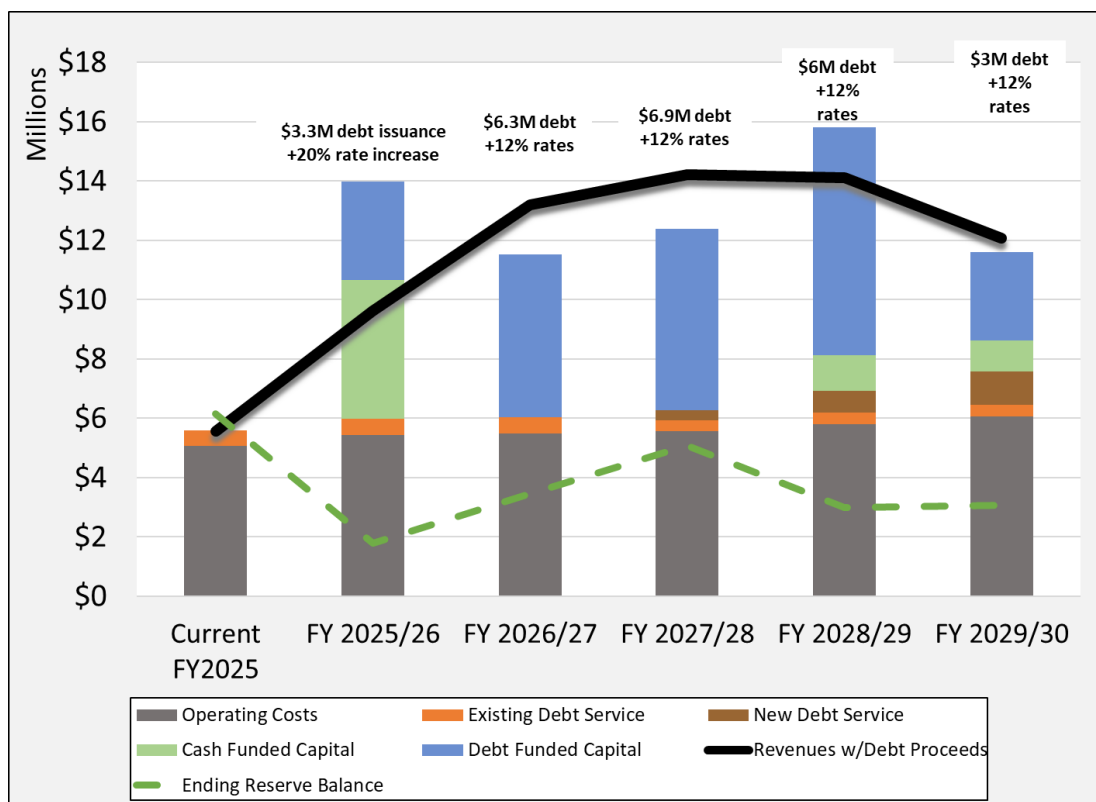
5 - 4 months O&M expenses

Table 10 and Figure 3 summarize the water utility's projected combined Operating and Capital cash flows over the five-year rate study period. It is projected that the water utility will have total reserves of about \$3.06 million at the end of FY 2029/30.

Table 10: Water Fund Summary

	Rate Study Projection					
	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Fiscal Year Ending Balance						
Operations	\$1,775,000	\$1,774,000	\$2,531,000	\$3,277,400	\$2,921,300	\$2,449,700
Capital	<u>\$4,374,000</u>	<u>\$3,000</u>	<u>\$918,000</u>	<u>\$1,803,000</u>	<u>\$76,000</u>	<u>\$608,000</u>
Total Water Fund	\$6,149,000	\$1,777,000	\$3,449,000	\$5,080,400	\$2,997,300	\$3,057,700
Debt Coverage		1.44	2.39	1.82	1.49	1.54
Rate Revenue Increase		20%	12%	12%	12%	12%

Figure 3: Water Cash Flow Summary



SECTION 5: WATER COST ALLOCATION

The revenue requirement detailed in the previous section determines the amount of revenue to be recovered from water rates. The cost of service allocation determines how revenues will be recovered from customers based on how they use the water system. Proposition 218 requires that agencies providing “property-related services” (including water utility service) set rates and charges that are based on the cost of providing those services.

5.1 Methodology

The American Water Works Association (AWWA) recommends methods to classify costs among various customers. Using the Base-Extra Capacity Method as recommended by the AWWA, water operating expenses are allocated to the following categories: (a) Base, (b) Extra, (c) Meters, (d) Fire Protection, and (e) Customer Service. The Base and Extra categories are intended to recover the costs to deliver water to customers, while the Customer Service, Fire Protection, and Meters categories are intended to recover expenses related to maintaining infrastructure in the system to supply water at all times under the proposed water service rates in this study. A summary of the cost allocation categories is provided below:

- *Base:* Base costs include the expenses related to providing water under average (“base”) demand conditions.
- *Extra:* The extra category includes costs related to providing water above the system average demand (i.e., related to peak, “extra” usage).
- *Meters:* These include costs related to maintaining infrastructure and operating capacity to provide service at any time under the proposed water service fee rates in this study.
- *Fire Protection:* This category includes costs related to providing direct fire protection service.
- *Customer Service:* This category contains costs associated with serving customers, such as billing and answering customer inquiries.

5.2 Proposed Cost Allocation

This section determines the percentage of the annual revenue requirement to be collected from each rate or charge (consisting of the volume rate and the meter fee) based on the actual costs attributable to each rate or fee and establishes that each parcel’s total water bill will not exceed the proportional cost of service for that parcel.

Table 11 provides the proposed cost allocation based on FY 2025/26 operating costs and a five-year average of annual debt service. For this rate study, it is proposed that the AWWA recommended cost

categories of *Base* and *Extra* be combined as the proposed volume rate is a uniform tier applied to all levels of usage. The volume rate is intended to recover operations & maintenance, utilities as well as 90% of the water utility's service contract and pass through expenses and 10% of staffing costs.

The meter fee for non-irrigation meters will be made up of the AWWA recommended cost categories of *Meters*, *Customer Service*, and *Fire Protection*. For the meter fee for irrigation customers, *Fire Protection* costs will be omitted per Town policy. The meter fee will recover expenses for administration, debt service, 90% of staffing costs, and 10% of service contract and pass through expenses.

Current engineering estimates indicate that maximum day demand (MDD) of the water system is 6,000 gallons per minute (gpm). Maximum day demand plus fire flow is 8,000 gallons per minute. The 2,000 gpm attributable to fire flow demand represents 25% of MDD + fire flow demand. Operating and capital costs related to maintaining capacity in the system to serve customers at any time are determined by MDD + fire flow demand. Therefore, staffing & consulting service costs and capital costs (i.e. debt service costs) are allocated 75% to the *Meters* category and 25% to *Fire Protection*.

