

The City of  
**SAN DIEGO**  
**PUBLIC UTILITIES DEPARTMENT**  
**FISCAL YEAR 2024-2028**  
**FIVE-YEAR FINANCIAL OUTLOOK**



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NOVEMBER 2022

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
SUMMARY OF KEY FINANCIAL DATA.....	2
Water and Wastewater Systems .....	2
REPORT OUTLINE .....	7
OVERVIEW OF THE WATER AND WASTEWATER SYSTEMS .....	9
Regional Water Supply .....	10
Participating Agencies .....	10
Pure Water Program.....	12
Background.....	12
Cost of Service Analysis.....	13
WATER SYSTEM.....	14
Water System Expenditures .....	14
Water Purchases.....	14
Personnel Expenditures .....	16
Supplies .....	18
Contracts .....	19
Information Technology .....	21
Energy & Utilities .....	21
Other Expenditures.....	22
Reserves Contributions .....	23
Water System Capital Improvements Program .....	25
Capital Improvements Program (CIP) Financing Plan.....	26
Debt Service Coverage Ratios.....	27
Water System Revenues .....	28
Water Sales.....	28
Water Capacity Charges .....	30
Revenue from Use of Property.....	32
Other Revenue.....	33
Other Assumptions and Considerations.....	34
Litigation.....	34
WASTEWATER SYSTEM.....	35
Wastewater System Expenditures .....	35
Personnel Expenditures .....	35
Supplies .....	36
Contracts .....	37
Information Technology .....	38
Energy & Utilities .....	39
Other Expenditures.....	40
Reserves Contributions .....	42
Wastewater System Capital Improvements Program.....	43
Capital Improvements Program (CIP) Financing Plan.....	44
Debt Service Coverage Ratio.....	45
Wastewater System Revenue .....	46
Sewer Service Charges.....	46
Wastewater Capacity Charges .....	48
Other Revenue.....	49

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## **MISSION STATEMENT**

*To provide reliable water utility services that protect the health of our communities and the environment*

## **VISION STATEMENT**

*A world-class water utility for a world-class city*

## EXECUTIVE SUMMARY

The Public Utilities Department (PUD or Department) Fiscal Year 2024-2028 Five-Year Financial Outlook (PUD Outlook or Outlook) is provided to guide long-range planning and serve as the framework for the development of the Fiscal Year (FY) 2024 Proposed Budget for the Water and Wastewater Funds. The purpose of this report is to provide an overview of the Public Utilities Department's long-range needs and to guide programmatic decisions.

The PUD Outlook focuses on the overall fiscal condition of the Water and Wastewater Funds and assesses impacts to revenues and expenditures from regional water and wastewater demands. It also explores a funding strategy to finance major capital investments in Water and Wastewater System infrastructure and the Pure Water Program construction. The PUD Outlook quantifies new costs that are critical to accomplishing PUD's strategic goals over the next five-year period. These goals include:

### **Goal 1: Water Supply/Environmental Stewardship**

- Water supply and conservation
- Carbon footprint and energy management

### **Goal 2: Organization Excellence**

- Rate structure optimization
- Safety
- Training and development
- Culture of accountability

### **Goal 3: Community Engagement**

- Stakeholder understanding and support
- Customer service strategies

### **Goal 4: Infrastructure Management**

- Asset management
- Infrastructure investment

The PUD Outlook is not a budget, and projected revenues and expenditures in any given year of the PUD Outlook may not correspond exactly to those in future Proposed Budgets. Nevertheless, the PUD Outlook can serve as a planning tool to assist in budget decisions and the allocation of resources to meet PUD's strategic goals that are critical to providing the community with a reliable and high-quality water service. The PUD Outlook also provides the City Council, key stakeholders, and the public with information to facilitate discussions during the development of the FY 2024 Budget.

As enterprise funds, the Water and Wastewater Funds differ from the General Fund in that their services are supported with revenue derived from rates charged to customers. These rates are determined through a process prescribed by state law, which requires a cost of service analysis and Council approval of any rate adjustments at a public hearing. For the Wastewater System, rates and the corresponding revenues from a recent cost of service study approved September 2021 are reflected in FY 2022 through FY 2025 of the PUD Outlook. The Water cost of service study, which has been released simultaneously with PUD Outlook addresses proposed rate adjustments through FY 2025. The PUD Outlook identifies the overall system needs, whereas the cost of service analysis allocates those needs to establish applicable rate recovery by the different user classes.

## SUMMARY OF KEY FINANCIAL DATA

This section presents a summary of the PUD Outlook, and the overall fiscal condition of the Water and Wastewater Systems. Tables 1.1 and 1.3 summarize revenues projected to support operations, Capital Improvements Program (CIP) related expenditures, and key financial metrics for the Water and Wastewater Systems, respectively. Further detail on CIP expenses and revenue sources for those expenses is also provided.

Additional detail on each line item in these summaries can be found in the corresponding sections of this report. Baseline operating expenditures are those expenditures that are sufficient to allow PUD to continue providing its existing level of service without expanding any operational programs. Critical operating expenditures are those associated with expanded operations for PUD; a significant portion of these critical operating expenditures are associated with Phase 1 of the Pure Water Program coming online. CIP expenditure projections are also detailed in Tables 1.2 and 1.4 and are split into Pure Water CIP expenditures, which are associated with the Pure Water Program, and Baseline CIP expenditures, which consist of capital expenditures on all non-Pure Water related capital improvements. Revenue projections include revenue that will be required to adequately cover operating expenses, CIP expenses, and to meet financial metrics necessary to operate the systems.

### Water and Wastewater Systems

Overall, the PUD Outlook for both the Water and Wastewater Systems forecasts baseline operating expenditures to grow modestly over the next five years; however, increases in critical operating expenditures are expected as PUD begins operations and maintenance of Phase 1 of the Pure Water Program as well as debt service expenditures for constructing Pure Water Phase 1. Conversely, CIP expenditures during the Outlook period are expected to peak in FY 2024 due to Pure Water Phase 1 and then gradually decrease through FY 2028, as Phase 1 construction of the Pure Water Program nears completion and efforts shift to planning for Phase 2 of Pure Water.

In addition to Pure Water, the City's network of nine dams are expected to become another core expenditure program over the next 5-20 years as they continue to age and need to be replaced. This will impact both the operating and capital budget. This Outlook builds on earlier budget adds proposed by the Mayor and approved by City Council in what is expected to be a billion dollar plus program.

For the Water System, water purchase expenses are expected to decline during the Outlook period due to the additional use and availability of local water supply produced from Phase 1 of Pure Water coming online.

Revenues for both the Water and Wastewater Systems are projected to increase moderately over the next five years, primarily due to increased rates to support the operations as forecasted in FY 2024 through FY 2028. The PUD Outlook also anticipates the transfer of funds to and from the Rate Stabilization Fund for each system to smooth revenue needs through the Outlook period, which would otherwise require additional rate increases or reduction in expenditures.

PUD continues to project the use of financing to fund the CIP, including the Pure Water Program, as illustrated in Tables 1.2 and 1.4.

<b>Table 1.1 - Water System Fiscal Year 2024-2028 Financial Outlook</b>						
<b>(\$ in Millions)</b>						
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Water Sales	\$586.1	\$632.8	\$679.5	\$736.5	\$806.8	\$872.0
Capacity Charges	\$14.9	\$15.9	\$14.4	\$14.4	\$14.4	\$14.4
Revenue from Use of Property	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8
Other Revenue	\$52.6	\$51.7	\$50.7	\$50.4	\$49.8	\$48.6
<b>TOTAL SYSTEM REVENUES</b>	<b>\$660.4</b>	<b>\$707.1</b>	<b>\$751.4</b>	<b>\$808.1</b>	<b>\$877.7</b>	<b>\$941.8</b>
Salaries & Wages	\$59.2	\$61.2	\$63.3	\$65.5	\$67.7	\$69.6
Fringe Benefits	\$42.0	\$44.6	\$47.4	\$48.6	\$49.9	\$49.9
Water Purchases	\$263.7	\$290.0	\$309.2	\$329.9	\$317.1	\$316.1
Other Non-Personnel Expenditures	\$137.4	\$142.3	\$146.4	\$146.8	\$149.1	\$151.5
<b>BASELINE OPERATING EXPENDITURES</b>	<b>\$502.2</b>	<b>\$538.2</b>	<b>\$566.3</b>	<b>\$590.7</b>	<b>\$583.8</b>	<b>\$587.1</b>
<b>CRITICAL OPERATING EXPENDITURES</b>	<b>\$0.0</b>	<b>\$20.7</b>	<b>\$35.2</b>	<b>\$57.2</b>	<b>\$71.6</b>	<b>\$48.5</b>
Contribution to CIP	\$113.2	\$124.5	\$31.4	\$37.8	\$120.0	\$150.6
Debt Service	\$94.0	\$114.7	\$127.7	\$138.3	\$151.5	\$158.1
(Use of) / Contribution to Reserves	(\$18.0)	(\$7.1)	(\$21.4)	(\$25.0)	\$14.9	\$7.0
<b>NON-OPERATING EXPENDITURES</b>	<b>\$189.2</b>	<b>\$232.1</b>	<b>\$137.7</b>	<b>\$151.1</b>	<b>\$286.4</b>	<b>\$315.6</b>
<b>TOTAL EXPENDITURES</b>	<b>\$691.4</b>	<b>\$791.0</b>	<b>\$739.2</b>	<b>\$799</b>	<b>\$941.9</b>	<b>\$951.3</b>
<b>Impact to Fund Balance</b>	<b>(\$31.0)</b>	<b>(\$83.9)</b>	<b>\$12.2</b>	<b>\$9.0</b>	<b>(\$64.1)</b>	<b>(\$9.5)</b>
<b>Debt Service Coverage Ratio</b>	<b>1.73 x</b>	<b>1.37 x</b>	<b>1.37 x</b>	<b>1.37x</b>	<b>1.39 x</b>	<b>1.89 x</b>
<b>Assumed Rate Increase</b>	<b>2.5<sup>1</sup>%</b>	<b>9.3%</b>	<b>7.6%</b>	<b>9.8%</b>	<b>8.9%</b>	<b>8.2%</b>

<sup>1</sup> On September 20, 2022 the City Council Authorized a not to exceed passthrough rate from CWA of 3.0%, effective January 1, 2023. This based on update estimates in the outlook the expected rate increase has been revised downwards to 2.5%. This information will be distributed to customers at least 30 days before the effective date.

**Table 1.2 - Water System Fiscal Year 2024-2028 Financial Outlook  
Summary of Capital Improvements Program Key Financial Data  
(\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
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Baseline CIP	\$219.3	\$263.5	\$239.0	\$229.3	\$267.4	\$245.4
Pure Water CIP	\$312.2	\$218.3	\$112.7	\$64.9	\$18.5	\$33.4
<b>TOTAL CIP EXPENDITURES</b>	<b>\$531.6</b>	<b>\$481.8</b>	<b>\$351.7</b>	<b>\$394.2</b>	<b>\$285.9</b>	<b>\$278.8</b>

Sources of Funds						
Bonds	\$116.1	\$67.0	\$102.0	\$131.0	\$110.0	\$100.0
State Revolving Funds	\$0.3	\$79.4	\$103.8	\$110.3	\$56.0	\$28.2
WIFIA	\$302.0	\$210.9	\$114.5	\$15.1	\$0.0	\$0.0
Grants	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Cash	\$113.2	\$124.5	\$31.4	\$37.8	\$120.0	\$150.6
<b>REVENUE SOURCES</b>	<b>\$531.6</b>	<b>\$481.8</b>	<b>\$351.7</b>	<b>\$294.2</b>	<b>\$285.9</b>	<b>\$278.8</b>

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**Table 1.3 - Wastewater System Fiscal Year 2024-2028 Financial Outlook**  
(\$ in Millions)

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Sewer Service Charges	\$295.0	\$306.8	\$318.1	\$332.0	\$359.1	\$374.3
Capacity Charges	\$23.7	\$21.9	\$22.8	\$22.3	\$22.6	\$22.4
Grants	\$3.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Other Revenue	\$112.2	\$113.9	\$111.7	\$111.3	\$111.8	\$112.4
<b>TOTAL SYSTEM REVENUES</b>	<b>\$433.9</b>	<b>\$442.6</b>	<b>\$452.6</b>	<b>\$465.6</b>	<b>\$493.5</b>	<b>\$509.2</b>
Salaries & Wages	\$64.2	\$66.1	\$68.2	\$70.2	\$72.4	\$74.6
Fringe Benefits	\$44.7	\$45.8	\$46.9	\$48.1	\$49.3	\$50.5
Other Non-Personnel Expenditures	\$179.2	\$185.3	\$191.9	\$192.8	\$196.5	\$200.2
<b>BASELINE OPERATING EXPENDITURES</b>	<b>\$288.0</b>	<b>\$297.2</b>	<b>\$306.9</b>	<b>\$311.2</b>	<b>\$318.2</b>	<b>\$325.3</b>
<b>CRITICAL OPERATING EXPENDITURES</b>	<b>\$0.0</b>	<b>\$11.4</b>	<b>\$12.4</b>	<b>\$10.9</b>	<b>\$10.7</b>	<b>\$11.2</b>
Contribution to CIP	(\$57.5)	\$125.4	\$145.7	(\$39.1)	\$89.4	(\$70.6)
Debt Service	\$115.1	\$101.0	\$103.0	\$105.5	\$119.4	\$112.6
(Use of) / Contribution to Reserves	(\$26.3)	(\$5.0)	(\$12.0)	(\$11.5)	(\$9.8)	(\$8.5)
<b>NON-OPERATING EXPENDITURES</b>	<b>\$31.4</b>	<b>\$221.4</b>	<b>\$236.7</b>	<b>\$55.0</b>	<b>\$198.9</b>	<b>\$33.5</b>
<b>TOTAL EXPENDITURES</b>	<b>\$319.4</b>	<b>\$530.1</b>	<b>\$556.0</b>	<b>\$377.0</b>	<b>\$527.8</b>	<b>\$369.9</b>
<b>Impact to Fund Balance</b>	<b>\$114.6</b>	<b>(\$87.5)</b>	<b>(\$103.5)</b>	<b>\$88.6</b>	<b>(\$34.4)</b>	<b>\$139.3</b>
<b>Debt Service Coverage Ratio</b>	<b>1.42 x</b>	<b>1.38 x</b>	<b>1.41 x</b>	<b>1.47 x</b>	<b>1.46 x</b>	<b>1.61 x</b>
<b>Assumed Rate Increase<sup>2</sup></b>	<b>5.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>4.0%</b>

<sup>2</sup> City Council has approved maximum rate levels for wastewater through January 1, 2025. All rate increases reflect the value effective on the date of the rate increase. Revenues in the PUD Outlook reflect the impact of those increases from the effective date in that fiscal year

**Table 1.4 - Wastewater System Fiscal Year 2024-2028 Financial Outlook  
Summary of Capital Improvements Program Key Financial Data  
(\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Baseline CIP	\$138.4	\$217.8	\$230.6	\$227.2	\$149.9	\$107.2
Pure Water CIP	\$212.9	\$211.7	\$114.4	\$28.8	\$7.1	\$14.3
<b>TOTAL CIP EXPENDITURES</b>	<b>\$351.3</b>	<b>\$429.5</b>	<b>\$345.0</b>	<b>\$255.9</b>	<b>\$157.0</b>	<b>\$121.5</b>

Sources of Funds						
Commercial Paper / Bonds	\$75.0	\$90.0	\$0.0	\$210.0	\$0.0	\$140.0
State Revolving Funds	\$289.5	\$192.2	\$176.5	\$62.7	\$45.1	\$29.6
Grants	\$20.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Cash	(\$33.8)	\$147.3	\$168.5	(\$16.8)	\$111.9	(\$48.1)
<b>REVENUE SOURCES</b>	<b>\$351.3</b>	<b>\$429.5</b>	<b>\$345.0</b>	<b>\$255.9</b>	<b>\$157.0</b>	<b>\$121.5</b>

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## REPORT OUTLINE

The PUD Outlook is organized into two main sections: Water System and Wastewater System. The Water System is comprised of the Water Utility Fund and the Wastewater System is comprised of the Metropolitan and Municipal Sewer Funds, collectively known as the Sewer Revenue Funds.

