



PUBLIC UTILITIES DEPARTMENT  
FISCAL YEAR 2022-2026  
FIVE-YEAR FINANCIAL OUTLOOK



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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 2022-2026 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) 2022 Proposed Budget for the Water and Sewer 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 Systems, and assesses impacts to system 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 high quality and reliable water supply. The PUD Outlook also provides the City Council, key stakeholders, and the public with information in advance of the budget meetings to facilitate an informed discussion during the development of the FY 2022 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. 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. The period covered by the PUD Outlook overlaps with the periods that are anticipated to be covered by the Department's future cost of service studies. 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 financial condition of the Water and Wastewater Systems. Tables 1.1 and 1.3 summarize revenues projected to support operations, Capital Improvement Program (CIP) related expenditures, and key financial metrics for the Water and Wastewater Systems, respectively. Further detail on CIP expenses and sources of funds 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 City's 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 appropriately 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, but increases in critical operating expenditures are expected as PUD begins operations and maintenance of Phase 1 of the Pure Water Program. Conversely, CIP expenditures peak in FY 2022 and then gradually decrease through FY 2026, as construction of Phase 1 of the Pure Water Program nears completion.

For the Water System, water purchase expenses in FY 2025 and FY 2026 are projected to decline due to the additional local supply of water 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 in order to support the operations as forecasted in FYs 2022 through 2026. The PUD Outlook also anticipates the transfer of funds to and from the Rate Stabilization Fund for each system to mitigate potential fluctuations in rates in FYs 2022 through 2026.

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.

**Table 1.1 - Water System Fiscal Year 2022-2026 Financial Outlook**  
**Summary of Operating & Maintenance Key Financial Data**  
( \$ in Millions)

	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026
Water Sales	\$594.8	\$623.2	\$652.3	\$689.0	\$725.6
Capacity Charges	\$14.4	\$14.4	\$14.4	\$14.4	\$14.4
Revenue from Use of Property	\$6.1	\$6.1	\$6.1	\$6.1	\$6.1
Other Revenue	\$24.1	\$20.5	\$21.1	\$22.8	\$23.7
<b>TOTAL SYSTEM REVENUES</b>	<b>\$639.4</b>	<b>\$664.2</b>	<b>\$693.9</b>	<b>\$732.3</b>	<b>\$769.9</b>
Salaries & Wages	\$45.9	\$45.9	\$45.9	\$45.9	\$45.9
Fringe Benefits	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0
Water Purchases	\$271.6	\$285.5	\$300.1	\$292.9	\$284.5
Other Non-Personnel Expenditures	\$122.8	\$125.5	\$127.9	\$130.3	\$132.8
<b>BASELINE OPERATING EXPENDITURES</b>	<b>\$475.3</b>	<b>\$491.9</b>	<b>\$508.8</b>	<b>\$504.1</b>	<b>\$498.2</b>
<b>CRITICAL OPERATING EXPENDITURES</b>	<b>\$13.7</b>	<b>\$17.9</b>	<b>\$17.5</b>	<b>\$23.7</b>	<b>\$37.7</b>
Contribution to Capital Improvement Program	\$105.8	\$29.1	\$23.0	\$20.5	\$15.8
Debt Service	\$112.3	\$112.6	\$118.5	\$145.3	\$149.6
(Use of) / Contributions to Reserves	(\$14.0)	(\$13.0)	(\$8.8)	(\$8.3)	\$8.2
<b>NON-OPERATING EXPENDITURES</b>	<b>\$204.0</b>	<b>\$128.7</b>	<b>\$132.7</b>	<b>\$157.5</b>	<b>\$173.6</b>
<b>TOTAL EXPENDITURES</b>	<b>\$693.0</b>	<b>\$638.6</b>	<b>\$659.0</b>	<b>\$685.4</b>	<b>\$709.5</b>
<b>Impact to Unallocated Fund Balance</b>	<b>(\$53.6)</b>	<b>\$25.6</b>	<b>\$34.9</b>	<b>\$46.9</b>	<b>\$60.4</b>
<b>Debt Service Coverage Ratio</b>	<b>1.48 x</b>	<b>1.51 x</b>	<b>1.51 x</b>	<b>1.48 x</b>	<b>1.54 x</b>

**Table 1.2 - Water System Fiscal Year 2022-2026 Financial Outlook**  
**Summary of Capital Improvement Program Key Financial Data**  
( \$ in Millions)

	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026
Baseline CIP	\$303.3	\$204.6	\$176.1	\$119.5	\$127.2
Pure Water CIP	\$193.1	\$225.7	\$174.2	\$96.1	\$23.9
<b>TOTAL CIP EXPENDITURES</b>	<b>\$496.4</b>	<b>\$430.3</b>	<b>\$350.4</b>	<b>\$215.6</b>	<b>\$151.1</b>
<b>SOURCES OF FUNDS</b>					
Commercial Paper / Revenue Bonds	\$129.1	\$95.0	\$95.0	\$156.0	\$105.0
State Revolving Fund Loans	\$68.0	\$91.1	\$69.8	\$39.0	\$30.3
WIFIA Loan	\$191.3	\$215.1	\$162.6	\$0.0	\$0.0
Grants	\$2.2	\$0.0	\$0.0	\$0.0	\$0.0
Capacity Fees / Cash	\$105.8	\$29.1	\$23.0	\$20.5	\$15.8
<b>FINANCING SOURCES</b>	<b>\$496.4</b>	<b>\$430.3</b>	<b>\$350.4</b>	<b>\$215.6</b>	<b>\$151.1</b>

**Table 1.3 - Wastewater System Fiscal Year 2022-2026 Financial Outlook**  
**Summary of Operating & Maintenance Key Financial Data**  
**(\$ in Millions)**