As shown in Table 11, the volume rate is proposed to recover 52.1% of costs and the meter fees are proposed to recover the remaining 47.9% of costs. The volume rate is intended to recover the costs of delivering water to customers. The meter fees are intended to recover fixed operating costs as well as debt service costs. The meter fees for fixed operating costs are correlated with the actual costs regardless of the amount of each customer's water use and the volume rate for water delivery is correlated with the actual costs of water service at those levels, respectively.

Table 11: Water Cost Allocation

Category	FY 2025/26 Estimated Costs	Usage Rate	Total Fixed Meter Fee		
		Base/Extra	Meters	Fire Protection [1]	Customer Service
Operating Expenses					
Admin & Inter Govt. & Board	465,000	0%	25%	0%	75%
Staffing & Consulting Serv	1,860,000	10%	68%	23%	0%
Meter Reading	124,000	0%	0%	0%	100%
Operations & Maintenance	1,109,000	100%	0%	0%	0%
Utilities	827,000	100%	0%	0%	0%
Service Contract & Pass Through	<u>1,057,000</u>	<u>90%</u>	<u>10%</u>	<u>0%</u>	<u>0%</u>
Total Operating Expenses	5,442,000	3,073,300	1,477,450	418,500	472,750
Debt Service					
2017 Bonds Debt Service (5yr Avg)	85,000	0%	75%	25%	0%
2022 Bonds Debt Service (5yr Avg)	291,000	0%	75%	25%	0%
2022B Bonds Debt Service (5yr Avg)	<u>83,000</u>	<u>0%</u>	<u>75%</u>	<u>25%</u>	<u>0%</u>
Total Debt Service	459,000	0	344,000	115,000	0
Proposed Cost Allocation	5,901,000 100.0%	3,073,300 52.1%	1,821,450 30.9%	533,500 9.0%	472,750 8.0%

1 – Irrigation customers do not pay fire protection costs

SECTION 6: WATER RATE DESIGN

Following the allocation of costs, the next step is to derive the total cost responsibility for each customer class by developing unit costs of service for each cost function and then assigning those costs to each customer class based on the respective service requirements of each.

6.1 Billing Units

AWWA guidelines recommend using meter equivalents to assign capacity-related costs to larger meter sizes. Utility infrastructure is typically designed to meet peak demands associated with the maximum flow rate of each meter, and larger meters have higher maximum flow rates. Therefore, customers with larger meters are charged based on their ability to place a greater demand on the water system. The flow rate of larger meters compared to the 1" meter determines the number of meter equivalents for each meter size. For example, based on the AWWA meter capacity ratios, a customer that has a 2" meter has 3.2 times the capacity equivalency of a customer with a 1" meter. Meter equivalents for FY 2025/26 are calculated in Table 12 based on AWWA standards. The total number of water meters is 6,239 while the total number of meter equivalents is approximately 6,674.

Table 12: Meter Equivalents for FY 2025/26

Meter Size	# of Meters	Meter Ratio	Meter Equivalents
Non-Irrigation			
Up to 1"	6,057	1.0	6,057.0
1.5"	32	2.0	64.0
2"	46	3.2	147.2
3"	7	6.4	44.8
4"	<u>10</u>	10.0	<u>100.0</u>
Subtotal Non-irrigation	6,152		6,413.0
Irrigation			
Up to 1"	19	1.0	19.0
1.5"	25	2.0	50.0
2"	34	3.2	108.8
3"	2	6.4	12.8
4"	<u>7</u>	10.0	<u>70.0</u>
Subtotal Irrigation	87		260.6
Total	6,239		6,673.6

6.2 Meter Fee Calculation

Unit costs of service for each fixed cost function are calculated in Table 13. Of the FY 2025/26 water rate revenue requirement of \$5.72 million (i.e. the amount recovered from rates in FY 2025/26 as shown in Table 9), 47.9% is attributed to the fixed meter fee consisting of the *Meters*, *Customer Service*, and *Fire Protection* rate categories from Table 11. The *Base/Extra* category is allocated 52.1% of the revenue requirement and is proposed to be recovered from the volume rate. Further discussion of volumetric rate design is provided in the subsequent section.

The *Meters* revenue requirement is proposed to be recovered based on the number of meter equivalents calculated in Table 12. The *Customer Service* revenue requirement is proposed to be recovered from each customer on a per-meter basis regardless of meter size. The *Fire Protection* revenue requirement is also proposed to be recovered based on the number of meter equivalents but will only be recovered from non-irrigation accounts.

Table 13: Water Fixed Unit Cost Calculation

FY 2025/26 Revenue Requirement	Base/Extra	Meters	Cust. Service	Fire Protection
\$5,722,000	\$2,980,075 52.1%	\$1,766,198 30.9%	\$458,410 8.0%	\$517,317 9.0%
		6,674 meter equiv	6,239 # of meters	6,413 non-irrigation meter equiv
		\$22.05 \$/meter equivalent/mo	\$6.12 \$/meter/mo	\$6.72 \$/domestic equivalent/mo

Using the *Meters* and *Fire Protection* unit costs from Table 13, Table 14 determines the total cost per meter equivalent. The *Fire Protection* cost is omitted from the irrigation meter equivalent fee per Town policy.

Table 14: Meter Equivalent Charges

Cost Category	Non-Irrigation Meter Equivalent	Irrigation Meter Equivalent
Meters	\$22.05	\$22.05
Fire Protection	<u>\$6.72</u>	<u>NA</u>
Total (\$/meter equiv./mo)	\$28.77	\$22.05

To calculate the total fixed monthly meter fee for each meter size, the meter equivalent fees from Table 14 are scaled by the meter ratios shown in Table 12. The customer service fee of \$6.12 per month is then added to the meter equivalent fees. The total fixed monthly fee for a 1" domestic (non-irrigation) meter is \$34.89, see Table 15.

Table 15: Total Fixed Water Charges

Non-Irrigation Customers										
Meter Size	Ratio		Meter Equiv. Cost	=	Meter Equiv. Charge		Meter Equiv. Charge	+	Customer Service Charge	Total Fixed Monthly Fee
5/8"	1.0	X	\$28.77	=	\$28.77		\$28.77	+	\$6.12	\$34.89
3/4"	1.0	X	\$28.77	=	\$28.77		\$28.77	+	\$6.12	\$34.89
1"	1.0	X	\$28.77	=	\$28.77		\$28.77	+	\$6.12	\$34.89
1.5"	2.0	X	\$28.77	=	\$57.54		\$57.54	+	\$6.12	\$63.66
2"	3.2	X	\$28.77	=	\$92.06		\$92.06	+	\$6.12	\$98.18
3"	6.4	X	\$28.77	=	\$184.13		\$184.13	+	\$6.12	\$190.25
4"	10.0	X	\$28.77	=	\$287.70		\$287.70	+	\$6.12	\$293.82
6"	20.0	X	\$28.77	=	\$575.40		\$575.40	+	\$6.12	\$581.52