Similar to the organization of the Five-Year Financial Outlook for the General Fund, the PUD Outlook provides a brief overview of the Water and Wastewater Systems and the impacts of the Pure Water Program, as well as a discussion of projected operating and capital expenditures, projected revenues, and potential rate adjustments. This Outlook also reflects the impacts of the commissioning of Phase 1 of the Pure Water Program which factors in the cost competitive, reliable and sustainable increase in local water supplies as well as the debt service for the project. The PUD Outlook is presented in a different order than the General Fund Outlook; expenditures are discussed first, followed by a discussion of revenue. This is due to the nature of rate forecasts, which are driven by the need to support operations and achieve key financial metrics.

The Water System and Wastewater System sections of the PUD Outlook include additional details on the projections for the next five years of ongoing revenues and expenditures that were displayed in Table 1.1 – Water System Fiscal Year 2024-2028 Financial Outlook, and Table 1.3 – Wastewater System Fiscal Year 2024-2028 Financial Outlook, respectively. Each section begins with a discussion of operating expenditures. ‘Baseline’ projections for operating expenditures represent those necessary to support current service levels provided by PUD. Unaudited Expenditures<sup>3</sup> for FY 2022 are presented for context but FY 2023 projections are the starting point for personnel and non-personnel baseline expenditures unless otherwise noted. As noted earlier, the PUD Outlook projections in any given year may not correspond exactly to the revenues and expenditures in future Proposed Budgets.

For this PUD Outlook, the primary Critical Operating Expenditures associated with implementing the Pure Water Program have been called out separately from baseline expenditures<sup>4</sup>. The Critical Operating Expenditures are discussed within each expenditure category. In some cases, expenditures are allocated in both water and wastewater funds. For instance, the Pure Water Program is displayed in both Water and Wastewater sections as both systems benefit. Previous Critical Operating Expenditures that were identified in prior PUD Outlooks and the FY 2023 budget were incorporated as baseline expenses in the PUD Outlook. All expenditures projected in this report will be further refined during the budget development process for each respective fiscal year.

Projections for CIP expenditures and funding sources are also provided, with Pure Water CIP expenses and funding sources broken out from the Department’s baseline capital program which covers pumps, treatment plants, pipelines, and reservoirs, among other capital infrastructure.

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<sup>3</sup> The City’s Annual Comprehensive Financial Report (ACFR) includes the financial statements of all funds of the City, is prepared in accordance with Generally Accepted Accounting Principles, including those standards established by the Governmental Accounting Standards Board and portions of it at audited by an independent audit. The financial activity presented in this report was prepared in advance of the 2022 ACFR.

<sup>4</sup> Note – this presentation differs from PUD’s financial disclosure documents. Critical Operating Expenditures in the PUD Outlook are broken out from Baseline Operating Expenditures to show programmatic additions to Department operations. Disclosure documents do not show these expenditures separately.

Finally, each section includes revenue projections and a discussion of the projected water and wastewater rates that are assumed in those revenue projections. Rates adjustments are determined through a process prescribed by state law and require a cost of service analysis and City Council approval at a public hearing.

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## OVERVIEW OF THE WATER AND WASTEWATER SYSTEMS

The City of San Diego is a major metropolis, ranked as the eighth largest city by population in the United States and the second largest city in California. The City's total population is over 1.4 million. The City's climate is semiarid with cycles of multi-year droughts. Average rainfall does not provide adequate local water supplies for the City and is supplemented with water imported from outside the region.

The City's Water and Wastewater Systems are maintained and operated by the City of San Diego (City) Public Utilities Department. The Public Utilities Department (PUD) provides water to the City of San Diego as well as to the cities of Del Mar, Coronado and Imperial Beach, primarily from two water sources: (1) local supplies, which provide on average 10 - 15% of water needs, and (2) the San Diego County Water Authority (CWA), which provides 85 - 90% of water needs. The City's Water System extends over 404 square miles, with average (FY 2017–2021) potable water deliveries of approximately 176,950 acre-feet (AF) per year. PUD's extensive raw water system includes nine reservoirs, which capture rain and local runoff from rainfall and store purchased imported water. The water is then sent to PUD's three water treatment plants for treatment and distribution. While PUD expects water conservation efforts to continue, it also expects the demand for potable water to increase due to population growth, however this is largely dependent on the variables of future weather and water conservation efforts.

The City's Wastewater System owns and operates wastewater treatment plants that serve the City as well as other agencies of other cities and districts outside San Diego City boundaries (Participating Agencies). The Wastewater System serves over 2.3 million regional customers by providing wastewater collection, treatment, and disposal services. The Wastewater System is comprised of two sub-systems, the Municipal Sub-System and the Metropolitan ("Metro") Sub-System. The Municipal Sub-System is a sewage collection system for the City's customers and consists of all elements required for the collection and conveyance of wastewater generated by the service area, which currently consists of more than 275,000 accounts. The Metropolitan Sub-System is a regional sewage treatment and disposal system that serves the City and twelve other Participating Agencies near the City. The Wastewater System covers approximately 450 square miles, including most of the City, and stretches from Del Mar and Poway to the north, Alpine and Lakeside to the east, and San Ysidro to the south. The communities and agencies served by the PUD Wastewater System form the third largest metropolitan area in the State, surpassed only by the Los Angeles and San Francisco metropolitan areas. The Point Loma Wastewater Treatment Plant serves as a regional treatment facility handling sanitary waste from both Municipal Sub-System and Metropolitan Sub-System customers. Additionally, the Wastewater System operates and maintains two water reclamation plants (North City and South Bay), and a solids management facility (Metropolitan Biosolids Center).

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## Regional Water Supply

In any given year, the City uses local water supplies to meet 10 - 15% of demand and relies on imported water from the CWA to meet the other 85 - 90% of demand. The CWA is a wholesale water agency that provided approximately 384,000 AF of imported and desalinated water to its member agencies in FY 2021, including 142,900 AF supplied to PUD. CWA currently acquires the majority of its water from three main sources: conserved water from the Imperial Irrigation District, water from the Metropolitan Water District (MWD), and desalinated water. MWD obtains its water from the Colorado River through the United States Bureau of Reclamation, and from northern California via the State Water Project through the California Department of Water Resources (DWR). MWD is one of 29 public water agencies that have long-term contracts for water service from DWR, and it is the largest agency in terms of the number of people its water serves (approximately 19 million). The CWA is among MWD's largest customers, contributing to approximately 12% of MWD's annual revenues in FY 2021.

Both CWA and MWD are developing storage and additional supplies, such as water transfers, to augment their reliance on imported water; these storage and additional supply areas are important given the shortage of water from both the State Water project, which transports water from Northern California to Southern California, and the Colorado River, that supplies water to the basin states which are Arizona, California, Colorado, New Mexico, Nevada, Utah, and Wyoming. In March 2022, the Department of Water Resources cut State Water Project allocations to 5% of requested amounts. Additionally, the Federal government has signaled that Colorado River cuts may be imposed unilaterally if action is not taken by the basin states to reduce water usage.

In October 2022, California water agencies proposed reducing water used by up to 9%, but requested federal funding to offset the economic impacts of the proposed cutback. To address the water conditions in California, the Governor issued a long-term strategy to boost the State's water supply by expanding reservoir storage and the amount of water recycling done through-out the State. This long-term plan is in addition to the short-term target to reduce statewide water usage 15% below calendar year 2020 levels.

PUD also maintains a recycled water system that supplies a portion of the San Diego region. Recycled water is wastewater treated to a level that makes it safe for a variety of uses including irrigation, dust suppression and soil compaction at construction sites, in cooling towers, in ornamental fountains, and office building toilet and urinal flushing; that system is supplied by two water reclamation plants – the North City Water Reclamation Plant (NCWRP) and South Bay Water Reclamation Plant (SBWRP). The City supplies recycled water to retail customers and three wholesale customers: the City of Poway, the Olivenhain Municipal Water District, and the Otay Water District. Recycled water is a joint venture between the Water (for distribution) and Wastewater (for treatment) Systems. Recycled water revenue is split between the two utilities once debt for the recycled water distribution network is paid off, which is expected to occur by the end of FY 2024.

## Participating Agencies

Pursuant to the Regional Wastewater Disposal Agreement, the Metropolitan Sub-System provides "wholesale" treatment and disposal services, including some sewage transportation, to the cities of Chula Vista, Coronado, Del Mar, El Cajon, Imperial Beach, La Mesa, National City and Poway, the Lemon Grove Sanitation District, the Otay Water District, the Padre Dam Municipal Water District, and the

County of San Diego (on behalf of Winter Gardens Sewer Maintenance District and the Alpine, Lakeside and Spring Valley Sanitation Districts). These cities and districts are collectively referred to as the Participating Agencies.

The Regional Wastewater Disposal Agreement requires the Participating Agencies to pay their respective share of planning, design, and construction of Metropolitan Sub-System facilities, as well as costs related to the operation and maintenance of the Metropolitan Sub-System. Since FY 2011, the Participating Agencies have constituted approximately 33% of the total Metropolitan Sub-System costs. Recently, the City of El Cajon, San Diego County and the Padre Dam Municipal Water District, formed the East County Advanced Water Purification Joint Powers Authority, which is expected to divert up to 25% of the Participating Agencies flow away from the Metropolitan Sub-System when the Advanced Water Purification goes live during the Outlook period. The Outlook does not assume that this action will dramatically change the costs of operating the Metropolitan Sub-System.

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## Pure Water Program

### Background

The Pure Water Program will provide a safe, secure, cost competitive, and sustainable local drinking water supply for San Diego. Advanced water purification technology will be used to produce potable water from recycled water. The City and its regional partners face significant issues with water supply and wastewater treatment primarily due to the increasing cost of imported water and the increasingly stringent regulations on wastewater treatment and disposal. The region's reliance on imported water causes the water supply to be vulnerable to shortages and susceptible to price increases beyond the control of the City.

The Pure Water Program is a 20-year (2015-2035) multi-phased water and wastewater capital improvements program that is expected, upon full implementation by the end of Calendar Year (CY) 2035, to create 83 million gallons per day (mgd) of locally controlled water, which will provide nearly half of the City's total potable water needs. The Pure Water Program will divert treated wastewater from the Point Loma Wastewater Treatment Plant's (PLWTP) ocean outfall and recycle a valuable and limited resource that is currently discharged to the ocean.

In 2010, the City received a renewal of the Modified Permit for the PLWTP and agreed to identify opportunities to maximize recycling of wastewater for potable and non-potable uses. The City submitted its renewal application on March 24, 2022 180 days prior to the expiration of the current permit, which is jointly issued by the EPA and the San Diego Regional Water Quality Control Board. The modified permit was administratively extended by the EPA on September 27, 2022. Administrative extension of NPDES permits by the State of California (through the San Diego Regional Water Quality Control Board) are automatic upon expiration (and upon submittal of a timely renewal application) prior to adoption of a subsequent permit. It is anticipated that continuation of the Pure Water Program will be reflected in future permits, which will eliminate the need for the City to make over \$1.8 billion in upgrades to the PLWTP that would otherwise be necessary, based on the City's 2018 cost estimate.

Phase 1 of the Pure Water Program is estimated to cost approximately \$1.5 billion. The Water and Wastewater Funds will share in these expenditures according to allocating cost based on completed design and engineering studies. As documented in the City's second Water Infrastructure Finance and Innovation Act (WIFIA) Loan, approximately \$827.6 million (55%) is allocated to the Water Utility Fund and approximately \$671.6 million (45%) is allocated to the Sewer Revenue Fund. Total cost allocations will continue to be adjusted as any potential change orders are issued for the project. Final cost allocation will be done in the fiscal year following substantial completion of the project.

Pure Water Phase 1 is the largest construction effort the City has ever taken on and significant progress has been made towards completion. Each of the eleven construction contracts (early site work contract has been completed) have been awarded and construction is approximately 25% complete. Although Phase 1 is being constructed through ten individual construction contracts via eight independent prime contractors and numerous subcontractors; it is one interconnected project. This project and our region are not shielded from the economic impacts related to the pandemic and the war in Ukraine. These global conditions have and will likely continue to impact the cost and availability of materials. All prime contractors have communicated challenges with getting key

materials and equipment necessary for the timely construction of Pure Water Phase 1. Several contractors have signaled possible construction delays and cost increases due to supply chain issues. Due to the size and complexity of Pure Water Phase 1 and the current construction climate, the construction effort will likely continue to experience unusual challenges related to the current global environment.

To achieve Pure Water Phase 1 full production of 30 mgd, construction of nearly all individual components needs to be completed and commissioned at roughly the same time. To be financially prudent and transparent, contingency planning is occurring from an operations and financial perspective. As such, this Outlook projects a conservative timeline for when potable water will be produced by forecasting the possibility of a delay in the commissioning process; this approach will manage the risk of the complications listed above. If commissioning were to happen sooner, it would result in reducing city water purchase expenditures in alignment with Pure Water Phase 1 production.