	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026
Sewer Service Charges	\$302.9	\$315.8	\$329.2	\$339.9	\$351.0
Capacity Charges	\$17.5	\$17.5	\$17.5	\$17.5	\$17.5
Grants	\$0.3	\$0.0	\$0.0	\$0.0	\$0.0
Other Revenue	\$100.1	\$99.9	\$99.8	\$105.1	\$105.3
<b>TOTAL SYSTEM REVENUES</b>	<b>\$420.8</b>	<b>\$433.2</b>	<b>\$446.5</b>	<b>\$462.5</b>	<b>\$473.8</b>
Salaries & Wages	\$58.1	\$58.1	\$58.1	\$58.1	\$58.1
Fringe Benefits	\$41.7	\$41.7	\$41.7	\$41.7	\$41.7
Other Non-Personnel Expenditures	\$162.7	\$166.0	\$169.1	\$172.3	\$175.6
<b>BASELINE EXPENDITURES</b>	<b>\$262.5</b>	<b>\$265.8</b>	<b>\$268.9</b>	<b>\$272.1</b>	<b>\$275.4</b>
<b>CRITICAL OPERATING EXPENDITURES</b>	<b>\$12.2</b>	<b>\$14.2</b>	<b>\$13.9</b>	<b>\$15.0</b>	<b>\$23.8</b>
Contributions to Capital Improvement Program	\$2.4	\$77.1	\$55.1	\$75.6	\$65.8
Debt Service	\$109.3	\$118.1	\$103.4	\$105.5	\$111.0
(Use of) / Contributions to Reserves	(\$15.6)	(\$21.5)	\$5.5	\$8.3	\$2.3
<b>NON-OPERATING EXPENDITURES</b>	<b>\$96.2</b>	<b>\$173.8</b>	<b>\$164.0</b>	<b>\$189.4</b>	<b>\$179.1</b>
<b>TOTAL EXPENDITURES</b>	<b>\$370.8</b>	<b>\$453.8</b>	<b>\$446.8</b>	<b>\$476.5</b>	<b>\$478.2</b>
<b>Impact to Unallocated Fund Balance</b>	<b>\$49.9</b>	<b>(\$20.6)</b>	<b>(\$0.3)</b>	<b>(\$14.0)</b>	<b>(\$4.4)</b>
<b>Debt Service Coverage Ratio</b>	<b>1.48 x</b>	<b>1.48 x</b>	<b>1.53 x</b>	<b>1.59 x</b>	<b>1.55 x</b>

**Table 1.4 - Wastewater System Fiscal Year 2022-2026 Financial Outlook**  
**Summary of Capital Improvement Program Key Financial Data**  
**(\$ in Millions)**

	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026
Baseline CIP	\$197.6	\$148.2	\$166.7	\$143.1	\$123.1
Pure Water CIP	\$157.4	\$189.0	\$109.2	\$43.4	\$10.1
<b>TOTAL CIP EXPENDITURES</b>	<b>\$355.1</b>	<b>\$337.1</b>	<b>\$275.9</b>	<b>\$186.5</b>	<b>\$133.2</b>
<b>SOURCES OF FUNDS</b>					
Revenue Bonds	\$150.0	\$80.0	\$60.0	\$0.0	\$0.0
State Revolving Fund Loans	\$202.3	\$180.0	\$160.8	\$110.9	\$67.5
Grants	\$0.3	\$0.0	\$0.0	\$0.0	\$0.0
Capacity Fees / Cash	\$2.4	\$77.1	\$55.1	\$75.6	\$65.8
<b>FINANCING SOURCES</b>	<b>\$355.1</b>	<b>\$337.1</b>	<b>\$275.9</b>	<b>\$186.5</b>	<b>\$133.2</b>



## 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 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. However, the PUD Outlook is presented in a different order – 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 to 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 Fund Fiscal Year 2022-2026 Financial Outlook, and Table 1.3 – Wastewater System Fiscal Year 2022-2026 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. Expenditure projections for FY 2021 serve as the starting point for non-personnel baseline expenditures unless otherwise noted; personnel expenditure projections use the FY 2021 Adopted Budget as the starting point. As noted earlier, the PUD Outlook projections in any given year may not correspond exactly to the revenues and expenditures in future Proposed Budgets.

Critical operating expenditures are largely associated with implementing the Pure Water Program, but also include expenditures that have been preliminarily identified as necessary in meeting core water and wastewater service levels and PUD’s strategic goals.<sup>1</sup> They 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. All expenditures discussed 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 expenses.

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

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<sup>1</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.

## OVERVIEW OF THE WATER AND WASTEWATER SYSTEMS

The City of San Diego is a major metropolis and is ranked 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's Public Utilities Department. The City 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 (FY15 – FY19) potable water deliveries of approximately 180,000 acre-feet (AF) per year vs. nearly 200,000 AF per year from the previous five-year period of FY10 – FY14. PUD's extensive raw water system includes nine reservoirs, which capture local runoff from rainfall and store purchased imported water that is sent to the City's three water treatment plants for treatment and distribution. Based on statistics provided by the San Diego Association of Governments (SANDAG), the City's population is projected to increase approximately 22% over the next 20 years. While PUD expects water conservation efforts to continue, it also expects the demand for potable water will increase consistent with population growth, depending 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 2.2 million customers by providing wastewater collection, treatment, and disposal services. The Wastewater System processes an average of approximately 150 million gallons of sewage daily via a vast network of facilities which include an extensive collection system, regional wastewater treatment plants, cogeneration plants, and a biosolids processing center. The Wastewater System is comprised of two sub-systems, the Municipal ("Muni") Sub-System and the Metropolitan ("Metro") Sub-System. The Muni Sub-System is a municipal sewage collection system for the City's residents 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 Metro 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 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 Muni Sub System and Metro 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).

## Regional Water Supply

In any given year, the City will use 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 354,000 AF of imported and desalinated water to its member agencies in Fiscal Year 2020, including 142,000 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 it serves (approximately 19 million). The CWA is MWD's largest customer, responsible on average for 18% of MWD's annual revenues. Both CWA and MWD are developing storage and additional supplies, such as water transfers, to augment their imported water.

PUD also maintains a recycled water system that supplies a portion of the San Diego region. 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 to three wholesale customers: the City of Poway, the Olivenhain Municipal Water District, and the Otay Water District. Recycled water usage is seasonal and is primarily used for irrigation. Customers also use the water for dust suppression or soil compaction at construction sites, in cooling towers, ornamental fountains, and for office building toilet and urinal flushing (dual plumbing).