Irrigation Customers										
Meter Size	Ratio		Meter Equiv. Cost	=	Meter Equiv. Charge		Meter Equiv. Charge	+	Customer Service Charge	Total Fixed Monthly Fee
5/8"	1.0	X	\$22.05	=	\$22.05		\$22.05	+	\$6.12	\$28.17
3/4"	1.0	X	\$22.05	=	\$22.05		\$22.05	+	\$6.12	\$28.17
1"	1.0	X	\$22.05	=	\$22.05		\$22.05	+	\$6.12	\$28.17
1.5"	2.0	X	\$22.05	=	\$44.10		\$44.10	+	\$6.12	\$50.22
2"	3.2	X	\$22.05	=	\$70.56		\$70.56	+	\$6.12	\$76.68
3"	6.4	X	\$22.05	=	\$141.12		\$141.12	+	\$6.12	\$147.24
4"	10.0	X	\$22.05	=	\$220.50		\$220.50	+	\$6.12	\$226.62
6"	20.0	X	\$22.05	=	\$441.00		\$441.00	+	\$6.12	\$447.12

6.3 Proposed Volume Rates

The proposed volume rates are calculated in Table 16. The revenue allocated to the *Base/Extra* category is divided by projected annual water use in ccf to calculate the rate per ccf. For FY 2025/26, approximately \$3.0 million is allocated to the *Base/Extra* category as shown in Table 13. To be conservative, it is projected that annual water consumption will remain the same as current over the next five years.

Table 16: Water Volume Rate Cost Calculation

	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Rate Revenue Increase					
Base/Extra Revenue	\$2,980,075	\$3,337,684	\$3,738,206	\$4,186,791	\$4,689,206
Total ccf	1,143,981	1,143,981	1,143,981	1,143,981	1,143,981
Rate (\$/ccf)	\$2.605	\$2.918	\$3.268	\$3.660	\$4.099

6.4 Proposed 5-Year Schedule of Rates

The proposed 5-year schedule of water rates is provided in Table 17. The rates are proposed to go into effect each July 1 from 2025 through 2029. The vacant parcel charge is proposed to remain the same over the next five years and the meter install fee is proposed to remain the same until it is phased out at the end of FY 2026/27. The rates are calculated in this study as described above to produce rates that will be necessary to recover only the actual cost of the water service per parcel. If the rates are adopted, then the rates for the water service fees shown in Table 17 will also apply to any additional connections built out in the Town in the future.

Table 17: Current and Proposed Monthly Water Service Rates

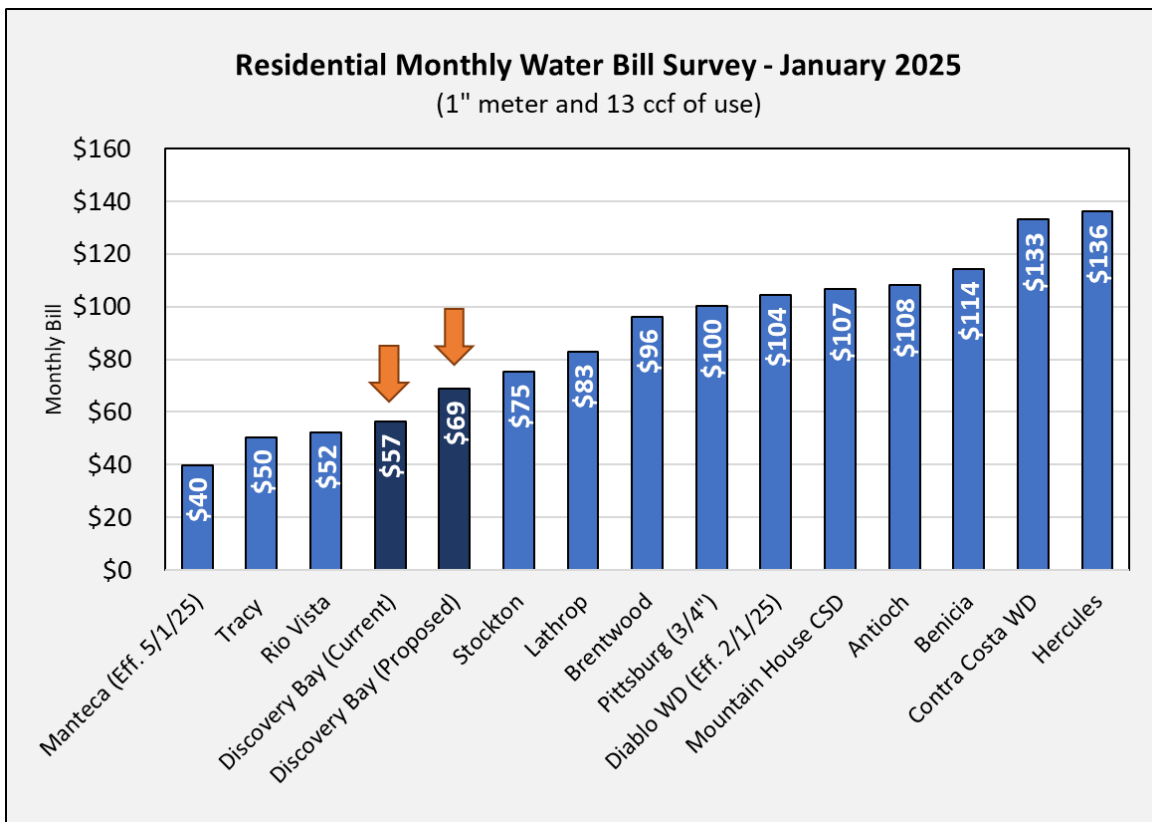
WATER	Current 1-Jul-24	PROPOSED				
		FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)	Monthly (\$/month)
Vacant	\$14.67	\$14.67	\$14.67	\$14.67	\$14.67	\$14.67
Non-irrigation Account Charge:						
5/8 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
3/4 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
1 Inch Meter	\$23.02	\$34.89	\$39.08	\$43.77	\$49.02	\$54.90
1 1/2 Inch Meter	\$42.98	\$63.66	\$71.30	\$79.86	\$89.44	\$100.17
2 Inch Meter	\$66.94	\$98.18	\$109.96	\$123.16	\$137.94	\$154.49
3 Inch Meter	\$130.80	\$190.25	\$213.08	\$238.65	\$267.29	\$299.36
4 Inch Meter	\$202.64	\$293.82	\$329.08	\$368.57	\$412.80	\$462.34
6 Inch Meter	\$402.22	\$581.52	\$651.30	\$729.46	\$817.00	\$915.04
Irrigation Account Charge:						
5/8 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
3/4 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
1 Inch Meter	\$20.62	\$28.17	\$31.55	\$35.34	\$39.58	\$44.33
1 1/2 Inch Meter	\$38.18	\$50.22	\$56.25	\$63.00	\$70.56	\$79.03
2 Inch Meter	\$59.24	\$76.68	\$85.88	\$96.19	\$107.73	\$120.66
3 Inch Meter	\$115.73	\$147.24	\$164.91	\$184.70	\$206.86	\$231.68
4 Inch Meter	\$180.27	\$226.62	\$253.81	\$284.27	\$318.38	\$356.59
6 Inch Meter	\$359.54	\$447.12	\$500.77	\$560.86	\$628.16	\$703.54
Metered Usage Charge:						
All Usage (\$/ccf)	\$2.577	\$2.605	\$2.918	\$3.268	\$3.660	\$4.099
Newly Metered Customers						
Meter Install Fee (10-year payback)	\$8.01	\$8.01	\$8.01			

ccf = 100 cubic feet = 748 gallons

6.5 Bill Impacts

The average single family residential customer in the Town of Discovery Bay uses 13 ccf of water monthly and is served by a 1" meter. Currently, the average equivalent monthly bill is \$56.52 and will increase to \$68.76 under the FY 2025/26 proposed rates assuming no water conservation. Figure 4 below compares the Town's current and proposed typical water bills with the bills of other local agencies for customers using 13 ccf of monthly consumption. Even with the proposed FY 2025/26 increase, the Town's water bill will remain on the low-end of surveyed agencies.