## Cost of Service Analysis

Pursuant to State law, PUD uses a cost of service process to determine how to set its rates to ensure they meet PUD's overall revenue requirements. Cost of service studies detail projected expenditures, determine the total revenue required to cover those expenditures, and allocate those revenue needs based on the demands each customer class places on PUD's systems. Revenue requirements not only support operating and capital costs but are set to ensure appropriate reserve and debt service coverage ratios.

The City last completed a cost of service study and rate case for the water system in 2015, which included rate adjustments through FY 2020. The City just concluded a cost of service study and rate case for the Wastewater System in September 2021, which included rate adjustments for FY 2022 through FY 2025, as approved by the City Council. Additional information on projected revenues can be found in the Water System Revenues and Wastewater System Revenues sections of this report.

The Department is releasing the Water Cost of Service Study in conjunction with this Outlook. The Water Cost of Service Study includes overall system-wide revenue requirements, and additional details on the allocation of expenses to different customer classes and on potential rate adjustments. The study is expected to serve as the basis for Council's deliberation on future rate adjustments. A public hearing following customer outreach will need to be set to effectuate any rate increase.

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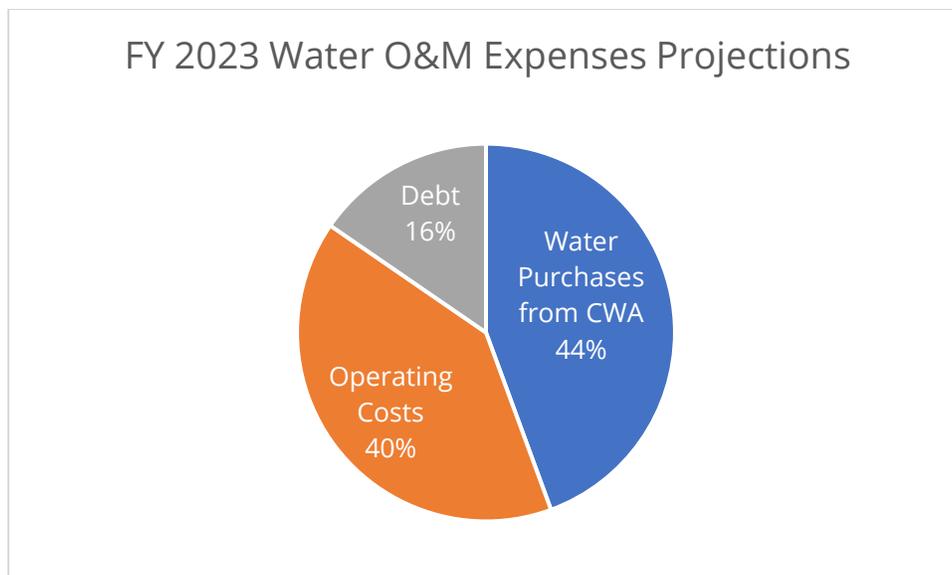
## WATER SYSTEM

This section discusses baseline expenditure projections, upcoming critical operational expenditures, and projected capital improvements program needs and financing options for the next five years for the Water Utility Fund. An overview of Water System revenue projections is also included.

### Water System Expenditures

Water Utility Fund expenditures are comprised of both personnel and non-personnel expenditures including debt service and other non-discretionary payments. The largest single expenditure of the Water Utility Fund is for water purchases, representing approximately 44% of FY 2022 operating expenditures. As show in Figure 1.5

**Figure 1.5 Fiscal Year 2023 Water Operations and Maintenance Expenses**



These expenditures are therefore discussed separately. The following sections discuss in detail each expenditure category and include a description of the category, projected growth rates, and a discussion of any related critical strategic expenditures.

- The outlook includes a few strategic critical expenditures from prior Outlooks that are now included in the baseline for the FY 2024-2028 Outlook, including a Senior Engineer fully dedicated to Phase 2 of the Pure Water Program and positions to support water system controls and Positions and resources for customer service support.

### Water Purchases

The City currently imports approximately 85-90% of its water through the CWA. Water purchases contribute to the largest expense in the Water Utility Fund and make up approximately 44% of the Water Utility Fund's operating budget. CWA charges a volumetric rate that includes both a commodity

rate and a transportation rate. In addition to the rate charged by acre foot, CWA and MWD also levy fixed charges on their member agencies.

Table 2.1 presents projected costs for purchasing water from CWA. The amount of water purchased is forecasted to decline as Phase 1 of the Pure Water Program is expected to be substantially complete during this Outlook. Fiscal Year 2023 assumed a larger use of local water based on changing the policy for stored water in the City’s reservoir levels to represent six months of water needs. In addition to the changes associated with local water, the City is projecting lower water purchases when compared to prior Outlooks to reflect assumed water conservation measures, which has been directed by the Governor.

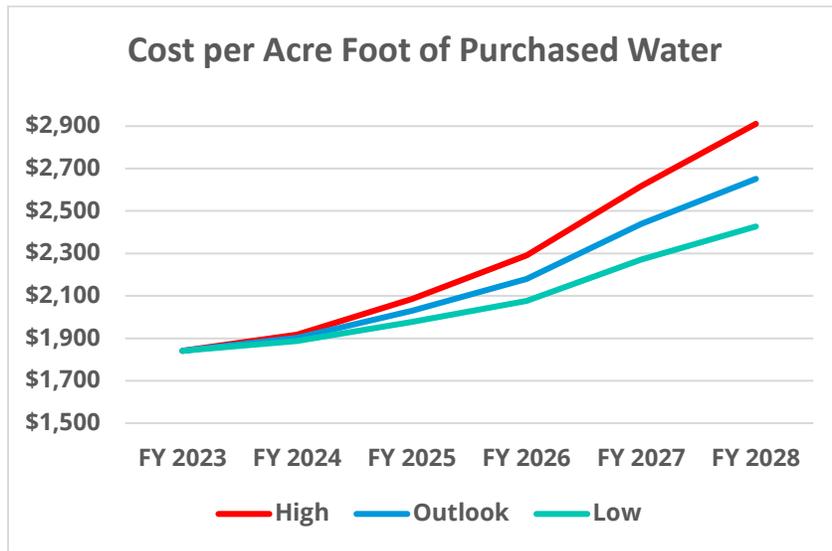
<b>Table 2.1 - Water Purchases - Baseline Expenditures</b>							
<b>(\$ in Millions)</b>							
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Projections	\$278.5	\$263.7	\$290.0	\$309.2	\$329.9	\$317.1	\$316.1
Acre Feet	166,792	143,226	152,502	152,340	151,320	130,017	119,216

As, mentioned previously, the largest single expenditure for Public Utilities (and the largest non-personnel expense for the City) is the purchase of water from the City’s wholesaler, CWA. During the forecast period, PUD is forecasting to spend \$290M to \$329M per year to buy water.

In September 2021, CWA adopted a Long-Range Financing Plan which identified high and low rate and charge forecasts Figure 1.6 below shows the impact of these scenarios vs the assumptions used in the PUD Outlook.

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**Figure 1.6 High/Low and Outlook Cost Per Acre foot of Purchased Water**



The PUD Outlook assumes a mid-range forecast; however, there is a strong probability that the increases will be different than assumptions for two primary reasons:

1. The guidance provided by CWA is at the “all in” level but actual rate increases will be implemented based on multiple rate and charge categories. For the City of San Diego, applicable rate and charge categories include four fixed categories (Storage, Customer Service, Supply Reliability and Infrastructure Access) and a volumetric rate based on the actual volume of water purchased. Depending on rate increases per category, the result may have a different impact on the City. For instance, if fixed charges are increased, the City could be impacted substantially more than if volumetric rates are increased.
2. CWA is currently evaluating their rate structure and the PUD Outlook does not make any assumptions on the outcome of this effort. Again, any changes to the fixed nature of rates and charges will have a substantive impact on the City.

## Personnel Expenditures

Personnel expenditures include salaries, wages, and fringe benefits. Salaries and wages are comprised of regular salaries and wages, hourly wages, special pay, overtime, and pay in lieu of annual leave. Fringe benefits include pension payment or Actuarially Determined Contribution (ADC), flexible benefits, retiree health or Other Post-Employment Benefits (OPEB), workers’ compensation, Supplemental Pension Savings Plan (SPSP), and other fringe benefits. Projected FY 2023 Water Utility Fund salaries, wages, and fringe benefits are \$105.4 million and includes 947.6 full-time equivalent (FTE) positions. Table 2.2 displays unaudited actuals for FY 2022 and projections through FY 2028 for Water System personnel expenditures.

Table 2.2 –Baseline Personnel Expenditures (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Salary and Wages	\$50.4	\$59.2	\$61.2	\$63.3	\$65.5	\$67.7	\$69.6
Fringe	\$39.0	\$42.0	\$44.6	\$47.4	\$48.6	\$49.9	\$49.9

The salary and wages category incorporates only those expenditures associated with staff included in the FY 2022 Adopted Budget. Position adds identified for FY 2024-2028 to support critical expenditures are discussed below. Consistent with the General Fund, the PUD Outlook accounts for negotiated pay increases through FY 2023 and assumes that salaries and wages will grow in FY 2024-2027 at the 3.05% increase used by the San Diego City Employees' Retirement System's (SDCERS) actuary (Actuary) to calculate the City's yearly ADC to the pension.

Fringe benefits include updated assumptions related to pension investment loses and the amortization of Proposition B over a 20-year period. These assumptions are further expanded upon in the City of San Diego Fiscal Year 2023-2027 Five-Year Financial Outlook Report

### Critical Operating Expenditures

Table 2.3 - Critical Strategic Expenditures - Personnel						
Request	FTE/Exp	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Dam Repairs and Replacement	FTE	14.50	33.00	42.00	42.00	42.00
	Expense	\$1,693,673	\$3,853,159	\$4,997,691	\$5,131,605	\$5,269,603
Data Driven Decisions and Systems	FTE	2.25	2.25	2.25	2.25	2.25
	Expense	\$296,091	\$304,130	\$312,414	\$320,951	\$329,748
Pure Water Phase 1 Operations	FTE	5.24	15.74	20.24	21.24	21.24
	Expense	\$595,503	\$1,799,267	\$2,335,765	\$2,460,682	\$2,526,369
Pure Water Phase 2	FTE	1.24	1.24	1.24	1.24	1.24
	Expense	\$172,870	\$177,595	\$182,465	\$187,484	\$192,656
Regulatory Compliance and Equipment	FTE	2.91	4.91	7.16	12.66	12.66
	Expense	\$353,049	\$548,341	\$780,632	\$1,344,421	\$1,379,845
Water System Safety and Resiliency	FTE	13.50	20.91	40.41	40.41	40.41
	Expense	\$1,386,764	\$2,212,902	\$4,169,286	\$4,278,634	\$4,391,318
	<b>Total FTE</b>	<b>39.64</b>	<b>78.05</b>	<b>113.30</b>	<b>119.80</b>	<b>119.80</b>
	<b>Total Expense</b>	<b>\$4,497,950</b>	<b>\$8,895,395</b>	<b>\$12,778,253</b>	<b>\$13,723,777</b>	<b>\$14,089,539</b>

Table 2.3 identifies additional personnel expenditures, including fringe benefits, for the addition of staff to support Department new programs and/or critical needs. This includes IT staff specializing in

large data sets, future system platforms and industrial control systems; and laboratory staff for regulatory compliance. There are three large requests (Pure Water, dam repairs and water system safety and resiliency), which are described in more in detail below.

The Dam Repairs and Replacement critical strategic add addresses two different aspects of the City's dam and reservoir system: short-term repairs and other maintenance projects and long-term improvements and/or replacements of existing dams. It is estimated that the City's dam system has at least \$1 billion of short and long-term projects needed to safely operate and maintain these assets, which are critical for local water storage in the region. Given the size, scale, timeline and specialization of this work, a dedicated team within the Public Utilities Department is needed. This request creates a team to design, manage and execute the needed improvements. The team includes resources for both operational staff that manage the day-to-day operations of the facilities and the project teams that are required to design, engineer and construct replacement facilities as the dams reach the end of life design.

The identified funding needs for the Pure Water Program are for the operation and maintenance of new and expanded Pure Water facilities and related staffing needs. Pure Water positions are gradually being ramped up, so personnel are fully trained to operate and maintain the facilities when they come online. A total of 29.00 FTEs from the Water System (of 55.00 total FTEs) are anticipated to be required when Pure Water Phase 1 becomes fully operational. These estimates will be further refined as the City gets closer to bringing the facilities online.

The Water System Safety and Resiliency critical strategic add will address the water distribution valve system, which allows for water system to be locally shut off, and the boosting pump station which maintain water system pressure. Both of these systems work to ensure the system is able to quickly respond to main breaks and limit the area that may be impacted by a boil water notice in the event of a water main break. In addition this request funds central contract management staff for large repair contracts, maintenance workers for the Otay Water treatment plants and cross connection staff to do field inspections for water connections, which is critical to ensure the water system is working correctly.

## Supplies

The Supplies category includes costs for chemicals, water meters, pipe fittings, asphalt road materials, machine parts, and low value assets. Table 2.4 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Supplies category.

Table 2.4 - Baseline Supplies (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	19.7%	5.9%	4.2%	3.0%	3.0%	3.0%
Projection <sup>1</sup>	\$14.8	\$17.7	\$18.8	\$19.6	\$20.2	\$20.8	\$21.4

<sup>1</sup>Figure excludes expenditures associated with water purchases

The Supplies category includes various components. Each component has a different growth rate. Growth rates for each category are based on historical analysis and include other adjustments based on known and anticipated events, including prior critical strategic expenditures. In Fiscal Year 2022, the City saw a sharp increase in key chemicals, including chlorine, which has driven large growth in the Department’s supplies costs. These increases are expected to hold through Fiscal Year 2023 and FY 2024 and could exceed the level of expenses assumed in this Outlook. Given the importance of these chemicals in the treatment process, the Department would prioritize the use of other resources to ensure sufficient supplies of treatment chemicals were available in any applicable fiscal year and will continue closely monitoring these costs.

### Critical Operating Expenditures

Table 2.5 - Critical Strategic Expenditure - Supplies					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1 Operations	\$983,655	\$574,280	\$11,236,548	\$7,507,392	\$7,467,392
Water System Safety and Resiliency	\$375,000	\$375,000	\$750,000	\$750,000	\$750,000
<b>Total Expense</b>	<b>\$1,358,655</b>	<b>\$949,280</b>	<b>\$11,986,548</b>	<b>\$8,257,392</b>	<b>\$8,217,392</b>

Table 2.5 identifies increased expenditures in the Supplies category for critical expenditures. Pure Water supply expenses are anticipated to become necessary as facilities come online, and include chemical costs, consumables, pumps, and other materials necessary for operation and maintenance of facilities and equipment. The supplies for Water System Safety and Resiliency support consumables and equipment needed to support and maintain the water distribution valve system and booster stations needed to ensure adequate water system pressure.