## Participating Agencies

Pursuant to the Regional Wastewater Disposal Agreement, the Metro 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 Metro Sub-System facilities, as well as costs related to the operation and maintenance of the Metro Sub-System. Since Fiscal Year 2011, these aggregate costs have consistently constituted approximately 33% of the total Metropolitan Sub-System costs. Between Fiscal Years 2016 and 2020, the Department received, on average, approximately \$75 million in system revenues per fiscal year from the Participating Agencies.

## Pure Water Program

### Background

The Pure Water Program will provide a safe, secure, 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. 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 City.

The Pure Water Program is a 20-year (2015-2035) multi-phased water and wastewater capital improvement program that is expected, upon full implementation by the end of calendar year 2035, to create 83 million gallons per day (mgd) of locally controlled water, which will provide one-third of the City's total potable water needs. The Pure Water Program will divert treated water 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. Phase 1 of the program is expected to be online by March 2025. There is a staged ramp-up in flow and the production is expected to be 30 mgd by the end of Calendar Year (CY) 2025. This will allow the City to reduce the amount of water purchased in FY 2025 and beyond.

In 2010, the City received a renewal of the Modified Permit for the PLWTP and agreed to identify opportunities to maximize recycling wastewater for potable and non-potable uses. That permit expired in July 2015 and was administratively continued while the regulatory agencies completed work on the renewal application. In 2017 the Environmental Protection Agency (EPA), in conjunction with the California Regional Water Quality Control Board (RWQCB), renewed the Modified Permit (5th Renewal) and a waiver from secondary treatment standards for another five years. The permit took effect October 1, 2017 and expires on September 30, 2022. The 5th Renewal was based on compliance with Clean Water Act requirements, progress of the Pure Water Program, and a reduction in permitted emissions from the previous permit level. The Pure Water Program is designed to reduce discharge into the ocean from PLWTP while providing a new local source of potable water for the City. 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.

Phase 1 of the Pure Water Program is estimated to cost approximately \$1.39 billion. The Water and Wastewater Funds will share in these expenditures according to a cost allocation based on completed design and engineering studies. Based on the cost allocation between the Water and Wastewater Systems, approximately \$814 million (58%) is allocated to the Water Utility Fund and approximately \$581 million (42%) is allocated to the Sewer Revenue Fund.

### Update

Phase 1 of the Pure Water Program includes the construction of the North City Pure Water Facility and the expansion of the existing North City Water Reclamation Plant. In November 2018 the City Council authorized PUD to begin advertising for construction. After initial advertisement of Pure Water

projects, however, the Association of General Contractors (AGC) initiated litigation against the City, alleging that joint apprenticeship language in three of the construction contracts violated the City's Proposition A requirements, and the Court issued an injunction that prohibited proceeding with construction while the litigation was resolved. The State subsequently passed legislation requiring project labor agreements for Pure Water projects that receive State Revolving Fund Loan financing, and on November 5, 2019, the City Council approved removing joint apprenticeship language from all Pure Water contracts. The City successfully negotiated project labor agreements for Pure Water with applicable labor and construction groups.

Consequently construction of Phase 1 of the Pure Water Program experienced a delay of approximately 18 months from the initial authorization for bids. Bidding on Phase 1 projects has resumed; bids on the North City Pure Water Facility and Morena Northern Alignment projects have been received, and bids on the remaining Phase 1 projects are anticipated over the next several months. Given the updated timing of the bids it is anticipated that construction on Pure Water projects will now begin in the first half of calendar year 2021, and that Phase 1 will be complete and fully operational in 2025.

## 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 meet those expenditures, and allocate those revenue needs to different customer classes based on the demands those customer classes place 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 last completed a cost of service study and rate case for the Wastewater System in 2006, which included rate adjustments through FY 2010. Additional information on projected revenues can be found in the Water System Revenues and Wastewater System Revenues sections of this report.

Following contract approval by the City Council, PUD engaged Raftelis Financial Consultants, Inc. to prepare new cost of service studies for both the Water and the Wastewater Systems. The Department anticipates releasing these cost of service studies in the third quarter of FY 2021. Those studies will include overall system-wide revenue requirements, additional details on the allocation of expenses to different customer classes, and potential rate adjustments. Those studies are expected to serve as the basis for Council's deliberation on future rate adjustments. A public hearing will need to be set in order to effectuate any rate increase.

## WATER SYSTEM

This section discusses baseline expenditure projections, upcoming critical operational expenditures, and projected capital improvement 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 50% of FY 2021 operating expenditures. 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 critical strategic expenditures.

### 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 50% 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 volumetric charges the City pays for imported water, both CWA and MWD also levy fixed charges on their member agencies.

Table 2.1 presents projected costs for purchasing water from CWA, and assumes that 10% of the demand will be met with local supplies for FY 2021 through FY 2026.<sup>2</sup> According to CWA's guidance estimates, rates are projected to rise by 5% per year. This increase impacts the Water Utility Fund's overall expenditures by approximately 2.2% as water purchases make up roughly half of the Fund's operating expenditures. The cost and amount of water purchased declines as Phase 1 of the Pure Water Program is expected to be substantially complete by March 2025. There is a staged ramp-up in flow and the production is expected to be 30 mgd by the end of CY 2025.

Additionally, PUD is projecting the receipt of approximately \$5.7 million in Local Resource Program incentives from MWD for developing local water supplies, which also contributes to the decline in water purchase expenditures in FY 2025. Starting in FY 2026, the incentives are expected to be \$11.4 million per year.

Table 2.1 - Water Purchases - Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Projection	\$239.0	\$271.6	\$285.5	\$300.1	\$292.9	\$284.5
Acre Feet Purchased	143,000	161,000	162,000	162,000	145,000	129,000

<sup>2</sup> Rainfall has seen increasing volatility over the past several years. Water year 2018 (October 1, 2017 – September 30, 2018) totaled 3.3 inches, 7 inches below San Diego's historical average of 10.3 inches. Rainfall in water year 2019 (October 1, 2018 – September 30, 2019), however, totaled 12.9 inches. Fiscal Years 2022 and thereafter assume average rainfall, but actual experiences in any given year will vary.