Figure 4: Residential Monthly Water Bill Survey



SECTION 7: WASTEWATER REVENUE REQUIREMENT

Similar to the water utility, the wastewater utility's cost of service and revenue requirement is comprised of operating costs, capital costs, debt service obligations, and the need to maintain reasonable emergency reserves.

7.1 Capital Improvement Plan

The wastewater utility is a capital-intensive enterprise. Through FY 2029/30, the Town expects to fund \$15.9 million in capital improvements, see Table 18. Of this total, about \$8.6 million represents costs to the Town Administration Building and Solar Project Phase II. The remaining \$7.2 million will go towards maintenance, equipment, and lift station improvements. The wastewater utility is responsible for 70% of the costs of Phase II of the solar project.

Table 18: Summary of Wastewater Capital Projects

Project Categories	Projected FY 2025/26	Projected FY 2026/27	Projected FY 2027/28	Projected FY 2028/29	Projected FY 2029/30	5-Year Total	% of Total
Lift Station Improvements	224,000	251,000	281,000	315,000	352,000	1,423,000	9%
Wastewater System & Maintenance	2,620,000	0	0	0	0	2,620,000	16%
Solar Project Phase II	941,000	2,459,000	2,754,000	0	0	6,154,000	39%
Town Admin Building	2,508,000	0	0	0	0	2,508,000	16%
Equipment	<u>2,872,000</u>	<u>314,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,186,000</u>	<u>20%</u>
Total Projects	9,165,000	3,024,000	3,035,000	315,000	352,000	15,891,000	100%

The projects shown in Table 18 will be funded through a combination of reserves, capacity fees, rate revenues, and loan proceeds. Table 19 lists capital revenue sources through FY 2029/30. The Town is projected to use \$3.0 million in existing operating and capital fund reserves. As shown in Table 5, the wastewater utility has reserves beyond its minimum targets. These reserves were accumulated from service charge revenues and should be used judiciously for the benefit of the ratepayers. The Town is expected to experience growth over the next five years. For planning purposes, it is assumed that the Town will collect capacity fee revenues from approximately 10 new homes annually.² \$6.7 million of capital improvement funding is provided by rate and capacity fee revenues. This rate plan assumes the Town will fund \$6.15 million of projects from loan proceeds for Solar Phase II via the same loan program as the water solar project.

Table 19: Wastewater Capital Funding Sources through FY 2029/30

Revenue Source	5-Year Total	% of Total
Existing Capital Reserves	\$3,037,000	19%
Capacity Fees	\$700,000	4%
Rate Revenues	\$6,000,000	38%
New Debt (IBank Loan)	<u>\$6,154,000</u>	<u>39%</u>
Total Revenues	\$15,891,000	100%
 Total Capital Projects	 \$15,891,000	

7.2 Capital Cash Flows

Table 20 provides the wastewater capital fund cash flows over the next five years. The projected costs and timeline of each project was determined by the Town as part of the capital improvement plan. Major projects include the Town Administration Building and Phase II of the Solar Project. The Operations Fund is expected to make transfers to the Capital Improvements Fund to help cover expenses for these major projects. Projects will also be funded from available revenues, including capacity fee revenues and capital reserves.

FY 2026/27 to FY 2029/30, it is anticipated that the Operations Fund will provide transfers of \$1 million to \$1.7 million of rate revenues annually. By the end of FY 2025/26, it is projected that the ending balance will drop to \$934,000. By FY 2027/28 and onwards, this reserve will steadily grow by about \$1.5 million annually.

² Capacity fee revenues can only be used to fund facilities that benefit growth. L&T did not conduct an independent evaluation to determine which projects are growth-related.

Table 20: Wastewater Capital Cash Flow

	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Beginning Balance	9,026,000	934,000	1,505,000	2,864,000	4,443,000
Revenues					
Capacity Fees +10 new cust./year	132,000	136,000	140,000	144,000	148,000
Transfer from Operating	0	1,000,000	1,500,000	1,750,000	1,750,000
Ibank Loan Proceeds	<u>941,000</u>	<u>2,459,000</u>	<u>2,754,000</u>	<u>0</u>	<u>0</u>
Total Revenues	1,073,000	3,595,000	4,394,000	1,894,000	1,898,000
Capital Improvements					
Annual Lift Station Improvements	224,000	251,000	281,000	315,000	352,000
Wastewater System & Maintenance					
Dewatering Return Pipe & Settling Box	358,000	0	0	0	0
Belt Press WWTP#2	1,680,000	0	0	0	0
Decant Station	560,000	0	0	0	0
Pipe Leak Seals @ ML Pump Stations	<u>22,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total System & Maintenance	2,620,000	0	0	0	0
Other Projects					
Solar Project Phase II	941,000	2,459,000	2,754,000	0	0
Town Administration Building	<u>2,508,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Projects	3,449,000	2,459,000	2,754,000	0	0
Equipment					
Solar Dryer Panel Replacement	368,000	0	0	0	0
Cable Tray in Solar Dryers A & B	560,000	0	0	0	0
Fence Portions Around Plant No. 2	1,245,000	0	0	0	0
Dredge Anchors on Pond #2	22,000	0	0	0	0
Rehab Solar Circulators	134,000	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Gate WWTP#1	56,000	0	0	0	0
Upgrade Remaining Radio to Cell/Net Service	95,000	0	0	0	0
Vac Truck Garage/Cover	392,000	0	0	0	0
Stationary Liftstation Generators	<u>0</u>	<u>314,000</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Equipment	2,872,000	314,000	0	0	0
Total Capital Improvements	9,165,000	3,024,000	3,035,000	315,000	352,000
Total Net Revenues	(8,092,000)	571,000	1,359,000	1,579,000	1,546,000
Ending Balance	934,000	1,505,000	2,864,000	4,443,000	5,989,000

7.3 Operating Cash Flows

Table 21 provides the wastewater fund operating cash flow, including rate and non-rate revenues, operating costs, debt service costs, and transfers to the capital fund. The Town is projected to begin FY 2025/26 with an operating balance of \$1.74 million. The minimum fund balance target for the end of each year is based on four months of O&M expenses.