### Contracts

Contracts are a non-personnel expense category that include the cost of contractual services, professional consultant fees, general government services billing, City services billings, fleet vehicle usage and assignment fees, rental expenses, security services, and other contractual expenses. Table 2.6 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Contracts category.

Table 2.6 - Baseline Contracts (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	19.7%	4.5%	2.2%	0.3%	1.5%	1.5%
Projection <sup>1</sup>	\$74.6	\$89.3	\$93.3	\$95.3	\$95.6	\$97.0	\$98.4

<sup>1</sup>Figure excludes expenditures associated with water purchases

The Contracts category includes various components that each has different applicable growth rate. Growth rates for each category are based on historical analysis and other adjustments based on known and anticipated events, including prior critical strategic expenditures and anticipated contract expirations. Historically, PUD’s actual operating expenditures have been lower than budgeted amounts; expenses in FY 2023 and FY 2024 have incorporated this trend into the forecast. In addition, the PUD Outlook assumes additional transfers from the Water Fund to the Metropolitan Wastewater Fund, per their revenue sharing agreement. Additional baseline resources have been allocated to the Customer Support Division to assist with the development of improved customer support self-service tools, it is expected that these additional resources will result in future improvements that will be described in future budget requests and Outlooks.

### Critical Operating Expenditures

Table 2.7 - Critical Strategic Expenditure - Contracts					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Dam Repairs and Replacement	\$7,027,488	\$14,054,976	\$27,087,951	\$6,802,000	\$7,022,000
Pure Water Phase 1 Operations	\$123,630	\$585,971	\$1,245,200	\$486,090	(\$994,380)
Pure Water Phase 2	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000
Regulatory Compliance and Equipment	\$0	\$10,000	\$10,000	\$10,000	\$10,000
Water System Safety and Resiliency	\$0	\$2,761,000	\$1,570,000	\$1,166,000	\$786,000
<b>Total Expense</b>	<b>\$8,391,118</b>	<b>\$18,651,947</b>	<b>\$31,153,151</b>	<b>\$9,704,090</b>	<b>\$8,063,620</b>

Table 2.7 identifies increased contractual expenditures associated with increased support for Phase 1 of the Pure Water Program as it comes online and then starts to decrease as Phase 1 comes online and then transitions for program management for Phase 2. These are updated estimates that were included in last year’s Outlook.

The Dam Repairs and Replacement critical strategic add includes funding to address minor construction projects that have been identified in the city’s condition assessments and requests from regulators, which peak at \$21 million in FY 2026. In addition, the add includes funding for a program management contract, using a similar model developed for the Pure Water Program, to ensure continuity in management and retention of specialized skills related to the management of large complex dam projects, as well technical studies needed for the projects.

The regulatory compliance contracts address maintenance of new equipment related to microplastics testing and the water treatment plants funding supports minor construction projects (non-capital) at water treatment plants.

The Water System Safety and Resiliency request includes contract repair funding to address deferred maintenance at the Otay Water Treatment Plant.

## Information Technology

The Information Technology category includes both discretionary expenses and non-discretionary allocations to the Water Utility Fund. The Information Technology category includes the costs related to hardware and software maintenance, help desk support, and other information technology (IT) services. Table 2.8 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Information Technology category.

Table 2.8 - Baseline Information Technology (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	23.9%	10.9%	3.5%	(4.3%)	2.9%	2.1%
Projection	\$8.5	\$10.5	\$11.7	\$12.1	\$11.6	\$11.9	\$12.2

The projections include estimates of IT costs and systems critical to treatment plant and distribution system operations. Expenditures were inflated by 2.9% to account for potential cost increases in IT services and hardware/software products. The majority of the growth is seen in centralized IT costs maintained by the Department of IT also includes PC replacement costs that spike in Fiscal Year 2024 and 2025.

## Critical Operating Expenditures

Table 2.9 - Critical Strategic Expenditure - Information Technology					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Water System Safety and Resiliency	\$4,063,604	\$8,825,710	\$3,301,051	\$3,444,164	\$3,601,372
<b>Total Expense</b>	<b>\$4,063,604</b>	<b>\$8,825,710</b>	<b>\$3,301,051</b>	<b>\$3,444,164</b>	<b>\$3,601,372</b>

Table 2.9 identifies increased identified in the Information Technology category, which includes ongoing replacement and updates to department staff computers. The Water system Safety and Resiliency critical strategic expenditures supports the City's Distributed Control Systems, which is the system that allows for remote access and control of critical systems across the city's treatment and distribution network. The costs for maintaining and replacing the systems continues to increase and continues to be a key strategic expenditure to address.

## Energy & Utilities

The Energy & Utilities category includes the Water Utility Fund's costs for electricity, water services, fuel, and other utility and energy expenses. Table 2.10 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Energy & Utilities category.

Table 2.10- Baseline Energy & Utilities (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	(1.6%)	4.0%	5.0%	0.4%	0.4%	0.4%
Projection	\$15.4	\$15.1	\$15.7	\$16.5	\$16.6	\$16.6	\$16.7

The Energy and Utilities category includes various costs including prior critical strategic expenditures. Each cost component (electricity, natural gas, gasoline, etc.) has a different applicable rate, that considered base increases in the expenditure categories. The FY 2022 expenditures saw a substantial increase from prior years, which is expected to continue in FY 2024 and FY 2025 as a result from higher SDG&E increases, which is expected to moderate in FY 2023.

### Critical Operating Expenditures

Table 2.11 - Critical Strategic Expenditure - Energy and Utilities					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1 - Operations	\$0	\$0	\$7,241,181	\$14,482,361	\$14,482,361
<b>Total Expense</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,241,181</b>	<b>\$14,482,361</b>	<b>\$14,482,361</b>

Table 2.11 identifies increased energy and utility expenditures associated with the Pure Water Program. These expenditures are necessary as new and expanding Pure Water facilities come online and include increased electricity, water, and natural gas expenditures necessary for the daily operation of facilities.

### Other Expenditures

Expenses included in this category are transfers to other funds, capital expenses, taxes, and other miscellaneous expenditures. Debt service obligations, including payments for bonds, commercial paper, State Revolving Fund (SRF) loans and WIFIA payments, are excluded from this category and are discussed in the Water System Capital Improvements Program section of this report. Table 2.12 displays the FY 2022 unaudited actuals and projections through FY 2027 for the Other Expenditures category.

Table 2.12 - Baseline Other Expenditures (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	16.6%	(42.9%)	0.0%	0.0%	(16.8%)	0.0%
Projection	\$0.8	\$0.9	\$0.5	\$0.5	\$0.5	\$0.4	\$0.4

The reductions seen in FY 2024 and FY 2027 are related to reduction in assumed capital equipment expenses, which includes new vehicles purchases, heavy machinery and laboratory equipment, which can have small cyclical increases and decreases. The current forecasts do not take into account the additional costs associated with converting PUD fleet to electric, which requires coordination with the General Services Department for charging infrastructure and vehicle procurement.

### Critical Strategic Expenditures

Table 2.13 - Critical Strategic Expenditure - Other Expenditures					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1- Operations	\$933,250	\$252,600	\$1,250,000	\$1,750,000	\$182,400
Regulatory Compliance and Equipment	\$635,000	\$200,000	\$0	\$0	\$0
Water System Safety and Resiliency	\$655,000	\$655,000	\$0	\$0	\$0
<b>Total Expense</b>	<b>\$2,223,250</b>	<b>\$1,107,600</b>	<b>\$1,250,000</b>	<b>\$1,750,000</b>	<b>\$182,400</b>

Table 2.13 identifies increased other expenditures. Significant expenditures are associated with new laboratory operating equipment needed for Phase 1 of the Pure Water Program, for new regulatory equipment including those specifically related to microplastics and vehicles and other equipment for the expanded distribution valves and pump station teams.

### Reserves Contributions

The City has established accounts within the Water Utility Fund for four reserve funds: The Emergency Operating Reserve (Operating Reserve), the Secondary Purchase Reserve, the Rate Stabilization Fund Reserve (Rate Stabilization Fund), and the Emergency Capital Reserve (Capital Reserve). The Department maintains these reserve funds in accordance with the City's Reserves Policy (the City Reserves Policy). At the end of FY 2022, the Water Utility Fund is estimated to have total reserves of approximately \$176 million.

Table 2.14 details reserve targets and projected funding levels. Reserves are projected to be fully funded throughout the PUD Outlook period.

**Table 2.14 - Reserve Targets and Estimated Funding Levels  
(\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Operating Reserve Target (\$)	\$48.4	\$51.7	\$56.2	\$61.0	\$64.9	\$61.3
Operating Reserve Level (\$)	\$48.6	\$51.7	\$56.2	\$61.0	\$64.9	\$64.9
Secondary Purchase Reserve Target (\$)	\$15.8	\$17.4	\$18.6	\$19.8	\$19.0	\$19.0
Secondary Purchase Reserve Level (\$)	\$16.7	\$17.4	\$18.6	\$19.8	\$19.8	\$19.8
Rate Stabilization Fund Target (\$)	\$28.7	\$30.2	\$32.5	\$34.8	\$37.7	\$41.2
Rate Stabilization Fund Level (\$)	\$96.1	\$85.1	\$58.1	\$27.1	\$38.1	\$45.1
Capital Reserve Target (\$)	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0
Capital Reserve Level (\$)	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0

The Secondary Purchase Reserve Target for FY 2027 reflects a decrease in water purchases as Phase 1 of the Pure Water Program is completed.

The Rate Stabilization Reserve Fund is funded above targeted levels. This is due to several one-time revenue sources from prior years, including the sale of the stadium site, one-time grant funding and legal settlements from the MWD that have allowed the City to make large contributions to the stabilization reserve. Saving one-time revenue for use in a reserve is a financial best practice so that the funds can be used to provide one-time operating revenue to offset or mitigate the need for sudden or dramatic rate increases in the future. The PUD Outlook projects use of the Rate Stabilization Reserve Fund in FY 2023 through FY 2026. In FY 2026, rate stabilization reserves dip below their target levels and are returned to target levels in the next fiscal year. In accordance with the reserve policy, a plan to address this dip below the target will be included in the next COSS.

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## Water System Capital Improvements Program

The Water System CIP is established to address current and future system needs in a cost-effective manner. The program’s principal drivers are:

- continuing the implementation of the Pure Water Program;
- improving infrastructure to reduce pipeline breaks and emergency repairs;
- funding for improvements to Hodges Dam;
- improving treatment and distribution process technology;
- expanding the Water System to accommodate growth; and
- complying with the Federal Safe Drinking Water Act and the Division of Drinking Water (DDW) Compliance Order.

Table 3.1 shows categories of projects with the estimated cost of expenditures contained in the CIP for the period of FY 2024 through FY 2028. The City’s Adopted Budget includes multi-year project pages for non-routine and large projects. The PUD Outlook includes a high-level summary of the CIP to understand the financial impact on the Water System; the City’s Five-Year Capital Infrastructure Planning Outlook provides additional information on the capital infrastructure needs for the entire city.

Table 3.1 - Summary of Projected CIP Projects Fiscal Year 2024-2028 (\$ in Millions)								
Water CIP Projects	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Outlook Total
Pure Water Program	\$104.5	\$312.2	\$218.3	\$112.7	\$64.9	\$18.5	\$33.4	<b>\$447.9</b>
Transmission Pipelines	\$26.3	\$48.2	\$101.1	\$85.5	\$61.1	\$68.5	\$61.7	<b>\$377.9</b>
Pipelines	\$72.8	\$112.5	\$133.0	\$106.8	\$87.0	\$73.9	\$86.4	<b>\$487.0</b>
Storage Facilities	\$2.7	\$4.8	\$10.5	\$17.5	\$28.5	\$39.5	\$27.4	<b>\$123.4</b>
Water Treatment Plants	\$4.4	\$6.0	\$6.6	\$10.7	\$22.3	\$30.1	\$25.7	<b>\$95.5</b>
Pump Stations	\$4.1	\$7.1	\$5.6	\$6.7	\$11.0	\$18.9	\$18.0	<b>\$60.2</b>
SDG&E Relocation Advance	\$0.0	\$36.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
Ground Water Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.4	\$1.2	<b>\$1.7</b>
Miscellaneous Projects	\$1.5	\$3.6	\$4.0	\$9.7	\$15.6	\$26.6	\$9.5	<b>\$65.4</b>
<b>Total</b>	<b>\$216.2</b>	<b>\$530.6</b>	<b>\$479.3</b>	<b>\$349.6</b>	<b>\$290.4</b>	<b>\$276.4</b>	<b>\$263.2</b>	<b>\$1,659.0</b>

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## Capital Improvements Program (CIP) Financing Plan

Table 3.2 describes the projected sources of funds to finance the Water System CIP during the PUD Outlook period for FY 2024 through FY 2028; FY 2022 and FY 2023 activity are provided for reference and are not a part of the PUD Outlook period.

PUD anticipates incurring approximately \$945.2 million of additional debt obligations for the Baseline Water System CIP and \$371.2 million of additional obligations for the Pure Water CIP over the PUD Outlook period. The City is projecting an increase in borrowing rates, related to the Federal Reserve's attempts to combat inflation. Capacity fees and cash are anticipated to fund an additional \$402.1 million.

Although grant funding is currently not reflected during the PUD Outlook period, the Department is actively applying for additional grant funding and continually searching for new grant opportunities. Any grant funding awarded will be used to offset cash funding. The City has identified many grant opportunities in recent federal bills but would note a large portion of funding has been restricted to specific agencies, for smaller jurisdictions or grant awards being capped at relatively low dollar values. Please note fiscal years that show the use of negative cash reflect reimbursement of prior cash expenditures from grant, bonds, or loans.