## 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 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. Projected FY 2021 Water Utility Fund salaries, wages, and fringe benefits are \$80.9 million and include 806.57 full-time equivalent (FTE) positions. Table 2.2 displays the FY 2021 through FY 2026 projected baseline personnel expenditures.

Table 2.2 - Personnel Expenditures - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Salary & Wages Projection	\$45.9	\$45.9	\$45.9	\$45.9	\$45.9	\$45.9
Fringe Benefits Projection	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0

The salary and wages category incorporate only those expenditures associated with staff included in the FY 2021 Adopted Budget. Position adds identified for FY 2022-2026 to support critical expenditures are discussed below. The PUD Outlook does not project for the potential impacts of any future Memorandum of Understandings (MOU) with Recognized Employee Organizations (REOs).

## Critical Operating Expenditures

Table 2.3 - Critical Strategic Expenditures - Personnel						
Request	FTE/Exp	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
AMI Support	FTE	-	5.00	10.00	19.50	19.50
	Expense	\$0	\$371,709	\$743,417	\$1,432,172	\$1,432,172
Cross Connection Support	FTE	3.00	5.00	5.00	5.00	5.00
	Expense	234,378	392,592	392,592	392,592	392,592
Customer Service Support	FTE	1.00	1.00	1.00	1.00	1.00
	Expense	94,324	94,324	94,324	94,324	94,324
Field Services & Investigations	FTE	3.50	8.50	8.50	8.50	8.50
	Expense	317,695	766,645	766,645	766,645	766,645
Laboratory Operations	FTE	1.00	-	-	-	-
	Expense	120,479	-	-	-	-
Pure Water Support	FTE	7.00	20.00	34.00	34.00	34.00
	Expense	\$800,941	\$2,112,863	\$3,469,507	\$3,469,507	\$3,469,507
Reservoirs/Dams/Plant Operations	FTE	15.00	23.00	23.00	23.00	23.00
	Expense	1,366,632	1,953,992	1,953,992	1,953,992	1,953,992
SCADA Support	FTE	3.00	3.00	3.00	3.00	3.00
	Expense	299,021	299,021	299,021	299,021	299,021
Water CIP Support	FTE	2.94	2.94	2.94	2.94	2.94
	Expense	275,760	275,760	275,760	275,760	275,760
<b>Total FTE</b>		<b>36.44</b>	<b>68.44</b>	<b>87.44</b>	<b>96.94</b>	<b>96.94</b>
<b>Total Expense</b>		<b>\$3,509,230</b>	<b>\$6,266,907</b>	<b>\$7,995,259</b>	<b>\$8,684,014</b>	<b>\$8,684,014</b>

Table 2.3 identifies additional personnel expenditures, including fringe benefits, for the addition of staff to support a number of Department needs. Significant additions are included to ensure sufficient

staffing to implement, operate, and maintain the City's Advanced Metering Infrastructure Program (AMI); the Pure Water Program, and increased operations and upkeep of the City's water reservoirs, dams, and treatment plants.

Additional FTE support is also being added for the Supervisory Control and Data Acquisition (SCADA) Water Distribution System. This system monitors the water distribution facilities and detects and rectifies equipment malfunctions and operation problems. This is critical to ensuring that water treatment plant operations, public health and regulatory compliance are protected from any system vulnerabilities in older SCADA systems.

The identified funding needs for the Pure Water Program are for the operation and maintenance of new and expanded Pure Water facilities and staffing needs. Pure Water positions are gradually being ramped up so personnel is on hand and fully trained to operate and maintain the facilities when they come online. A total of 34.00 FTEs from the Water System (of 67.00 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.

Additional support is also included for Cross Connections team to ensure that the potable water delivery system is not impacted the introduction of any used water source, and for Customer Service.

## 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 FY 2021 through FY 2026 projections for the Supplies category.

Table 2.4 - Supplies - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	3.0%	3.0%	3.0%	3.0%
Projection <sup>1</sup>	\$15.4	\$15.4	\$15.9	\$16.3	\$16.8	\$17.3

1. Figures exclude 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. As a result, the 3.0% growth rate that was applied to the Supplies category represents a weighted growth rate that was calculated after applying the corresponding growth rate for each component. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.



## Critical Operating Expenditures

Table 2.5 - Critical Strategic Expenditures - Supplies					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Pure Water Support	\$10,000	\$5,000	\$5,000	\$1,104,322	\$10,166,717
<b>Total Expense</b>	<b>\$10,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$1,104,322</b>	<b>\$10,166,717</b>

Table 2.5 above identifies increased expenditures in the supplies category. Pure Water 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.

## Contracts

Contracts are a non-personnel expense category that include the cost of contractual services, professional consultant fees for outside expertise, general government services billing, City services billings, fleet vehicle usage and assignment fees, rental expenses, security services, and other contractual expenses. Table 2.6 below displays PUD's projections for FY 2021 through FY 2026 for the Contracts category.

Table 2.6 - Contracts - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	2.0%	2.0%	2.0%	2.0%
Projection <sup>1</sup>	\$80.1	\$80.1	\$81.7	\$83.3	\$85.0	\$86.7

1. Projection figures exclude contractual expenditure projections associated with water purchases.

The Contracts category includes various components with different applicable growth rates. Growth rates for each category are based on historical analysis and other adjustments based on known and anticipated events, including anticipated contract expirations. As a result, the growth rate for the Contracts category represents a weighted growth rate that was calculated after applying the corresponding growth rate for each component. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.