In FY 2025/26, the Town estimates about \$7.3 million will be collected in total year-end revenues, with rate revenues making up about \$6.8 million (including vacant service fees). About \$400,000 per year is collected from interest and about \$22,000 annually is collected from miscellaneous service fees such as permits, inspections, etc.

For FY 2025/26, operating expenses are estimated at \$4.7 million. Major costs include administration, staffing, operations, and service contract and pass through. Operating expenses are projected to increase to about \$5.11 million over the next 5 years. Most expenses projected from FY 2025/26 onward are based on the FY 2024/25 expenses escalated by 3% annually. However, staffing and consulting services are projected to increase 5% annually and utilities are projected to increase 10% annually, though utilities will decrease in FY 2027/28 due to savings realized from the solar project before continuing to increase 10% annually thereafter. The Town's service contract cost with Veolia Water was estimated by staff. The Operations Fund also pays the cost of the annual debt service of about \$1.8 million for the 2017 and the 2022 bonds. In FY 2028/29, loan repayment will start for Solar Project Phase II for a yearly amount of \$453,000.

Currently, the Wastewater Operations Fund is in good financial health and is generating positive net revenues, estimated at about \$829,000 for FY 2025/26. The Town's financial strategy for the sewer utility is to generate enough revenues to fund capital improvements through a combination of debt and cash on hand. The net operating revenues will be used to maintain reserves and partially fund capital improvements over the next five years.

In order to support capital improvements, it is recommended that rate revenues increase by 6% annually over the next five years. This rate plan maintains operating reserves in excess of the target of four months of operating expenses. These additional reserves provide financial security should operating costs exceed the estimates provided herein.

Table 21: Wastewater Operating Cash Flow

	FY 2025/26	FY 2026/27	Projected FY 2027/28	FY 2028/29	FY 2029/30
Beginning balance	\$1,741,000	\$2,570,000	\$2,597,000	\$2,788,000	\$2,542,000
Rate Increase	6.0%	6.0%	6.0%	6.0%	6.0%
Revenues					
Wastewater service					
Rate Revenues (less vacant)	6,864,000	7,276,000	7,713,000	8,176,000	8,667,000
Other & Misc	22,000	22,000	22,000	22,000	22,000
Interest Income	400,000	400,000	400,000	400,000	400,000
New Customers	21,000	32,000	43,000	54,000	65,000
Vacant	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>
Total revenues	7,314,000	7,737,000	8,185,000	8,659,000	9,161,000
% increase in expenses [1]	3.0%	3.0%	3.0%	3.0%	3.0%
Expenses					
Operating Expenses					
Admin & Inter Govt. & Board	516,000	531,000	547,000	563,000	580,000
Staffing & Consulting Serv	1,072,000	1,126,000	1,182,000	1,241,000	1,303,000
Operations & Maint	311,000	320,000	330,000	340,000	350,000
Utilities [2]	878,000	966,000	610,000	671,000	738,000
Service Contract & Pass Through	<u>1,900,000</u>	<u>1,957,000</u>	<u>2,016,000</u>	<u>2,076,000</u>	<u>2,138,000</u>
Total Operating Expenses	4,677,000	4,900,000	4,685,000	4,891,000	5,109,000
Net Operating Revenues	2,637,000	2,837,000	3,500,000	3,768,000	4,052,000
Debt Service [2]					
2017 Bonds	356,000	357,000	357,000	358,000	358,000
2022 Bonds	756,000	756,000	755,000	758,000	758,000
2022B (2012 refinance) Bonds	696,000	697,000	697,000	695,000	695,000
New IBank Loan (4% over 20 years)	<u>0</u>	<u>0</u>	<u>0</u>	<u>453,000</u>	<u>453,000</u>
Total Debt Service	1,808,000	1,810,000	1,809,000	2,264,000	2,264,000
Debt Service Coverage	1.46	1.57	1.93	1.66	1.79
Total Expenses	6,485,000	6,710,000	6,494,000	7,155,000	7,373,000
Net Revenues	829,000	1,027,000	1,691,000	1,504,000	1,788,000
Transfer to Capital Fund	0	1,000,000	1,500,000	1,750,000	1,750,000
O&M Ending balance	2,570,000	2,597,000	2,788,000	2,542,000	2,580,000
O&M Minimum balance target [3]	1,559,000	1,633,000	1,562,000	1,630,000	1,703,000

1 - Most operating expenses are projected to increase by 3% annually

2 - Chemicals and electric; 10% annual increases; savings begin in first year of operation from solar project

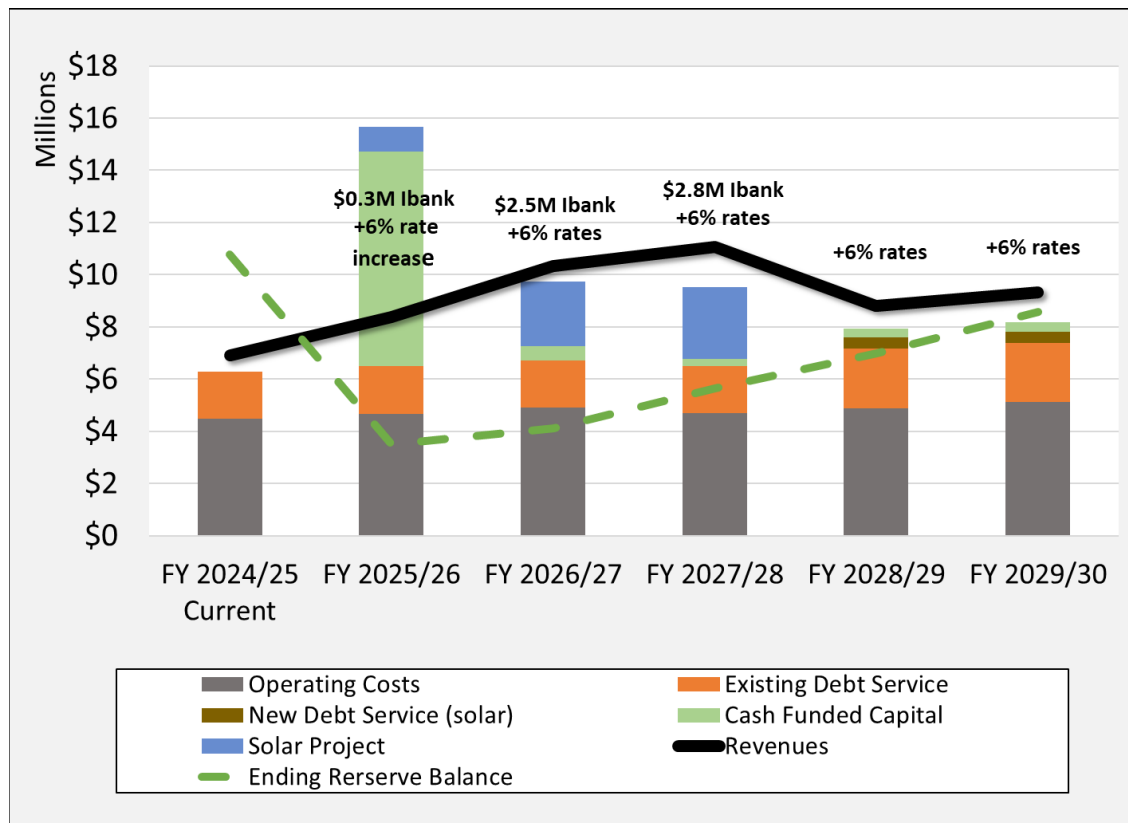
3 - 4 months O&M expenses

Table 22 and Figure 5 summarize the wastewater utility’s projected combined Operating and Capital cash flows over the five-year rate study period. It is projected that the wastewater utility will have total reserves of about \$8.57 million at the end of FY 2029/30.