Table 3.2 - Sources of Funds for the Water Capital Improvement Program								
(\$ in Millions)								
Source of Funds	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	OUTLOOK TOTAL
<b>Pure Water CIP</b>								
Commercial Paper/ Bonds	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
WIFIA Loans	\$78.8	\$302.0	\$210.9	\$114.5	\$15.1	\$0.0	\$0.0	<b>\$340.5</b>
SRF Loans	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
Grants	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
Cash	\$24.2	\$10.2	\$7.4	(\$1.8)	\$49.8	\$18.5	\$33.4	<b>\$107.4</b>
<b>Total</b>	<b>\$104.5</b>	<b>\$312.2</b>	<b>\$218.3</b>	<b>\$112.7</b>	<b>\$64.9</b>	<b>\$18.5</b>	<b>\$33.4</b>	<b>\$447.9</b>
<b>Baseline CIP</b>								
Revenue Bonds/ Commercial Paper	\$85.2	\$116.1	\$67.0	\$102.0	\$131.0	\$110.0	\$100.0	<b>\$510.0</b>
SRF Loans	\$0.3	\$0.3	\$79.4	\$103.8	\$110.3	\$56.0	\$28.2	<b>\$377.6</b>
Grants	\$0.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
Capacity Fees/Cash	\$26.9	\$102.9	\$117.1	\$33.2	(\$12.0)	\$101.4	\$117.2	<b>\$356.9</b>
<b>Total</b>	<b>\$113.1</b>	<b>\$219.3</b>	<b>\$263.5</b>	<b>\$239.0</b>	<b>\$229.3</b>	<b>\$267.4</b>	<b>\$245.4</b>	<b>\$1,244.5</b>
<b>Total Funding</b>	<b>\$217.6</b>	<b>\$531.6</b>	<b>\$481.8</b>	<b>\$351.7</b>	<b>\$294.2</b>	<b>\$285.9</b>	<b>\$278.8</b>	<b>\$1,692.5</b>

The City has secured financing of up to \$733.5 million for the Water System’s share of the Pure Water Program Phase 1 through the EPA’s Water Infrastructure Finance and Innovation Act (WIFIA) Loan Program which will provide funding through FY 2026. Additional funding for the Water System’s portion of Pure Water CIP (including Phase 2) expenses includes \$76.7 million in cash. The Department has assumed that similar to Phase 1 of Pure Water, Phase 2 will be initially be cashed funded with the potential to be reimbursed through loans and grants. The Department expects to create a financing plan in conjunction with the Department of Finance Debt Management team during the Outlook period, which will be incorporated into future Outlooks.

For the Water System’s baseline CIP, the Department anticipates financing the costs of certain projects in the amount of \$433.2 million through SRF loans the City has already secured or for which it plans to apply for. The proceeds from additional SRF loans are assumed to provide funding in FY 2024 through FY 2028. SRF loans are one of the least expensive sources of financing available to the City. If the City is not awarded additional SRF loans projected over this PUD Outlook period, it will have to evaluate using other financing sources that carry higher interest rates, or potentially postponing various CIP projects.

### Debt Service Coverage Ratios

As the Water System makes use of various financing instruments to fund its CIP, it is important that it maintain good financial metrics to ensure its creditworthiness and its ability to issue debt at advantageous terms. One of the key components to measuring the Water System’s credit quality is its debt service coverage ratio (DSCR). The DSCR is a measure of a system’s ability to make payments on its existing and projected debt service and compares the system’s net operating revenues against its debt service payments.

While variations in revenues and expenditures will result in varying DSCRs in given years, the Department generally targets a DSCR of 1.5x, a financial target that gives the Department the ability to maintain high credit quality leading to continued low borrowing rates. Additionally, the Department’s bond covenants require it to maintain a DSCR of 1.2x for its senior debt and 1.1x for its aggregate debt. The projected DSCRs over the PUD Outlook period are displayed in Table 3.3. The 1.89X coverage ratio is expected to decrease, all else being equal, when the Pure Water Phase 2 financing plan is complete, since it will likely result in additional long-term debt being issued.

<b>Table 3.3 - Projected Debt Service Coverage Ratios</b>						
<b>(\$ in Millions)</b>						
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Net Systems Revenues	\$162.2	\$157.6	\$174.9	\$189.9	\$211.3	\$299.2
Debt Service	\$94.0	\$114.7	\$127.7	\$138.3	\$151.5	\$158.1
<b>Debt Service Coverage Ratio</b>	<b>1.73 x</b>	<b>1.37 x</b>	<b>1.37 x</b>	<b>1.37 x</b>	<b>1.39 x</b>	<b>1.89 x</b>

## Water System Revenues

The primary revenue sources of the Water Utility Fund are generated from water sales, capacity fees, interest earnings, and rental income. This section discusses each revenue category, and includes a description of revenue sources, projected growth rates, and a discussion of future revenue streams and how they impact the Water Utility Fund.

### Water Sales

**Background.** The majority of Water Utility Fund revenue is generated from water sales which makes up over 90% of the Water Utility Fund's total revenue. City utility bills include water and sewer charges and storm drain fees, but only receipts from water charges are revenues to the Water Utility Fund. The water charge is comprised of two parts: a fixed monthly service charge and a commodity charge that is based on the volume of water used. The fixed service charge is based on the size of a customer's meter, which provides an approximation of the amount of water the customer could have delivered to the customer's property.

The commodity charge is determined using a set rate based upon each hundred cubic feet (HCF), or approximately 750 gallons, of water consumed. The City has a tiered commodity charge structure for single family residential (SFR) customers that is broken down by water usage within each rate block. The remaining retail customers – Multi-Family Residential (MFR), Non-Residential, Temporary Construction and Irrigation – are billed under a uniform commodity charge for their respective customer classification.

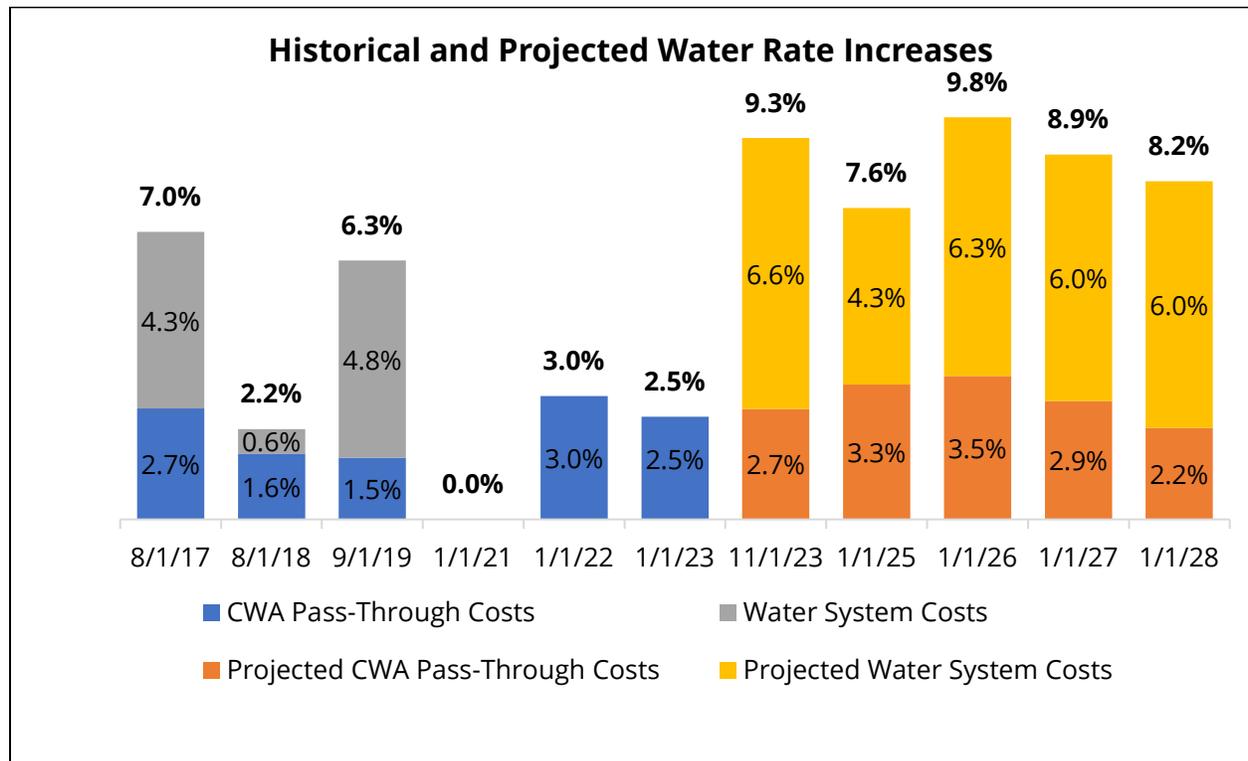
**Water Service Charge Rate Increases** PUD last released a Water System cost of service study in 2015, which produced a five-year rate case (the 2016 Rate Case). The 2016 Rate Case was based on comprehensive forecasted annual operations and maintenance costs, capital cost expenditures including the initial costs of the Pure Water Program, and purchased water costs that increase every January 1 from CWA. The 2016 Rate Case covered FY 2016 through FY 2020 and was approved by the City Council in November 2015. The rate case included projected rate increases of 9.8% on January 1, 2016, 6.4% on July 1, 2016, 6.4% on July 1, 2017, 5.0% on July 1, 2018, and 7.0% on July 1, 2019.<sup>5</sup>

Based on the revenue required to support projected expenditures, fund reserves appropriately, and achieve the target financial metrics, this Outlook includes projected water rate revenue adjustments on a system-wide basis of 9.3% on November 1, 2023, 7.6% on January 1, 2025, 9.8% on January 1, 2026, 8.9% on January 1, 2027, and 8.2% on January 1, 2028. Actual rate increases and the individual customer class impact will be subject to finalization of the cost of service study for the rate period and City Council consideration. The City is simultaneously releasing the cost of service study which details the November 1, 2023, and January 1, 2025, water rate adjustments; this will be presented separately to the Budget and Government Efficiency Committee in December 2022.

<sup>5</sup> These projected rate increases included both PUD's costs as well as increases in CWA water rates. The approved 2016 Rate Case allowed PUD to pass through CWA rate increases up to 7.0% each year. Projected and actual CWA rate increases were lower than this 7.0% maximum, though CWA rate increases in FY 2017 and FY 2018 were higher than they were projected to be in the 2016 Rate Case. Actual CWA pass-through costs through FY 2020 are reflected on Figure 4.1.

Roughly one half to one third of these rate adjustments are necessary to pay for increased CWA water rates, as indicated in Figure 4.1. Increases in revenue necessary to support PUD water operations range from 2.2% to 3.5% in each year.

**Figure 4.1 – Water Service Charge Rate Increases**



**Forecast.** Table 4.2 presents forecasted revenues for FY 2023 through FY 2028 for revenue from water sales. The growth rates reflect overall revenue growth and include revenue impacts of both proposed rate adjustments and slight increases in water use over projected 2023 amounts. Revenue from the MWD’s Local Resources Program, which provides credits for development of local water supplies is tied to the Pure Water production timeline. Upon full production, the incentives are expected to be \$11.4 million per year for 25 years. Note that the rate adjustments shown in figure 4.1 are included in these amounts, though these adjustments are proposed to be implemented on November 1, 2023 for the first increase and January 1 each year thereafter.

**Table 4.2 - Water Sales Revenue Projections  
(\$ in Millions)**

	FY 2022	FY 2023 Projection	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Potable Water</b>							
YOY Growth	N/A	3.6%	8.4%	7.5%	8.8%	8.8%	7.9%
Projection	\$526.0	\$544.9	\$590.9	\$635.4	\$691.1	\$751.7	\$810.7
<b>Other Water Sales</b>							
YOY Growth	N/A	26.7%	1.9%	5.3%	2.8%	21.4%	11.2%
Projection	\$32.5	\$41.2	\$41.9	\$44.2	\$45.4	\$55.1	\$61.3

**Economic Trends.** While PUD continues to promote water conservation, the demand for water within the City’s service area is projected to increase as the population continues to grow and development expands over the long-term. The City updated its Urban Water Management Plan (UWMP) in 2021, which projected single-family residential water use to increase by 0.62% over the period of 2025 to 2045. Growth is anticipated in the multi-family residential water use as forecasted in the UWMP which reflects an increase by 34% over the period of 2025 to 2045. The average demand over the last five years has not grown significantly, with some small growth in demand largely caused by increases in population.

Short-term projections however, do expect a 7% reduction in water usage from the prior projects used in last year’s Outlook. This is due to a reduction in water sales in FY 2022, that the Department attributes to the conservation messaging at a statewide level in light of dwindling supply of both water from northern California and the Colorado River Basin; staff expects additional water savings to continue in future years. This would put water sales in line with FY 2020 levels, which was a wet year in the San Diego region. These projections balance the trends seen in water use reduction with the reality that water sales volumes directly impact rates, especially if water reduction targets are not met.

The City’s Pure Water Program is expected to be crucial in helping to meet the City’s water demands and to reduce the impact of increases in the cost of imported water purchased from CWA. Over the past ten years, CWA’s water prices have more than doubled.

**Sensitivity Analysis.** While these projections represent PUD’s best estimate of water sales revenues throughout the PUD Outlook period, actual results will depend on the factors discussed above. Assuming the above rates, every 5,000-acre foot reduction in water sales volumes/sales, revenues could decrease by approximately \$8 million, which would require an approximately 2% increase in the rate levels projected in this Outlook.

## Water Capacity Charges

**Background.** Capacity charges are development fees included in permits for new or expanded water connections and are based on an estimate of the increase in water consumption as measured by equivalent dwelling units (EDUs). Capacity charge proceeds are used to construct, improve, and

expand the Water System to accommodate the additional business of such added dwellings or commercial or industrial units.

Pursuant to State law, capacity charges can be used only to pay costs associated with capital expansion, bonds, contracts, or other indebtedness of the Water System related to expansion. Because capacity charges are primarily collected on the issuance of new construction permits within the City, revenues obtained from such charges vary based upon construction permitting activity.

In February 2007, the Mayor and City Council approved increasing the water capacity charge by 19.5% to \$3,047 per EDU, which was estimated to provide full cost recovery for Water System expansion projects.

AB 2536 (2022) "Development fees: impact fee nexus studies: connection fees and capacity charges" became law on July 19, 2022. This bill increased the requirements for connection and capacity charges effective January 1, 2022, to be in alignment with other development impact fees, which have more specific reporting and project listing requirements than what had previously required. The City had planned to include a proposal to increase capacity charges in the COSS, but as a result of these new requirements, adjustments to water capacity fees will be addressed in a future nexus study.