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## Critical Operating Expenditures

Table 2.7 - Critical Strategic Expenditures - Contracts					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Condition Assessments	\$3,340,000	\$3,340,000	\$2,840,000	\$1,840,000	\$340,000
Environmental Support & Compliance	\$1,200,000	\$1,150,000	\$1,025,000	\$900,000	\$900,000
Financial Support	\$200,000	\$0	\$37,500	\$350,000	\$150,000
Pure Water Support	\$280,000	\$135,000	\$475,000	\$743,000	\$895,000
Restoration Contracts	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
SCADA Support	\$250,000	\$100,000	\$0	\$0	\$0
Security System Upgrades	\$52,170	\$52,170	\$52,170	\$52,170	\$35,250
Water Facilities/Reservoir/Dam Maintenance	\$2,600,000	\$3,000,000	\$2,300,000	\$450,000	\$100,000
Water Property/Land/Plan Management	\$600,000	\$600,000	\$0	\$0	\$0
<b>Total Expense</b>	<b>\$9,522,170</b>	<b>\$9,377,170</b>	<b>\$7,729,670</b>	<b>\$5,335,170</b>	<b>\$3,420,250</b>

Table 2.7 above identifies increased contractual expenditures in various areas. This includes increased expenditures for condition assessments of Water System facilities and dams, as well as expenditures necessary for the maintenance of water treatment facilities, reservoir repairs, and dam repairs. The Restoration Contracts item includes contractual funding to ensure compliance with various local, state, and federal requirements such as the Habitat Conservation Plan and Multiple Species Conservation Plan. Additional amounts support the Water System's SCADA system, security upgrades, and Phase 1 of the Pure Water Program.

## 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 below displays projections for FY 2021 through FY 2026 in the Information Technology category.

Table 2.8 - Information Technology - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	4.5%	2.0%	2.0%	2.0%
Projection	\$11.8	\$11.5	\$12.0	\$12.3	\$12.5	\$12.8

The projections include estimates of IT costs related to desktop support, networks, data-centers, applications, and systems critical to water treatment plant operations. Expenditures were inflated by 2% to account for potential cost increases in IT services and hardware/software products, and one-time expenditures in FY 2021 were removed from FY 2022 projections. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are otherwise carried forward from FY 2021.

## Critical Operating Expenditures

Table 2.9 - Critical Strategic Expenditures - Information Technology					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Customer Service Support	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000
Desktop Computer Replacement	\$0	\$705,000	\$0	\$0	\$0
MARS Ongoing Support	550,000	550,000	550,000	550,000	550,000
<b>Total Expense</b>	<b>\$725,000</b>	<b>\$1,430,000</b>	<b>\$725,000</b>	<b>\$725,000</b>	<b>\$725,000</b>

Additions in the IT category include additional support for customer service IT systems, replacement of desktop computers in the Department in FY 2023, and ongoing support for the MARS System which provides critical water meter test software and equipment to ensure residential and commercial water meter reliability.

## Energy & Utilities

The Energy and Utilities category includes the Water Utility Fund's costs for electricity, water services, fuel, and other utility and energy expenses. Table 2.10 displays FY 2021 through FY 2026 projections for the Energy and Utilities category.

Table 2.10 - Energy & Utilities - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	0.4%	0.4%	0.4%	0.4%
Projection	\$12.7	\$12.7	\$12.7	\$12.8	\$12.9	\$12.9

The Energy and Utilities category includes various costs. Each cost component has a different applicable rate. Growth rates for energy are based on growth rates prepared by the U.S. Energy Information Administration<sup>3</sup>; those growth rates showed no projected increases for energy, but some increases for fuel. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.

## Critical Operating Expenditures

Table 2.11 - Critical Strategic Expenditures - Energy & Utilities					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Pure Water Support	-	-	-	\$7,334,247	\$14,651,548
<b>Total Expense</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$7,334,247</b>	<b>\$14,651,548</b>

Table 2.11 above identifies increased energy and utility expenditures associated with the expansion of 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.

<sup>3</sup> U.S. Energy Information Administration, <https://www.eia.gov/outlooks/aeo/>

## Other Expenditures

Expenses included in this category are transfers out to other funds, capital expenses, taxes, and other miscellaneous expenditures. Debt service obligations, including bond, commercial paper, State Revolving Fund loans (SRF Loans) and WIFIA payments, are excluded from this category and are discussed in the Water System Capital Improvement Program section of this report. Table 2.13 displays FY 2021 through FY 2026 projections for the Other Expenditures category.

Table 2.12 - Other Expenditures - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	0.0%	0.0%	0.0%	0.0%
Projection	\$3.2	\$3.2	\$3.2	\$3.2	\$3.2	\$3.2

No growth rate was applied to Other Expenditures as the expenses in this category do not typically recur on an annual basis. The FY 2021 Projection is based on the FY 2021 Adopted Budget which is adjusted to account for historical trends.

## Critical Operating Expenditures

Table 2.13 - Critical Strategic Expenditures - Other Expenditures						
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
AMI Support	\$54,600	\$54,600	\$54,600	\$54,600	\$54,600	
Laboratory Operations	\$0	\$0	\$484,000	\$0	\$0	
Pure Water Support	\$40,000	\$660,000	\$468,000	\$470,000	\$0	
Water Facility Maintenance	\$100,000	\$100,000	\$0	\$0	\$0	
<b>Total Expense</b>	<b>\$194,600</b>	<b>\$814,600</b>	<b>\$1,006,600</b>	<b>\$524,600</b>	<b>\$54,600</b>	

Table 2.13 above identifies increased expenditures associated with the expansion of the Pure Water Program. Pure Water Program expenditures include funding for the replacement of laboratory equipment necessary for sampling analysis in support of the expanding program. Other Expenditures also includes one-time funding for various pieces of equipment associated with water and laboratory facilities and the Advanced Metering Infrastructure Program.

## Reserve 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 Reserve Fund), and the Emergency Capital Reserve (Capital Reserve). The Department maintains these reserve funds in accordance with the City's reserve policy (the City Reserve Policy). At the end of FY 2021, the Water Utility Fund is estimated to have total reserves of approximately \$177.8 million.

Table 2.14 details reserve targets and projected funding levels. Reserves are projected to be fully funded throughout the PUD Outlook period. The Rate Stabilization Reserve Fund is funded above targeted levels; it can be used to provide one-time operating revenue to offset or mitigate the need

for sudden or dramatic rate increases. The PUD Outlook projects use of the Water Rate Stabilization Reserve Fund in FY 2022 through 2025, and a contribution to the reserve in FY 2026.