Table 22: Wastewater Fund Summary

	Rate Study Projection					
	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Fiscal Year Ending Balance						
Operations	\$2,380,600	\$2,570,000	\$2,597,000	\$2,788,000	\$2,542,000	\$2,580,000
Capital	<u>\$9,026,000</u>	<u>\$934,000</u>	<u>\$1,505,000</u>	<u>\$2,864,000</u>	<u>\$4,443,000</u>	<u>\$5,989,000</u>
Total Wastewater	\$11,406,600	\$3,504,000	\$4,102,000	\$5,652,000	\$6,985,000	\$8,569,000
Debt Coverage		1.46	1.57	1.93	1.66	1.79
Rate Increase		6%	6%	6%	6%	6%

Figure 5: Wastewater Cash Flow Summary



SECTION 8: WASTEWATER COST ALLOCATION

To fairly recover costs from customers, a wastewater cost allocation was conducted, see Table 23. Operating and debt service expenses were allocated to *customer service* and *treatment/disposal* cost categories. The *customer service* category is intended to recover costs associated with general utility management and administration that do not vary significantly with the amount of wastewater discharged into the sewer system. The *treatment/disposal* category recovers costs more closely associated with operations, maintenance, and infrastructure. *Treatment/disposal* costs are attributed to customers based on their flows and wastewater strength. In total, about 34% of wastewater utility costs are related to customer service and administration. About 66% of costs are related to sewer treatment and disposal.

Table 23: Wastewater Cost Allocation

Cost	FY 2025/26 Estimated Costs	Customer Service/Admin	Treatment and Disposal
Operating Expenses			
Admin & Inter Govt. & Board	516,000	100%	0%
Staffing & Consulting Serv	1,072,000	100%	0%
Operations & Maint	311,000	0%	100%
Utilities	878,000	0%	100%
Service Contract	<u>1,900,000</u>	<u>33%</u>	<u>67%</u>
Total Operating Expenses	4,677,000	2,221,333	2,455,667
Debt Service			
2017 Bonds Debt Service (5yr Avg)	357,200	0%	100%
2022 Bonds Debt Service (5yr Avg)	756,600	0%	100%
2022B Bonds Debt Service (5yr Avg)	<u>696,000</u>	<u>0%</u>	<u>100%</u>
Total Debt Service	1,809,800	0	1,809,800
Proposed Cost Allocation	6,486,800	2,221,333 34.24%	4,265,467 65.76%

SECTION 9: WASTEWATER RATE DESIGN

The Town proposes to maintain its current wastewater rate structure. The Town will continue to charge residential customers a fixed annual sewer charge, while commercial customers will be charged for sewer flow based on metered water use. The amounts of each rate are proposed to be updated.

9.1 Flows and Pollutant Strength

Wastewater flow is about 9 ccf/month per single family home. In the Town of Discovery Bay, the average single family home has 2.74 occupants. It is assumed that the typical multiple family dwelling unit has 2 occupants and 6.5 ccf of monthly sewer flow. Based on these parameters, total annual residential flow is estimated in Table 24.

Table 24: Estimated Residential Sewer Flows

	Single Family Residential	Multiple Family	Units
Residential Winter Water Use	9	6.5	ccf/month
Annualized	108	78	ccf/year
Number of Parcels	5,816	224	
Estimated Annual Sewer Flow	628,128	17,472	ccf/year

The cost of service for each parcel depends on the parcel's flow (i.e. the amount discharged into the sewer system) and pollutant loading. Pollutant loading is expressed as concentrations of biochemical oxygen demand (BOD) and total suspended solids (TSS). Wastewater flow that has higher concentrations of BOD and TSS is more costly for the Town to treat and dispose of. Table 25 establishes the pollutant strength factors applicable to each customer class using the equation listed below. Based on industry typical estimates, it is assumed that 50% of wastewater utility costs recovered in the *treatment/disposal* category are attributable to flow, 25% are attributable to biochemical oxygen demand (BOD) and 25% are attributable to total suspended solids (TSS). Based on this calculation, each ccf of restaurant flow is 2.67 times more costly to treat than each ccf of domestic strength flow (not including customer service costs).

Table 25: Pollutant Strength Factors

$$\text{Strength Factor Estimate} = 50\% + [25\% \times \frac{BOD}{SF \text{ BOD}}] + [25\% \times \frac{TSS}{SF \text{ TSS}}]$$

Customer Class	Wastewater Strength (mg/L)		Strength Factor (see equation above)
	BOD	TSS	
Single Family Residential	230	230	1.00
Multiple Family	230	230	1.00
Business/Government/Clubs	150	150	0.83
Restaurants/Bars/Dining Facilities	1000	1000	2.67
Schools	150	150	0.83
Other Domestic Strength Users	230	230	1.00

BOD and TSS concentrations are based on industry typical values

BOD – biochemical oxygen demand

Mg/l – milligrams per liter

SF – single family

TSS – total suspended solids

Table 26 estimates the Town's total wastewater flow adjusted by the strength factors from Table 25. Residential flows are taken from Table 24 and commercial flows are taken from Table 4.

Table 26: Estimated Total Sewer Flow with Strength Factors

Customer Category	Total Flow (ccf)	Strength Factor	Flow w/Strength Factor (ccf)
Single Family Residential	628,128	1.00	628,128
Multiple Family	17,472	1.00	17,472
Business/Government/Clubs	1,043	0.83	865
Restaurants/Bars/Dining Facilities	4,663	2.67	12,451
Schools	800	0.83	664
Other Domestic Strength Users	<u>125</u>	1.00	<u>125</u>
	652,231		659,706

9.2 Unit Cost Calculation and Rate Design

Table 27 provides the wastewater unit cost calculation. The FY 2025/26 rate revenue requirement of \$6.86 million from the operating cash flow is allocated to the *customer service* and *treatment/disposal* categories based on the percentages in Table 23. The *treatment/disposal* revenue requirement is divided by the flow adjusted by strength factors from Table 26 and the *customer service* revenue requirement and rate design is provided in Table 28.