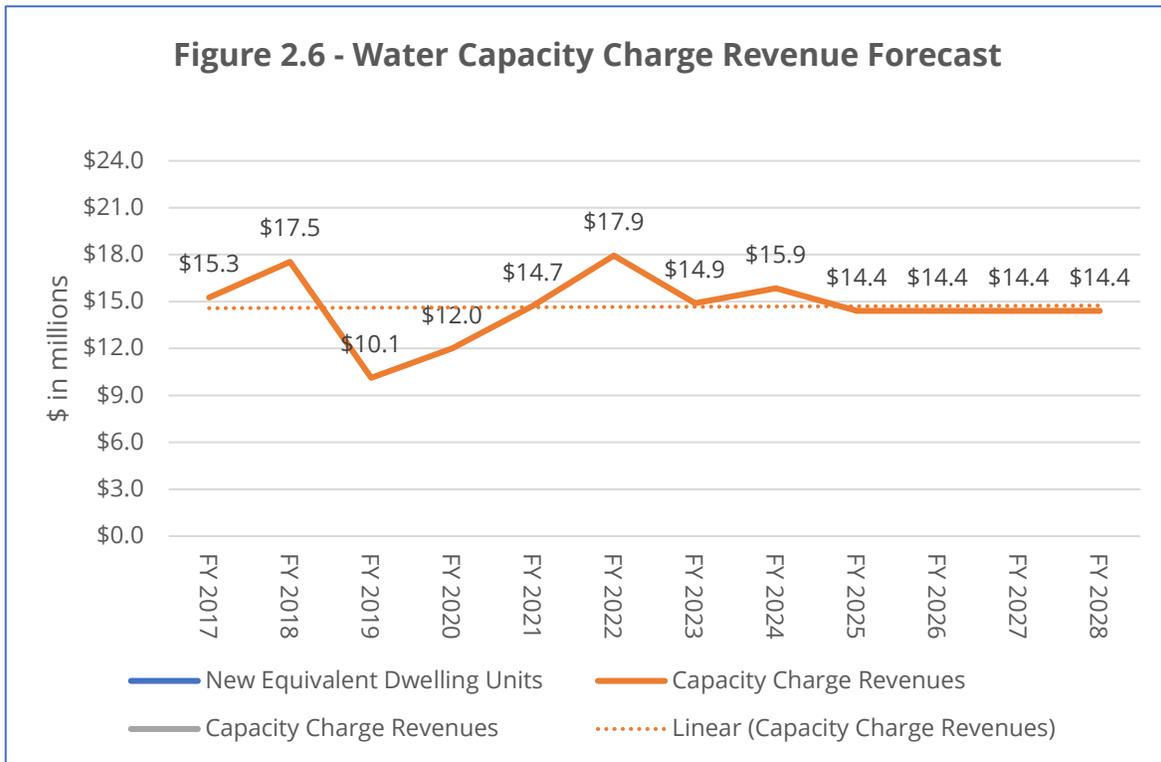
**Forecast.** Table 4.3 displays the FY 2022 unaudited actuals and projections through FY 2028 for water capacity charges. This revenue source represents less than 2% of the Water System’s overall revenue receipts.

Table 4.3 - Capacity Charges (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	0.0%	(17.0%)	6.5%	(9.2%)	0.0%	0.0%	0.0%
Projection	\$17.9	\$14.9	\$15.9	\$14.4	\$14.4	\$14.4	\$14.4

Projected revenues for capacity charges use conservative growth estimates based on historical spending trends from FY 2017 through FY 2021 as shown in Figure 4.4. Average capacity fee revenue between FY 2016 and FY 2020 was approximately \$13.9 million; The projections assume development activity slows in FY 2023, but increases in activity in FY 2024. Future years are assumed to more closely align with historical averages.

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**Figure 4.4 - Water Capacity Charge Revenue Forecast**



**Economic Trends** As previously mentioned, water capacity charges are primarily based on new water connections related to new construction and are directly influenced by population growth and residential and commercial development. The current population for the City of San Diego is 1.4 million. San Diego's population grew by approximately 7% between the 2000 Census and the 2010 Census and 6.6% between 2010 and 2020. As population continues to increase in the region, the demand for housing is also expected to increase in order to meet population demands.

According to SANDAG's 2013 study, multi-family units will make up over half of the new housing that will need to be built over the next 30 years. As a result, SANDAG forecasts that 40% of the total units in the region will be multi-family by 2030.

The uncertainty surrounding any recessionary impacts on residential construction contribute to generally flat capacity fee revenue projections over the next five years.

### Revenue from Use of Property

Revenue from Use of Property includes revenues from non-agricultural lease of land, such as the San Diego Zoo Safari Park; storage by private companies on utility-owned lands; agricultural leases of land in San Pasqual Valley; and telecom leases for cell towers on utility-owned properties.

Table 4.5 displays the FY 2022 unaudited actuals and projections through FY 2027 for use of property. This revenue source represents less than 1% of the Water System's overall revenue receipts.

Table 4.5 - Revenue from Use of Property (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Projection	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8

Actual revenues in this category can vary slightly each year as new lease agreements are entered into while other lease agreements expire; however, the projections are kept flat.

### Other Revenue

The Other Revenue category includes refunds or reimbursements from private parties for damages to utility-owned equipment, buildings, or fire hydrants; refunds from vendors; reimbursements from services provided to other City departments/funds; receipts from the sale of recycled materials or equipment (paper, computers, metal); grant revenue; and interest earnings on pooled investments.

Table 4.6 displays the FY 2022 unaudited actuals and projections through FY 2028 for the other revenue category. This revenue source traditionally represents 2.0% of the Water System's overall revenue receipts.

Table 4.6 - Other Revenue (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	(22.6%)	(1.9%)	(1.9%)	(0.5%)	(1.3%)	(2.3%)
Projection	\$68.0	\$52.6	\$51.7	\$50.7	\$50.4	\$49.8	\$48.6

Other revenue in FY 2023 through FY 2026 is projected to stay relatively flat, reflecting stable unrestricted balances. Changes from year to year are largely due to changes to projected interest income, as well as charges for services, including storage and transportation agreements with other local agencies. The higher actuals seen in FY 2022 reflect one-time revenues from MWD settlement payments as a result of successful litigation by CWA, and one-time grant revenue from Proposition 68 and SB129 which both support the Pure Water Program.

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## Other Assumptions and Considerations

### Litigation

The City's Water System is currently involved in litigation in *Patz v. City of San Diego* regarding the use of tiered water rate structure for single-family residential customers. The lawsuit alleges that the City's rates for water service do not reflect the actual cost to provide the water service to each parcel in violation of Article XIII D of the California Constitution (Proposition 218). The City contends that its water rates are strictly based on cost of service principles and compliant with Proposition 218.

On September 13, 2021, the court ruled in favor of plaintiffs on the Proposition 218 claim and on March 25, 2022 the petitioner class was awarded \$79.5 million in refunds based on estimated overcharges from August 14, 2014 to March 31, 2022. In addition, the class was also awarded pre and post judgement interest and refunds would increase \$644,000 each month until the rates were put in compliance with the order. The City disagrees with the ruling and filed an appeal on April 1, 2022. Single family residences are the largest customer class of the Water System and a ruling against the City will have a wide-ranging impact of the rates charged to that customer group moving forward. The PUD Outlook has assumed the liability through the end of FY 2023, when it is expected to know the results of the appeal during FY 2024.

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## WASTEWATER SYSTEM

The Wastewater System is comprised of the Metropolitan and Municipal Utility Funds, collectively known as the Sewer Revenue Funds. This section discusses the Wastewater System’s baseline expenditure projections, upcoming critical operational expenditures, projected capital improvement program needs and financing options for the next five years. Wastewater System revenues are also discussed.

### Wastewater System Expenditures

The Wastewater System expenditures are comprised of both personnel and non-personnel expenditures including debt service and other non-discretionary payments. The following sections will discuss in detail each expenditure category and will include a description of the expenditures, projected growth rates, and a discussion of critical strategic expenditures.

The following are some of prior strategic critical expenditures that are now included in the baseline for FY 2024-2028:

- Resources to support energy generation at wastewater facilities;
- Positions to support increased inspections of sewer lines and manholes; and
- Positions and resources for customer service support.

### Personnel Expenditures

Personnel expenditures include the salaries and wages category as well as fringe benefits category. The salaries and wages category is comprised of regular salaries and wages, special pays, overtime, step increases, and vacation pay in lieu, whereas the fringe benefits category includes pension payments or Actuarially Determined Contribution (ADC), flexible benefits, retiree health or Other Post-Employment Benefits (OPEB), workers’ compensation, Supplemental Pension Savings Plan (SPSP), and other fringe benefits. The FY 2023 Adopted Budget for the Sewer Funds salaries, wages, and fringe benefits was \$112.9 million and included 945.6 FTEs. Table 5.1 displays the FY 2022 unaudited actuals and projections through FY 2028 for personnel expenditures.

Table 5.1 – Baseline Personnel (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Salary and Wages	\$58.5	\$64.2	\$66.1	\$68.2	\$70.2	\$72.4	\$74.6
Fringe	\$43.5	\$44.7	\$45.8	\$46.9	\$48.1	\$49.3	\$50.5

The salary and wages category incorporates only those expenditures associated with staff included in the FY 2022 Adopted Budget. Position adds identified for FY 2024-2028 to support critical expenditures are discussed below. Consistent with the General Fund, the PUD Outlook accounts for negotiated pay increases through FY 2023 and assumes that salaries and wages will grow in FY 2024-2028 at the

3.05% increase used by the San Diego City Employees' Retirement System's (SDCERS) actuary (Actuary) to calculate the City's yearly ADC to the pension.

Fringe includes updated assumptions related to pension investment losses and the amortization of Proposition B over a 20-year period. These assumptions are further expanded upon in the General Fund Five-Year Outlook.

### Critical Strategic Expenditures

<b>Table 5.2 - Critical Strategic Expenditure - Personnel</b>						
<b>Request</b>	<b>FTE/Exp</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Data Driven Decisions and Systems	FTE	3.75	3.75	3.75	3.75	3.75
	Expense	\$481,484	\$494,516	\$507,946	\$521,785	\$536,046
Pure Water Phase 1 Operations	FTE	5.76	5.76	5.76	5.76	5.76
	Expense	\$670,002	\$687,898	\$706,339	\$725,343	\$744,927
Pure Water Phase 2	FTE	0.76	0.76	0.76	0.76	0.76
	Expense	\$105,952	\$108,849	\$111,834	\$114,910	\$118,079
Regulatory Compliance and Equipment	FTE	0.84	0.84	0.84	0.84	3.84
	Expense	\$118,093	\$121,325	\$124,655	\$128,087	\$500,637
Wastewater Safety and Resiliency	FTE	0.00	1.59	1.59	1.59	1.59
	Expense	\$0	\$209,074	\$214,749	\$220,598	\$226,626
	<b>Total FTE</b>	<b>11.11</b>	<b>12.70</b>	<b>12.70</b>	<b>12.70</b>	<b>15.70</b>
	<b>Total Expense</b>	<b>\$1,375,531</b>	<b>\$1,621,661</b>	<b>\$1,665,523</b>	<b>\$1,710,722</b>	<b>\$2,126,315</b>

Table 5.2 identifies increased personnel expenditures, including fringe benefits, for the addition of staff to support various key Department functions. This includes IT staff specializing in large data sets, future system platforms and industrial control systems; laboratory staff and industrial discharge staff for regulatory compliance and contract management staff to ensure the city's large wastewater repair contracts are executed timely.

The identified funding needs for the Pure Water Phase 1 are for the operation and maintenance of new and expanding Pure Water facilities under Phase 1. The Wastewater System is responsible for all work done before secondary treatment or ocean discharge standard of treatment. Pure Water positions are gradually being ramped up so personnel are fully trained to operate and maintain the facilities when they come online. A total of 26.00 FTEs from the Wastewater System (of 55.00 total FTEs) are anticipated to be required when Pure Water becomes fully operational. These estimates will be further refined as the City gets closer to bringing the facilities online.

### Supplies

The Supplies category includes costs for chemicals, machine parts, electrical materials, laboratory supplies, and pipe fittings. Table 5.3 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Supplies category.

Table 5.3 - Baseline Supplies (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	8.0%	7.4%	4.9%	3.0%	3.0%	3.0%
Projection	\$30.7	\$33.2	\$35.6	\$37.4	\$38.5	\$39.6	\$40.8

The Supplies category includes various components. Each component has a different growth rate. Growth rates for each category are based on historical analysis and include other adjustments based on known and anticipated events, including prior critical strategic expenditures. In Fiscal Year 2022, the City saw a sharp increase in key chemicals including chlorine and caustic soda which has driven large growth in the Department's supplies costs. These increases are expected to hold through Fiscal Years 2023 and 2024 and could exceed the level of expenses assumed in this Outlook. Given the importance of these chemicals in the treatment process, the Department would prioritize the use of other resources to ensure sufficient supplies of treatment chemicals were available in any applicable fiscal year and will continue closely monitoring these costs.

### Critical Strategic Expenditures

Table 5.4 - Critical Strategic Expenditures - Supplies (\$ in Millions)					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1- Operations	\$47,250	\$59,720	\$59,720	\$59,720	\$59,720
Wastewater Safety and Resiliency	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
<b>Total Expense</b>	<b>\$547,250</b>	<b>\$559,720</b>	<b>\$559,720</b>	<b>\$559,720</b>	<b>\$559,720</b>

Table 5.4 identifies increased expenditures associated with the expansion of the Pure Water Program at the reclamation plant to the fully operational Phase 1 facilities in North City. These expenditures are necessary as new and expanding Pure Water facilities come online and include chemical costs, consumables, repair and replacement parts for equipment, and other materials necessary for operation and maintenance of facilities and equipment. In addition, the Wastewater Safety and Resiliency expenditures address additional supplies for odor control measures at major pump stations.

### Contracts

Contracts are a non-personnel expense category that includes the cost of professional consultant fees, general government services billing, rent, city services billings, fleet vehicle usage and assignment fees, contractual services, and other contractual expenses. Table 5.5 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Contracts category.

Table 5.5 - Baseline Contracts (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Growth Rate	N/A	15%	2.7%	1.9%	1.9%	2.0%	2.0%
Projection	\$84.7	\$97.5	\$100.2	\$102.1	\$104.1	\$106.1	\$108.3

The Contracts category includes various components that have different applicable growth rates. Growth rates for each category are based on historical analysis and other adjustments based on known and anticipated events, including prior critical strategic expenditures and anticipated contract expirations. The growth from FY 2022 to FY 2023 is partially due to several new additions in FY 2023 to address deferred maintenance at wastewater treatment facilities.

### Critical Strategic Expenditures

Table 5.6 - Critical Strategic Expenditure - Contracts (\$ in Millions)					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1- Operations	\$51,770	\$176,970	(\$387,280)	(\$912,280)	(\$1,412,280)
Pure Water Phase 2	\$760,000	\$760,000	\$760,000	\$760,000	\$810,000
Regulatory Compliance and Equipment	\$1,636,910	\$886,910	\$886,910	\$961,910	\$1,236,910
Wastewater Safety and Resiliency	\$1,814,125	\$0	\$0	\$0	\$0
<b>Total Expense</b>	<b>\$4,262,805</b>	<b>\$1,823,880</b>	<b>\$1,259,630</b>	<b>\$809,630</b>	<b>\$634,630</b>

Table 5.6 identifies increased contractual expenditures associated with support for Phase 1 of the Pure Water Program as it comes online and then decreases in the outer years reflecting movement of resources to Phase 2 of Pure Water. These are updated estimates that were included in last year's Outlook. The regulatory compliance contracts address upkeep and support for the software system responsible for tracking industrial dischargers, while the pump station investment expenditures address repairs identified in condition assessments for Pump Stations 1 and 2 and an analysis of system-wide backup power needs.