Table 2.14 - Reserve Targets and Estimated Funding Levels (\$ in Millions)						
	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025*	Fiscal Year 2026
Operating Reserve Target (\$)	\$39.1	\$41.8	\$43.0	\$43.4	\$45.1	\$48.2
Operating Reserve Level (\$)	\$40.8	\$41.8	\$43.0	\$43.4	\$45.1	\$48.2
Secondary Purchase Reserve Target (\$)	\$14.3	\$16.3	\$17.1	\$18.0	\$17.6	\$17.1
Secondary Purchase Reserve Level (\$)	\$16.4	\$16.4	\$17.1	\$18.0	\$18.0	\$18.0
Rate Stabilization Fund Target (\$)	\$33.3	\$35.5	\$36.7	\$38.4	\$40.1	\$42.3
Rate Stabilization Fund Level (\$)	\$115.6	\$100.6	\$85.6	\$75.6	\$65.6	\$70.6
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 2025 reflects a decrease in water purchases as Phase 1 of the Pure Water Program nears completion.

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## Water System Capital Improvement 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:

- implementation of the Pure Water Program;
- improving infrastructure to reduce pipeline breaks and emergency repairs;
- improving process technology;
- expansion of the Water System to accommodate growth; and
- compliance with the Federal Safe Drinking Water Act and the Division of Drinking Water (DDW) Compliance Order.

Infrastructure improvements generally consist of water treatment plants, pipelines, reservoirs and pump stations, projects related to anticipated growth within the City's service area, and projects required by or related to applicable State and Federal regulations and orders.

Table 3.1 shows categories of projects with the estimated cost of expenditures contained in the CIP for the period of Fiscal Years 2022 through 2026. A number of condition assessments for the Department's dams are currently underway, and may reveal additional capital improvements and repairs to be necessary that are not reflected in Table 3.1, though it is likely that the bulk of such costs would fall outside the period covered by the Outlook.

Table 3.1 - Summary of Projected CIP Projects FY 2022 through FY 2026 (\$ in Millions)						
Water CIP Projects	2022	2023	2024	2025	2026	TOTAL
Pure Water Program	\$193.1	\$225.7	\$174.2	\$96.1	\$23.9	\$713.0
Transmission Pipelines	\$111.1	\$77.0	\$37.7	\$23.2	\$40.8	\$289.8
Pipelines	\$110.4	\$92.2	\$78.0	\$27.9	\$17.2	\$325.8
Storage Facilities	\$8.1	\$11.5	\$18.4	\$19.1	\$19.1	\$76.2
Water Treatment Plants	\$0.8	\$2.3	\$5.7	\$13.2	\$18.6	\$40.6
Pump Stations	\$6.7	\$4.5	\$6.5	\$7.1	\$10.7	\$35.5
SDG&E Relocation Advance	\$58.4	\$0.0	\$0.0	\$0.0	\$0.0	\$58.4
Ground Water Projects	\$0.1	\$0.1	\$0.1	\$0.1	\$0.2	\$0.5
Miscellaneous Projects	\$7.7	\$16.9	\$29.8	\$28.8	\$20.7	\$104.0
<b>Total</b>	<b>\$496.4</b>	<b>\$430.3</b>	<b>\$350.4</b>	<b>\$215.6</b>	<b>\$151.1</b>	<b>\$1,643.7</b>

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## Capital Improvement Financing Plan

Table 3.2 below describes the projected sources of funds to finance the Water System CIP for Fiscal Years 2022 through 2026.

As shown in Table 3.2, PUD anticipates incurring approximately \$762.4 million of additional debt obligations for the Baseline Water System CIP and \$684.9 million of additional obligations for the Pure Water CIP over the PUD Outlook period. Grants, capacity fees, and cash are anticipated to fund an additional \$196.4 million.

Table 3.2 - Sources of Funds for the Water Capital Improvement Program FY 2022 through FY 2026 (\$ in Millions)						
Source of Funds	2022	2023	2024	2025	2026	TOTAL
<b>Pure Water CIP</b>						
Commercial Paper/Revenue Bonds	\$0.0	\$0.0	\$0.0	\$96.0	\$20.0	\$116.0
WIFIA Loan <sup>(1)</sup>	\$191.3	\$215.1	\$162.6	\$0.0	\$0.0	\$568.9
Grants	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$1.5
Capacity Fees/Cash	\$0.4	\$10.6	\$11.7	\$0.1	\$3.9	\$26.7
<b>Total</b>	<b>\$193.1</b>	<b>\$225.7</b>	<b>\$174.2</b>	<b>\$96.1</b>	<b>\$23.9</b>	<b>\$713.1</b>
<b>Baseline CIP</b>						
Commercial Paper/Revenue Bonds	\$129.1	\$95.0	\$95.0	\$60.0	\$85.0	\$464.1
SRF Loans	\$68.0	\$91.1	\$69.8	\$39.0	\$30.3	\$298.3
Grants	\$0.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.7
Capacity Fees/Cash	\$105.4	\$18.5	\$11.3	\$20.4	\$11.9	\$167.6
<b>Total</b>	<b>\$303.3</b>	<b>\$204.6</b>	<b>\$176.1</b>	<b>\$119.5</b>	<b>\$127.2</b>	<b>\$930.7</b>
<b>Total Funding</b>	<b>\$496.4</b>	<b>\$430.3</b>	<b>\$350.4</b>	<b>\$215.6</b>	<b>\$151.1</b>	<b>\$1,643.8</b>

<sup>(1)</sup> Assumes periodic draw on the WIFIA Loan for FY2021 through FY2024, and a mix of bond funding and cash for the remaining Pure Water costs through FY2026.

The City has secured financing of \$614.0 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 2024. Additional funding for the Water System's portion of Pure Water CIP expenses includes \$116.0 million in future debt (commercial paper and revenue bonds), and \$26.7 million in grant funding and cash.