Table 27: Wastewater Unit Cost Calculation

	Customer Service/Admin	Treatment and Disposal	Total
Cost Allocation % from Table 23	34.24%	65.76%	100.00%
FY2025/26 Revenue Requirement	\$2,350,501	\$4,513,499	\$6,864,000
			[1]
Billing Units	(see Table 28)	Flow w/Strength Factor	
		659,706	
Total Rate (\$/ccf)		\$6.84	

1 – Rate revenue requirement for FY2025/26 from the cash flow in Table 21

The Town bills commercial customers volume sewer rates based on metered water use. Instead of billing the customer service fee as a fixed charge, the commercial *customer service* revenue requirement is recovered from the commercial volume rates. Table 28 calculates the customer service rates for residential and commercial customers. The total customer service revenue requirement is sub-allocated between residential and commercial classes based on the number of customers. The residential revenue requirement is divided by the number of customers to determine a \$/account charge and the commercial revenue requirement is divided by annual commercial flows (without the strength factor) to determine a \$/ccf charge.

Table 28: Customer Service Rate Calculation

	Residential	Metered Commercial	Total
# of Customers [1]	6,040	38	6,078
	99.4%	0.6%	100.0%
Customer Service Revenue Requirement	\$2,335,806	\$14,695	\$2,350,501
	99.4%	0.6%	100.0%
Billing Units	6,040	6,631	
	# of Customers	Annual ccf	
Rate	\$32.23	\$2.22	
	\$/month	\$/ccf	

1 - Does not include vacant parcels; from Table 4

9.3 Residential Rate Calculation

Table 29 calculates the single family and multiple family sewer bills for FY 2025/26 based on the unit costs developed in Table 27 and Table 28. Each residential dwelling unit is assigned a monthly customer service fee of \$32.23. The flow rate of \$6.84/ccf is multiplied by the typical single family flow of 9 ccf/month and the typical multiple family flow of 6.5 ccf/month.

Table 29: FY2025/26 Residential Wastewater Bill Calculation

	Count		Rate	Total Bill
Single Family Residential				
Customer Service Fee	1	X	\$32.23	\$32.23
Sewer Rate	9	X	\$6.84	<u>\$61.56</u>
Total Monthly Bill				\$93.79
Multi Family Residential				
Customer Service Fee	1	X	\$32.23	\$32.23
Sewer Rate	6.5	X	\$6.84	<u>\$44.46</u>
Total Monthly Bill				\$76.69

9.4 Commercial Rate Calculation

Table 30 calculates the total FY 2025/26 commercial rates. The customer service rate is added to the strength-adjusted treatment/disposal rate to calculate the total rate in \$/ccf. The rates shown below represent the full cost of service for these customers. To mitigate rate impacts, it is proposed that school and other domestic strength user rates be phased-in.

Table 30: Full Cost Commercial Wastewater Rate Calculation FY2025/26

Customer Class	Strength Factor		Base Treatment/Disposal Rate		Treatment/Disposal Rate	Treatment/Disposal Rate		Cust. Service Rate		Total Rate (\$/ccf)
Business/Government/Clubs	0.83	X	\$6.84	=	\$5.68	\$5.68	+	\$2.22	=	\$7.90
Restaurants/Bars/Dining	2.67	X	\$6.84	=	\$18.26	\$18.26	+	\$2.22	=	\$20.48
Schools	0.83	X	\$6.84	=	\$5.68	\$5.68	+	\$2.22	=	\$7.90
Other Domestic Strength Users	1.00	X	\$6.84	=	\$6.84	\$6.84	+	\$2.22	=	\$9.06

9.5 Proposed 5-year Schedule of Rates

Table 31 provides the proposed 5-year wastewater rate plan based on full cost rates. As shown below, the FY 2025/26 rate impacts for schools and other domestic strength users are significant.

Table 31: Full Cost 5-Year Wastewater Rate Plan

Customer Class	Current	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30
Single Family	\$88.46	\$93.79	\$99.41	\$105.38	\$111.70	\$118.40
Multiple Family/Condos	\$72.40	\$76.69	\$81.29	\$86.17	\$91.34	\$96.82
Business/Government/Clubs	\$7.50	\$7.90	\$8.37	\$8.88	\$9.41	\$9.97
Restaurants/Bars/Dining Facilities	\$19.70	\$20.48	\$21.71	\$23.01	\$24.39	\$25.86
Schools	\$6.85	\$7.90	\$8.37	\$8.88	\$9.41	\$9.97
Other Domestic Strength Users	\$7.50	\$9.06	\$9.60	\$10.18	\$10.79	\$11.44
Single Family		6.02%	6.0%	6.0%	6.0%	6.0%
Multiple Family/Condos		5.92%	6.0%	6.0%	6.0%	6.0%
Business/Government/Clubs		5.32%	6.0%	6.0%	6.0%	6.0%
Restaurants/Bars/Dining Facilities		3.98%	6.0%	6.0%	6.0%	6.0%
Schools		15.28%	6.0%	6.0%	6.0%	6.0%
Other Domestic Strength Users		20.78%	6.0%	6.0%	6.0%	6.0%

Table 32 provides the proposed phased-in rate plan. By the end of the fifth year, all rates will be equal to the full cost of service.

Table 32: Proposed 5-Year Wastewater Rate Plan

Customer Class	Current	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30
Single Family	\$88.46	\$93.79	\$99.41	\$105.38	\$111.70	\$118.40
Multiple Family/Condos	\$72.40	\$76.69	\$81.29	\$86.17	\$91.34	\$96.82
Business/Government/Clubs	\$7.50	\$7.90	\$8.37	\$8.88	\$9.41	\$9.97
Restaurants/Bars/Dining Facilities	\$19.70	\$20.48	\$21.71	\$23.01	\$24.39	\$25.86
Schools	\$6.85	\$7.39	\$7.96	\$8.58	\$9.25	\$9.97
Other Domestic Strength Users	\$7.50	\$8.16	\$8.88	\$9.66	\$10.51	\$11.44
Single Family		6.0%	6.0%	6.0%	6.0%	6.0%
Multiple Family/Condos		5.9%	6.0%	6.0%	6.0%	6.0%
Business/Government/Clubs		5.3%	6.0%	6.0%	6.0%	6.0%
Restaurants/Bars/Dining Facilities		4.0%	6.0%	6.0%	6.0%	6.0%
Schools		7.8%	7.8%	7.8%	7.8%	7.8%
Other Domestic Strength Users		8.8%	8.8%	8.8%	8.8%	8.8%

Highlighted rows indicate phased-in rate adjustments.

Table 33 shows the difference in revenues between the full cost rates and the phased-in rates for the schools and domestic strength users. The difference is de minimis and can be easily absorbed by non-rate sewer revenues.