### Information Technology

The Information Technology category includes both discretionary expense and non-discretionary allocations. The Information Technology category includes the costs related to hardware and software maintenance, help desk support, and other information technology (IT) services. Table 5.7 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Information Technology category.

Table 5.7 - Baseline Information Technology (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	34.0%	4.7%	2.5%	(3.8%)	2.0%	1.3%
Projection	\$11.7	\$15.7	\$16.4	\$16.8	\$16.2	\$16.5	\$16.7

The projections include estimates of IT costs and systems critical to treatment plant and collections system operations. Expenditures were inflated to account for potential cost increases in IT services and hardware/software products. Although, the majority of the growth is seen in centralized IT costs maintained by the Department of IT, the actual year over year growth is also impacted by PC replacement costs that spike in Fiscal Year 2024 and 2025.

### Critical Strategic Expenditures

Table 5.8 - Critical Strategic Expenditure - Information Technology					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Wastewater Safety and Resiliency	\$1,932,109	\$5,806,283	\$3,751,160	\$4,002,021	\$4,202,122
<b>Total Expense</b>	<b>\$1,932,109</b>	<b>\$5,806,283</b>	<b>\$3,751,160</b>	<b>\$4,002,021</b>	<b>\$4,202,122</b>

Table 5.8 identifies increases in the Information Technology category. The Wastewater Safety and Resiliency critical strategic expenditures supports the City's Distributed Control Systems, which is the system that allows for remote access and control of critical systems across the city's treatment and collection network.

### Energy & Utilities

The Energy & Utilities category includes costs for electricity, water services, fuel, and other utility and energy expenses. Table 5.9 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Energy & Utilities category.

Table 5.9 - Baseline Energy & Utilities (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	1.0%	6.2%	3.3%	0.4%	0.4%	0.4%
Projection	\$25.7	\$26.0	\$27.6	\$28.5	\$28.6	\$28.7	\$28.9

The Energy & Utilities category includes various costs including prior critical strategic expenditures. Each cost component (electricity, natural gas, gasoline, etc.) has a different applicable rate, that

considers base increases in the expenditure categories, which is consistent method used in the cost of service process. Unlike in the water system, there is not an anticipated reduction in flows/volumes in the sewer system, which does not decrease the energy requirements of the system.

### Critical Strategic Expenditures

Table 5.10 - Critical Strategic Expenditures - Energy & Utilities (\$ in Millions)					
Request	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pure Water Phase 1- Operations	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000
Wastewater Safety and Resiliency	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
<b>Total Expense</b>	<b>\$1,500,000</b>	<b>\$1,500,000</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>

Table 5.10 identifies increased energy and utility expenditures for the Wastewater System. Expenditures for Pure Water are necessary as new and expanding Pure Water facilities come online and include expenditures for the Morena Pump Station, North City Water Reclamation Plant, and the Metropolitan Biosolids Center. The Wastewater Safety and Resiliency includes cost estimates for natural gas costs for the Pump Station 2 backup energy costs, which is expected to use renewable natural gas, which is a premium over non-renewable sources.

### Other Expenditures

Expenses included in this category are transfers to other funds, capital expenses, and other miscellaneous expenditures. Debt service obligations, including bond and State Revolving Fund (SRF) loan payments, are excluded from this category and are discussed in detail within the Wastewater System Capital Improvements Program section of this report. Table 5.11 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Other Expenditures category.

Table 5.11 - Baseline Other Expenditures (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	14%	(19.6%)	28.3%	-22.0%	0.0%	0.0%
Projection	\$6.0	\$6.9	\$5.5	\$7.1	\$5.5	\$5.5	\$5.5

No growth rate was applied to Other Expenditures as the expenses in this category do not typically recur on an annual basis. The FY 2023 projection is based on the FY 2023 Adopted Budget which contained several one-time capital expenses that are not expected to be recurring. The increase in FY 2023 and FY 2025 is related to anticipated capital equipment purchases for wastewater collections. The current forecasts do not consider the additional costs associated with converting PUD fleet to electric; the Department is currently working on developing that forecast, which requires coordination with the General Services Department for charging infrastructure and vehicle procurement.

**Critical Strategic Expenditures**

<b>Table 5.12 - Critical Strategic Expenditure – Other Expenditures</b>					
<b>Request</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Pure Water Phase 1- Operations	\$135,350	\$74,400	\$8,000	\$0	\$137,600
Regulatory Compliance and Equipment	\$685,000	\$1,000,000	\$1,120,000	\$1,000,000	\$1,000,000
<b>Total Expense</b>	<b>\$820,350</b>	<b>\$1,074,400</b>	<b>\$1,128,000</b>	<b>\$1,000,000</b>	<b>\$1,137,600</b>

Table 5.10 identifies increased capital equipment expenditures for setting up the Pure Water Phase 1 operations and resources to address enhanced testing requirements, replacement of equipment for regulatory compliance and a preliminary estimate to replace the ocean monitoring vessel.

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## Reserves Contributions

The City has established accounts within the Sewer Revenue Fund for three reserve funds: The Emergency Operating Reserve (Operating Reserve), the Rate Stabilization Fund Reserve (Rate Stabilization Fund), and the Emergency Capital Reserve (Capital Reserve). The Department operates these reserve funds in accordance with the City's reserve policy. At the end of FY 2023, the Sewer Revenue Fund is estimating total reserves of approximately \$144.5 million. Table 5.13 details reserve targets and projected funding levels. Reserves are projected to be fully funded throughout the PUD Outlook period. The Sewer Fund's Rate Stabilization Fund is funded above targeted levels and is planned to be used to mitigate the need for sudden or dramatic rate increases over the PUD Outlook period.

<b>Table 5.13 - Reserve Target Levels and Estimated Funding Levels</b>						
<b>(\$ in Millions)</b>						
	<b>FY</b>	<b>FY</b>	<b>FY</b>	<b>FY</b>	<b>FY</b>	<b>FY</b>
	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Operating Reserve Target (\$)	\$55.2	\$59.2	\$61.2	\$61.8	\$63.1	\$64.5
Operating Reserve Level (\$)	\$55.2	\$59.2	\$61.2	\$61.8	\$63.1	\$64.5
Rate Stabilization Fund Target (\$)	\$19.6	\$19.4	\$20.0	\$20.6	\$21.3	\$22.6
Rate Stabilization Fund Level (\$)	\$79.3	\$70.3	\$56.3	\$44.3	\$33.1	\$23.1
Capital Reserve Target (\$)	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0
Capital Reserve Level (\$)	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0

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## Wastewater System Capital Improvements Program

The Wastewater System CIP is established to address current and future system needs in a cost-effective manner. The program’s principal drivers are:

- continuing the implementation of the Pure Water Program;
- improving infrastructure to reduce emergency spills and repairs;
- improving process technology;
- expanding the Wastewater System to accommodate growth; and
- ongoing replacement and rehabilitation of 45 miles of sewer pipelines each year.

Infrastructure improvements generally consist of wastewater treatment plants, pipelines, pump stations, and projects required by or related to applicable State and Federal regulations and orders. The Wastewater System’s CIP for this PUD Outlook period includes improvements to the Wastewater System infrastructure, as well as Phase 1 and Phase 2 of the multi-year Pure Water Program.

Table 6.1 shows categories of projects with the estimated cost of expenditures contained in the CIP for the period of FY 2024 through FY 2028. The City’s Adopted Budget includes multi-year project pages for non-routine and large projects. The PUD Outlook includes a high-level summary of the CIP to understand the financial impact on the Wastewater System; the City’s Five-Year Capital Infrastructure Planning Outlook provides additional information on the capital infrastructure needs for the entire city.

Table 6.1 - Summary of Projected CIP Projects Fiscal Year 2024-2028 (\$ in Millions)								
Wastewater CIP Projects	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Outlook Total
Pure Water Program	\$63.7	\$212.9	\$211.7	\$114.4	\$28.8	\$7.1	\$14.3	\$376.2
Trunk Sewers	\$1.7	1.0	\$81.1	\$50.7	\$59.3	\$41.9	\$18.9	\$251.9
Municipal Pump Station	\$1.0	\$0.5	\$0.7	\$1.8	\$5.1	\$11.7	\$11.1	\$30.3
Sewer Pipelines	\$73.1	\$67.7	\$88.7	\$111.0	\$115.7	\$38.5	\$11.1	\$365.0
Miscellaneous Projects	\$4.1	\$8.6	\$7.8	\$34.9	\$9.1	\$31.5	\$23.2	\$106.5
SDG&E Relocation	\$0.0	\$10.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Sewer Treatment Plants	\$14.2	\$44.0	\$33.2	\$27.3	\$14.9	\$5.7	\$9.6	\$90.8
Large Sewer Pump Station	\$5.0	\$6.4	\$6.3	\$5.0	\$23.1	\$20.6	\$33.2	\$88.2
Recycled Water	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>Total</b>	<b>\$162.9</b>	<b>\$351.3</b>	<b>\$429.5</b>	<b>\$345.0</b>	<b>\$255.9</b>	<b>\$157.0</b>	<b>\$121.5</b>	<b>\$1,308.9</b>

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## Capital Improvements Program (CIP) Financing Plan

Table 6.2 below describes the projected sources of funds to finance the Water System CIP during the PUD Outlook Period for FY 2024 through FY 2028; FY 2022 and FY 2023 activity are provided for reference and are not a part of the PUD Outlook Period.

PUD anticipates incurring approximately \$602.2 million of additional debt obligations for the Baseline Wastewater System CIP and \$376.2 million of additional obligations for the Pure Water CIP over the PUD Outlook period. Additional amounts will be funded with capacity fee revenue and cash. The City is projecting an increase in borrowing rates, due to the Federal Reserve’s attempts to combat inflation. Although grant funding is currently not reflected during the PUD Outlook period, the Department is actively applying for additional grant funding and continually searching for new grant opportunities. Any grant funding awarded will be used to offset cash funding. The City has identified many grant opportunities in recent federal bills but, would note a large portion of funding has been restricted to specific agencies, for smaller jurisdictions or grant awards being capped at relatively low dollar values. Please note fiscal years that show the use of negative cash reflect reimbursement of prior cash expenditures from grant, bonds, or loans.

Table 6.2 - Revenues Sources for the Wastewater Capital Improvement Program (\$ in Millions)								
Revenue Sources	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	OUTLOOK TOTAL
<b>Pure Water CIP</b>								
SRF Loans	\$0.0	\$282.6	\$185.7	\$127.8	\$30.3	\$0.1	\$0.0	\$343.9
Grants	\$17.1	\$20.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Capacity Fees/Cash	\$46.7	(\$90.2)	\$26.0	(\$13.4)	(\$1.5)	\$7.0	\$14.3	\$32.4
<b>Total</b>	<b>\$63.7</b>	<b>\$212.9</b>	<b>\$211.7</b>	<b>\$114.4</b>	<b>\$28.8</b>	<b>\$7.1</b>	<b>\$14.3</b>	<b>\$376.2</b>
<b>Baseline CIP</b>								
Revenue Bonds	\$116.8	\$75.0	\$90.0	\$0.0	\$210.0	\$0.0	\$140.0	\$440.0
SRF Loans	\$9.4	\$7.0	\$6.5	\$48.7	\$32.4	\$45.0	\$29.6	\$162.2
Grants	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Capacity Fees/Cash	(\$27.1)	\$56.4	\$121.3	\$181.9	(\$15.2)	\$105.0	(\$62.4)	\$330.5
<b>Total</b>	<b>\$99.1</b>	<b>\$138.4</b>	<b>\$217.8</b>	<b>\$230.6</b>	<b>\$227.2</b>	<b>\$149.9</b>	<b>\$107.2</b>	<b>\$932.7</b>
<b>Total Funding</b>	<b>\$162.9</b>	<b>\$351.3</b>	<b>\$429.5</b>	<b>\$345.0</b>	<b>\$255.9</b>	<b>\$157.0</b>	<b>\$121.5</b>	<b>\$1,308.9</b>

The City anticipates financing approximately \$655 million of the Wastewater System’s portion of Pure Water Phase 1 through low-interest State Revolving Fund (SRF) loans which will provide funding through FY 2027. The SRF proceeds will reimburse not only projected expenditures for FY 2023 through FY 2027, but also expenditures from prior years. Because SRF loans are provided on a reimbursable basis, cash is initially used to fund construction before reimbursements are received; this is reflected in the Table 6.2 by negative cash values for Pure Water financing in FY 2025 through FY 2026. The Department has assumed like with Phase 1 of Pure Water, Phase 2 will be initially be

cash funded seeking reimbursement through loans and grants. The Department expects to create a financing plan during the Outlook period, which will be incorporated into future outlooks.

As noted in the discussion of the Water System CIP, SRF loans are one of the least expensive sources of financing available to the City. If the City is not awarded the SRF loans projected over this PUD Outlook period, it will need to seek financing sources that carry higher interest rates. Such financing sources could impact the schedule of projected CIP projects.

The City anticipates financing approximately \$162.2 million of the Wastewater System baseline CIP with SRF loans in FY 2023 through FY 2028. This includes approximately \$5.8 million from existing SRF loans which the City has already secured, and \$156.4 million from loans for which the City has applied for or is in the process of applying. Additionally, the City anticipates financing approximately \$440.0 million of the Wastewater System Baseline CIP through revenue bonds over the same period. It is expected that a total of \$330.5 million will come from capacity fees and cash on a pay-as-you-go-basis.

### Debt Service Coverage Ratio

Similar to the Water System, as the Wastewater System makes use of various financing instruments to fund its capital program, it is important that it maintain good financial metrics to ensure its creditworthiness and its ability to issue debt at advantageous terms. One of the key components to measuring the Wastewater System’s credit quality is its debt service coverage ratio (DSCR). The DSCR is a measure of a system’s ability to make payments on its existing and projected debt service and compares the system’s net operating revenues against its debt service payments.

While variations in revenues and expenditures will result in varying DSCRs in given years, the Department generally targets a DSCR of 1.5x, a financial target that gives the Wastewater system the ability to maintain high credit quality leading to continued low borrowing rates. Additionally, the Department’s bond covenants require it to maintain a DSCR of 1.2x for its senior debt and 1.1x for its aggregate debt. Table 6.3 displays the projections through FY 2028.