For the Water System's baseline CIP, the Department anticipates financing the costs of certain projects in the Water System Baseline CIP in the amount of \$298.3 million through SRF loans for which the City has secured or plans to apply. The proceeds from additional SRF loans are assumed to provide funding in Fiscal Years 2022 through 2026. SRF loans are one of the least expensive sources of financing available to the City. If the City is not awarded the 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.

The City also anticipates financing approximately \$464.1 million of the Baseline Water System CIP through a combination of revenue bonds and commercial paper. Remaining costs of the Water System Baseline CIP are anticipated to be paid on a pay-as-you-go basis.

## Debt Service Coverage Ratios

As the Water 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 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.

Table 3.3 - Projected Debt Service Coverage Ratios <sup>1</sup> (\$ in Millions)					
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net System Revenues	\$166.0	\$170.2	\$178.5	\$215.5	\$230.0
Debt Service	\$112.3	\$112.6	\$118.5	\$145.3	\$149.6
<b>Debt Service Coverage Ratio</b>	<b>1.48 x</b>	<b>1.51 x</b>	<b>1.51 x</b>	<b>1.48 x</b>	<b>1.54 x</b>

<sup>1</sup> Note - DSCRs shown here are based budgetary projections; DSCRs reported in CAFR statements may differ due to variances in non-budget transactions.

## 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 sales 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.

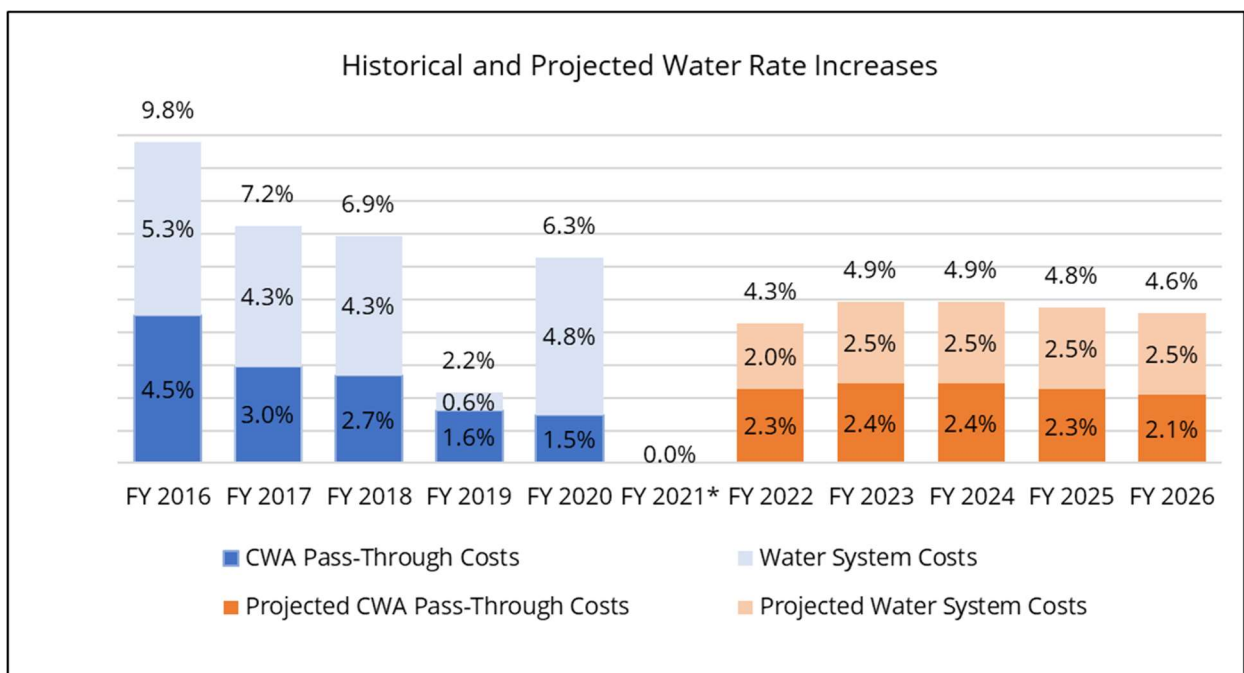


**Water Service Charge Rate Increases.** PUD last released a Water System cost of service study in 2015, which produced a five-year rate case (the 2016 Rate Case). The 2016 Rate Case was based on comprehensive forecasted annual operations and maintenance costs, capital cost expenditures including the initial costs of the Pure Water Program, and purchased water costs that increase every January 1 from CWA. The 2016 Rate Case covered Fiscal Years 2016 through 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>4</sup> FY2020 reflects the final year of the prior approved rate case.

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 4.3% in FY 2022, 4.9% in FY 2023, 4.9% in FY 2024, 4.8% in FY 2025, and 4.6% in FY 2026. Actual rate increases and the individual customer class impact will be subject to finalization of the cost of service study that is currently underway and City Council review and approval.

Roughly half 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 operations range from 2.0 to 2.5% in each year.

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



\*No water rate increase is shown for FY 2021. While rates will not increase in FY 2021, the Department anticipates absorbing an effective 2.5% increase in CWA's water rates.

<sup>4</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 of 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.

**Forecast.** Table 4.2 presents forecasted revenues for FY 2021 through FY 2026 for revenue from water sales. The growth rates as shown in Table 2.3 reflect overall revenue growth, and include revenue impacts of both proposed rate adjustments and slight increases in water use. Revenue from the MWD's Local Resources Program, which provides credits for Pure Water's production of local water, are also included in FYs 2025 and 2026. Note that the rate adjustments shown above are included in these amounts, though these adjustments are proposed to be implemented on January 1<sup>st</sup> of each year, so the impact to revenues on a Fiscal Year basis do not correspond exactly.

Table 4.2 - Water Sales Revenue Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023 <sup>(2)</sup>	FY 2024	FY 2025 <sup>(3)</sup>	FY 2026
<b>Potable Water</b>						
Growth Rate	N/A	3.5%	4.9%	5.1%	4.8%	4.6%
Projection	\$541.7	\$560.8	\$588.1	\$617.9	\$647.7	\$677.6
<b>Other Water Sales<sup>(1)</sup></b>						
Growth Rate	N/A	2.7%	3.2%	-1.8%	19.7%	16.5%
Projection	\$33.1	\$34.0	\$35.1	\$34.5	\$41.3	\$48.1

<sup>(1)</sup> Revenue figures for "Other Water Sales" include recycled water sales revenue figures and sales to Cal Am.