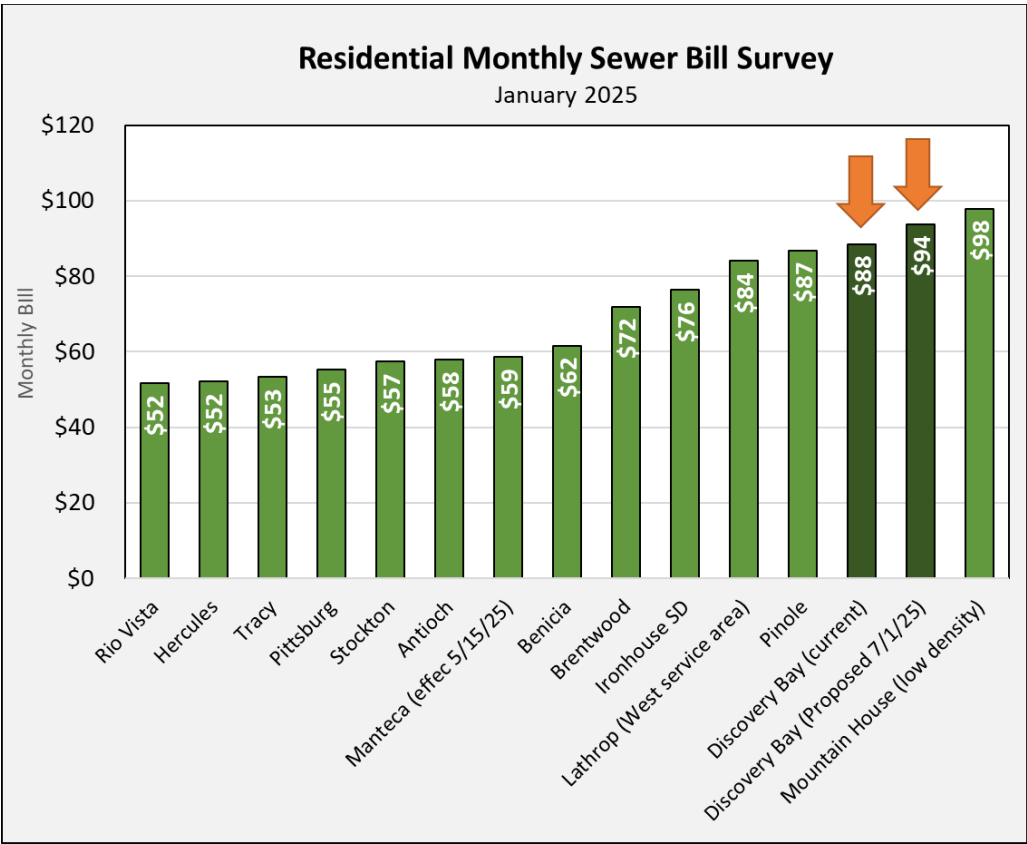
Table 33: School and Domestic User Wastewater Rate Revenues

	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30
Full Cost Rates					
Schools	\$6,319	\$6,698	\$7,100	\$7,526	\$7,978
Other Domestic Strength Users	\$1,136	\$1,204	\$1,276	\$1,353	\$1,434
Phased-in Rates					
Schools	\$5,908	\$6,368	\$6,864	\$7,398	\$7,978
Other Domestic Strength Users	\$1,023	\$1,113	\$1,211	\$1,318	\$1,434
Difference					
Schools	(\$411)	(\$330)	(\$236)	(\$128)	\$0
Other Domestic Strength Users	<u>(\$113)</u>	<u>(\$91)</u>	<u>(\$65)</u>	<u>(\$35)</u>	<u>(\$0)</u>
Loss of revenue due to phase-in	(\$523)	(\$421)	(\$301)	(\$163)	(\$0)

9.6 Bill Impacts

Figure 4 below compares the Town's current and proposed single family residential wastewater bills with those of other local agencies. Though customers are billed annually in the Town of Discovery Bay, bills are expressed here in monthly terms to allow for better comparison across local agencies. The Town's bill is currently at the upper end of surveyed agencies and will remain as such following the proposed rate increase.

Figure 6: Residential Monthly Sewer Bill Survey



SECTION 10: CONCLUSIONS AND RECOMMENDATIONS

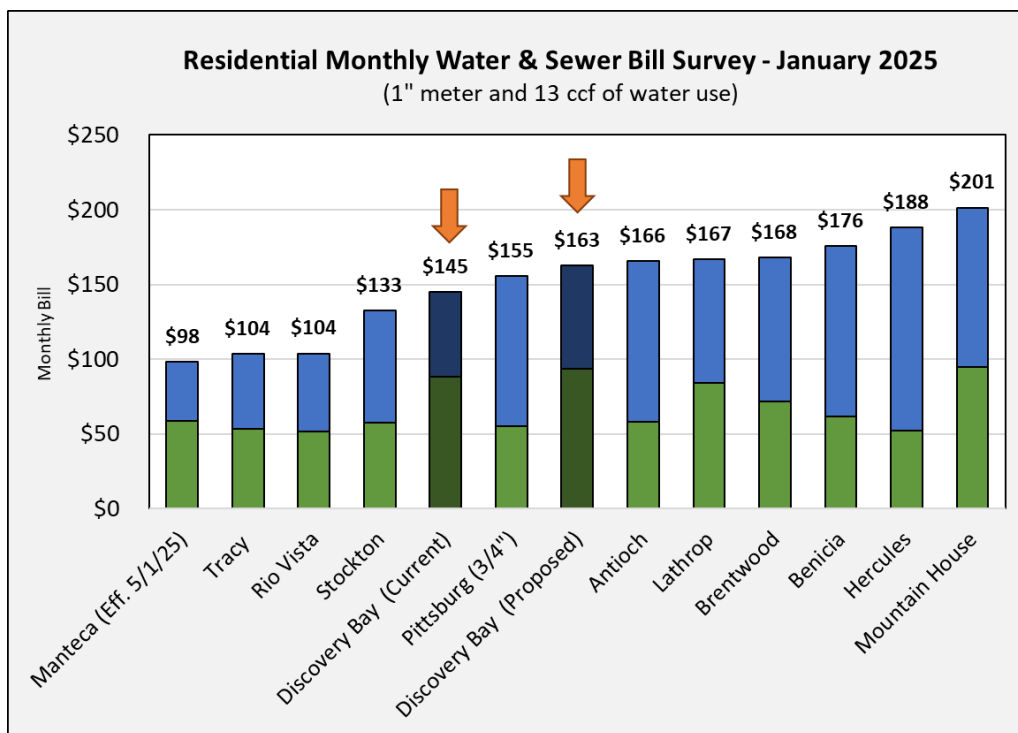
10.1 Rate Study Conclusions

The rates developed in this report were based on the best available information gathered from Town audits, budgets, and input from staff, the Finance Committee, and the Board of Directors and the ratemaking consultant's professional opinion. The cost allocations proposed herein are based on American Water Works Association methodologies and industry standard practice. The proposed rates are based on the reasonable cost of providing service and are proportional to the benefits received by each customer.

10.2 Rate Impacts

The chart below compares the Town's current and proposed combined water and sewer utility bill of the typical single family residential customer to the bills of other local agencies. The average single family residential customer is served by a 1" meter and uses 13 ccf of water per month. Under the proposed rate increases, the typical single family residential customer will experience a bill increase from \$144.98 to \$162.55 per month, about a 12% increase.

Figure 7: Residential Monthly Water & Sewer Bill Survey



10.3 Future Recommendations

It is recommended that the Town update its rates and cost of service at least every five years to account for cost increases, operational changes, and growth in the customer base.