Table 6.3 - Estimated Debt Service Coverage Ratios (\$ in Millions)						
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Net System Revenues	\$163.8	\$139.0	\$145.2	\$155.1	\$174.5	\$181.3
Debt Service	\$115.1	\$100.9	\$102.9	\$105.4	\$119.3	\$112.4
<b>Debt Service Coverage Ratio</b>	<b>1.42 x</b>	<b>1.38 x</b>	<b>1.41 x</b>	<b>1.47 x</b>	<b>1.46 x</b>	<b>1.61 x</b>

During the PUD Outlook period the debt service peaks in FY 2027 associated with the debt service on Pure Water. The changes in net system revenue are discussed in the expenditures and revenues sections of this report.

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## Wastewater System Revenue

The following section provides details of revenue projections for the Sewer Revenue Funds. The primary revenue sources of the Wastewater System are generated from wastewater service charges, capacity fees, interest earnings from the investments of available funds, and revenues from the Participating Agencies. This section will discuss in detail each revenue category and will include a description of the revenue source, projected growth rates, and a discussion of future revenue streams and how they impact the Wastewater System.

### Sewer Service Charges

**Background.** PUD manages and operates the Wastewater System with funds derived primarily from service charges that are deposited in the Sewer Revenue Funds and are used for the operation, maintenance and capital improvements of the Metropolitan Sub-System and the Municipal Sub-System.

The City establishes fees based upon the costs incurred by the City to collect, treat and discharge wastewater and covering debt service on capital improvements.

Sewer service charges are based on the characteristics of the wastewater discharged by each wastewater user. All wastewater users are charged based upon the amount of flow, and the solids and organic material which they discharge into the Sewer System. As sewage discharge is not metered, water consumption is used to approximate each customer's sewage flow.

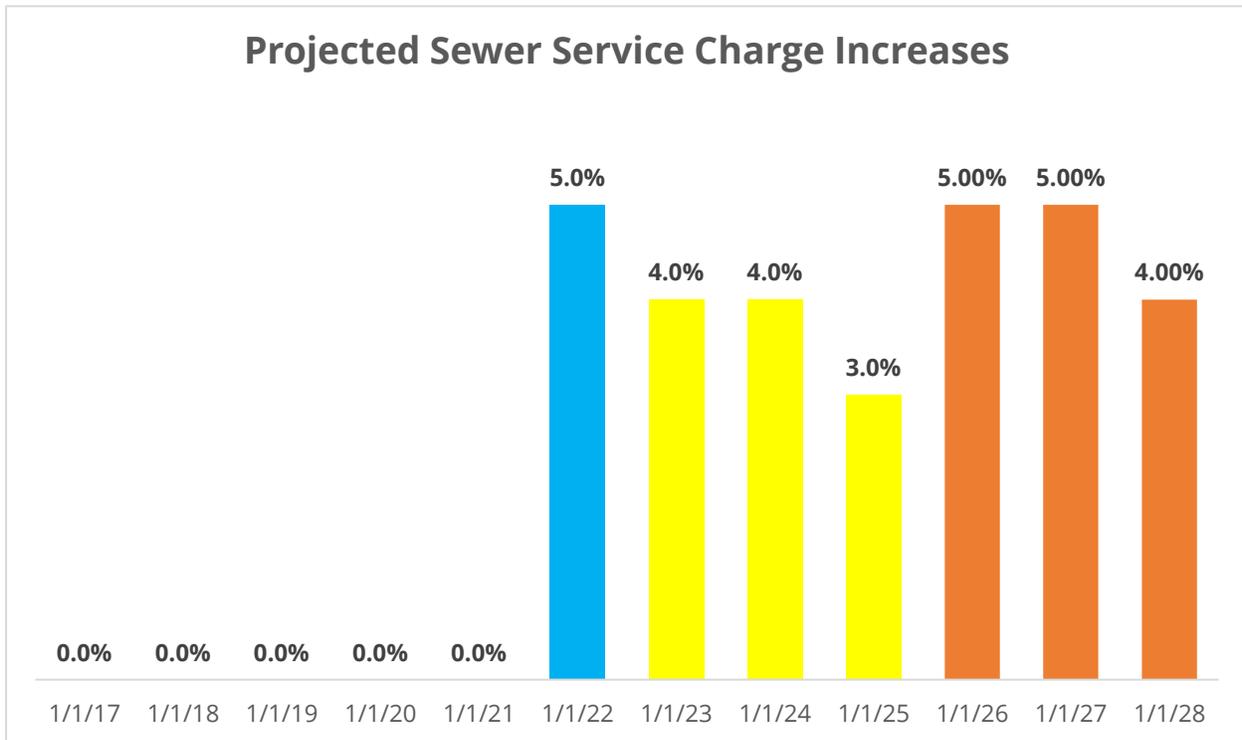
Sewer service charge revenues are comprised of two parts: a base fee and a sewer service charge (flow charge). The base fee is a fixed service fee charged to all customers to recover certain fixed and indirect costs. The flow charge is based on the amount (flow) and strength of the wastewater discharged to the system and incorporates allowances for system return that differs by customer class. This adjustment factor recognizes that not all water consumed discharges to the Wastewater System. The flow charge for both Single Family Residential (SFR) and Multi-Family Residential (MFR) customers include a 95% return to sewer factor, while Commercial/Industrial (C/I) customers average between a 73% and 79% return to sewer factor, which varies depending on the type of business. Additionally, the flow charge for SFR customers is based on the least amount of water used during the previous winter and includes a water usage cap of 20 HCF.

**Wastewater Service Charge Rate Increases.** The City Council approved the Department's Wastewater Rate Case in September of 2021 (the 2021 Rate Case). The 2021 Rate Case covers increases for four years from January 1, 2022, to January 1, 2025, and was based on a comprehensive forecast of annual operations and maintenance costs and projected capital expenditures. The 2021 Rate Case included a maximum rate increases of 5.0% on January 1, 2022, 4.0% on January 1, 2023, 4.0% on January 1, 2024, and 3.0% on January 1, 2025. This was the first wastewater rate increase in over ten years. The rates are the maximum authority authorized, which each rate being evaluated during the budget process and finalized in November of each year.

**Assumed Rate Increase on January 1, 2023.** Based on projected expenditure and revenue needs, this PUD Outlook maintains the rate increases included in the 2021 Rate Case and assumes the rate will be implemented at the maximum level of 4.0%. This is consistent with the Department's

proposal as presented to City Council in September 2021. Staff evaluated actual activity, against assumptions used in the rate setting process; accounted for changes in revenue and expenses; and evaluated the impact of any rate change to the wastewater systems financial metrics, which supported applying the maximum approved rate. Implemented rate increase are shown in blue in the figure below, maximum level of approved rates done through a cost of service process are in yellow and rates subject to additional cost of service review and council approval are displayed in orange.

**Figure 7.1 – Wastewater Rate Increases assumed in the Outlook.**



**Forecast** Table 7.2 displays the FY 2022 unaudited actuals and projections through FY 2028 for wastewater sewer service charge revenue. This revenue source represents approximately 71% of the Sewer Revenue Funds’ overall revenue receipts. The forecast assumes a 0.25% increase in accounts and reflects rate increases beginning January 1, 2022 and each January thereafter. The PUD Outlook currently assumes the maximum 4.0% increase is implemented on January 1, 2024. The Department will include in the FY 2024 Budget presentation the level of rate increase assumed for January 2024.

Table 7.2 - Sewer Service Charge Revenue (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	2.9%	4.0%	3.7%	4.4%	8.2%	4.3%
Projection	\$286.6	\$295.0	\$306.8	\$318.1	\$332.0	\$359.1	\$374.3

**Economic Trends.** Overall demand for sewer services closely tracks with population growth and overall water use. The demand for sewer services within the City’s service area is projected to increase moderately as the population continues to grow and development expands. The average demand over the last five years has not grown significantly, with some small growth in demand largely caused by increases in population. The Wastewater forecasts assumed water reduction shown in the water portion of this report, will primarily come from outdoor water usage, which does not impact expected sewer flows.

**Sensitivity Analysis.** While these projections represent PUD’s best estimate of wastewater revenues throughout the PUD Outlook period, actual results will depend on the factors discussed above. The impact in revenue from potential rate increases ranges from \$1.5 to \$3.1 million for each percent added or subtracted from projected rate increases depending on the year in which sewer service charges are adjusted, for those years outside of the approved rate case through FY 2025.

## Wastewater Capacity Charges

**Background.** Capacity charges are development fees within permits for new or expanded wastewater connections and are based on an estimate of the increase in wastewater discharge as measured by equivalent dwelling units (EDU). Capacity charge proceeds are used to construct, improve and expand the Wastewater System to accommodate the additional impacts of such added dwellings or commercial or industrial units.

As with water capacity charges, wastewater capacity charges can be applied only for the purpose of paying costs associated with capital expansion, bonds, contracts, or other indebtedness of the Wastewater System related to expansion. Because capacity charges are primarily collected on new construction within the City, revenues obtained from such charges vary based upon construction activity.

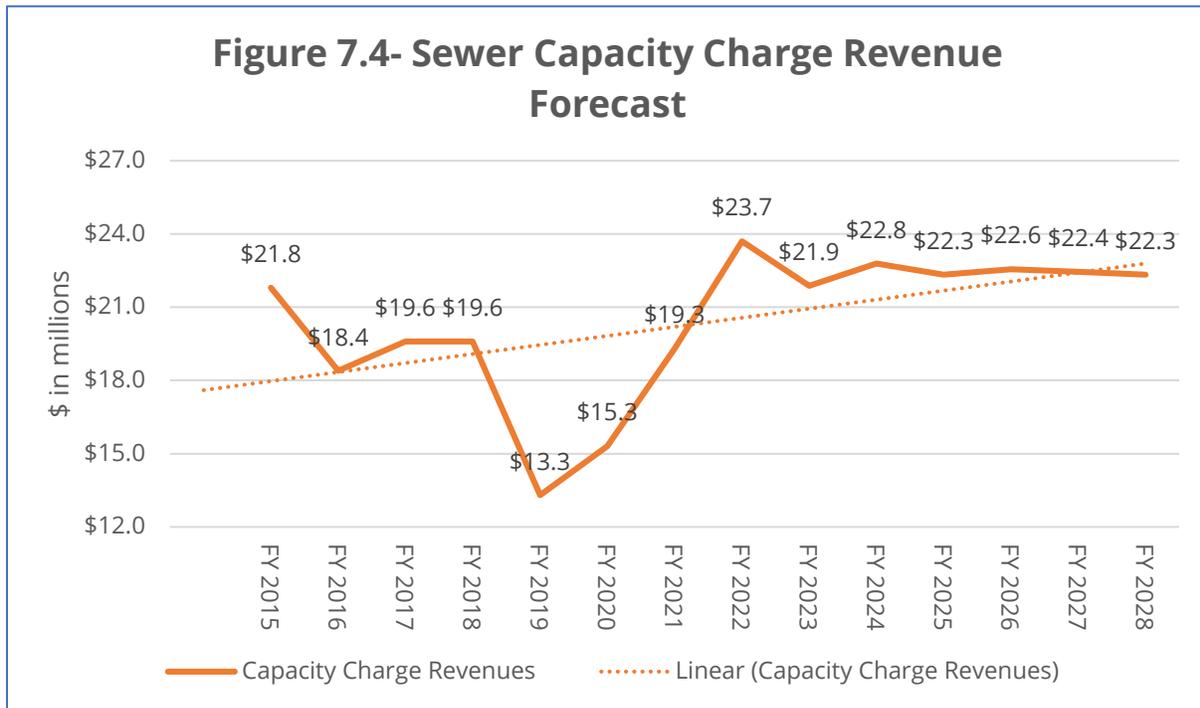
In September 2021, the City Council approved raising the capacity charge to \$5,154 per EDU, which was estimated to provide for full cost recovery for Wastewater System expansion projects.

**Forecast.** Table 7.3 displays the FY 2022 unaudited actuals and projections through FY 2028 for wastewater capacity charge revenue. This revenue source represents approximately 5% of the Wastewater System’s overall revenue receipts.

Table 7.3 - Capacity Charge Revenue (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	(6.5%)	(7.7%)	4.2%	(2.0%)	1.0%	(0.5%)
Projection	\$25.3	\$23.7	\$21.9	\$22.8	\$22.3	\$22.6	\$22.4

Projected revenues for wastewater capacity charges use conservative growth estimates based on historical trends for the previous five-year period. The fluctuation by year, reflects the fluctuations from the past as depicted in Figure 7.4. In addition, the approved increase in per EDU charge are reflected in the forecast.

**Figure 7.4 - Sewer Capacity Charge Revenue Forecast**



**Economic Trends.** As previously mentioned, wastewater capacity charges are primarily based on new wastewater connections related to new construction and are directly influenced by population growth and residential and commercial development. As discussed in the Water Capacity Charges section of this report, The current population for the City of San Diego is 1.4 million. San Diego's population grew by approximately 7% between the 2000 Census and the 2010 Census and 6.6% between 2010 and 2020. As population continues to increase in the region, the demand for housing and business creation is also expected to increase proportionate to population demands. Projections mirror those of Water Capacity Charges by remaining flat. For a more detailed discussion on population and housing growth, refer to the Water Capacity Charges section of this report.

### Other Revenue

The primary component of the Other Revenue category is revenue received from Participating Agencies (PAs) for use of the City's wastewater treatment system. As discussed earlier, PAs are other cities and districts that collect wastewater from their customers and send it to the City's wastewater treatment facilities. Each PA pays for its actual impact on the Wastewater System based on a measurement of the strength and flow of wastewater. Revenue from the PAs averages \$85 million per year over the PUD Outlook period and represents approximately 83% of revenues in the Other Revenue category. This percentage could change as the East County Advanced Water Purification Joint

Powers Authority (ECAWP JPA), which includes the City of El Cajon, County of San Diego and the Padre Dam Municipal Water District, start directing sewer flow to their advanced water purification facility. Furthermore, the city is in negotiations on alternative billing structures that will recognize this change in use of the Metropolitan sub-system, which is expected to be voted on in advance of the City's next cost of service study for the wastewater system. The Other Revenue category also includes revenue received for the sale of recycled water, interest on pooled investments, reimbursements from services provided to other City departments/funds, grants revenue, and other miscellaneous revenues.

Table 7.5 displays the FY 2022 unaudited actuals and projections through FY 2028 for the Other Revenue category.

Table 7.5 - Other Revenue Projections (\$ in Millions)							
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
YOY Growth	N/A	(7.1%)	1.6%	(2.0%)	(0.3%)	0.4%	0.5%
Projection	\$120.8	\$112.2	\$113.9	\$111.7	\$111.3	\$111.8	\$112.4

The increase seen in FY 2022 is the receipt of \$25 million in funding from SB 129 for expenses related to Phase 1 of the Pure Water project, which was one-time in nature. Additional variability in the Outlook period is due to changes in cash interest balances.

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