<sup>(2)</sup> Recycled LRP credits end in FY23 for NCWRP.

<sup>(3)</sup> LRP credits for Pure Water start.

**Economic Trends.** Although 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. The City last prepared an Urban Water Management Plan (UWMP) in 2016, which projected single-family residential water use to increase by 39% over the period of 2020 to 2040. Multi-family residential water use was forecasted to increase at 69% over the projection period of 2020 to 2040. 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 UWMP is due to be updated in calendar year 2021.

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, declines or increases in water demand, bill payment, or rate increases of just 1% can impact water sales revenue by approximately \$5.7 to \$6.3 million depending on the year in which they occur. Adjustments to projected rates in earlier years would compound this amount.

## Water Capacity Charges

**Background.** Capacity charges are development fees imposed on 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.

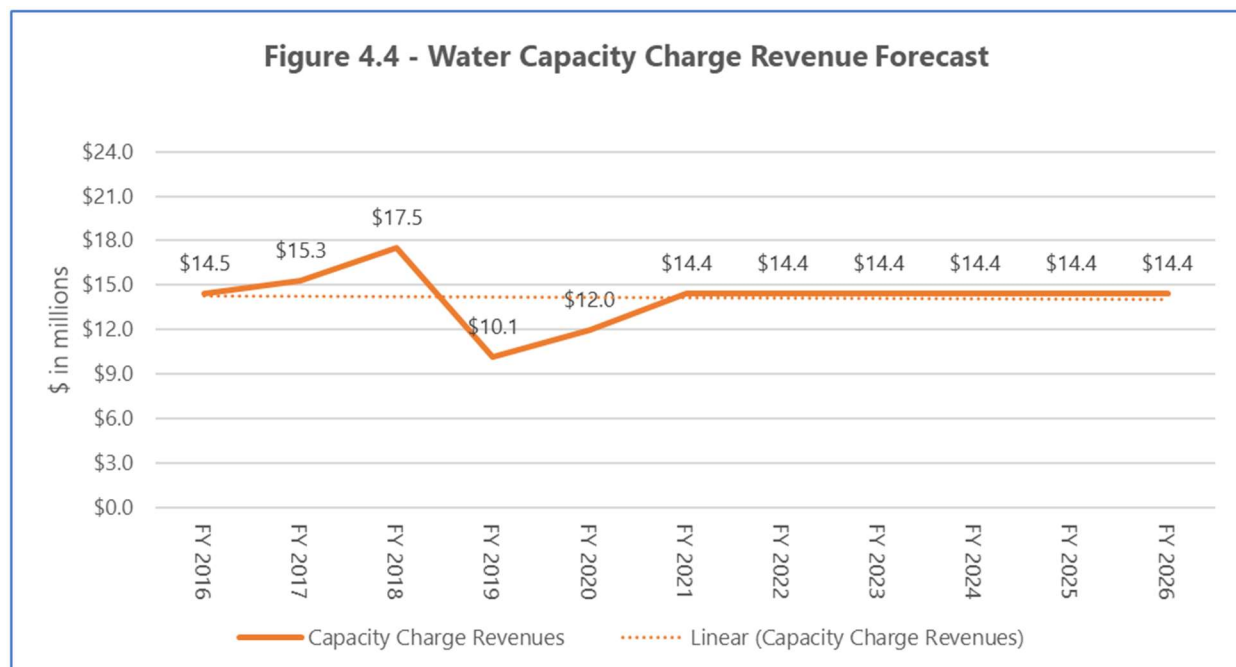
Pursuant to State law, capacity charges can be used only to pay costs associated with capital expansion, bonds, contracts, or other indebtedness of the Water System related to expansion. Because capacity charges are primarily collected on the issuance of new construction permits within the City, revenues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

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

**Forecast.** Table 4.3 presents projected capacity fee revenue for FY 2021 through FY 2026. This revenue source represents less than 2% of the Water System's overall revenue receipts.

Table 4.3 - Capacity Charges Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Projection	\$14.4	\$14.4	\$14.4	\$14.4	\$14.4	\$14.4

Projected revenues for capacity charges use conservative growth estimates based on historical spending trends from FY 2016 through FY 2020 as shown in Figure 4.4. Average capacity fee revenue between FY 2016 and FY 2020 was approximately \$13.9 million; capacity fee projections of \$14.4 million over the PUD Outlook period are based on this average and take recent trends into account.



**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. As population continues to increase in the region, the demand for new single and multi-family housing is also expected to increase in order to meet population demands.

According to SANDAG<sup>5</sup>, 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 California Association of Realtors is forecasting a modest decline in construction of single family units due to a combination of high home prices and eroding affordability. Multi-family housing hit a peak in 2019, but has since leveled off as multi-family units under construction near completion. This combined with uncertainty surrounding the impacts of the COVID-19 pandemic on residential construction contribute to 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 presents forecasted revenue for FY 2021 through FY 2026. This revenue source represents less than 1% of the Water Utility's overall revenue receipts.

Table 4.5 - Revenue from Use of Property Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	0.0%	0.0%	0.0%	0.0%
Projection	\$6.1	\$6.1	\$6.1	\$6.1	\$6.1	\$6.1

Revenues in this category can vary slightly each year as new lease agreements are entered into while other lease agreements expire. Overall, revenue in this category has averaged \$6.1 million since FY 2016. As a result, \$6.1 million in Revenues from Use of Property is projected throughout the PUD Outlook period.

## 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 presents forecasted revenue for FY 2021 through FY 2026. This revenue source represents 2.0% of the Water Utility's overall revenue receipts.

<sup>5</sup> It should be noted that SANDAG's Regional Growth Forecast was published in 2013 using 2012 data.

Table 4.6 - Other Revenue Projections (\$ in Millions)						
	FY 2021 Projection	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	7.3%	-14.9%	2.8%	8.4%	4.0%
Projection	\$22.4	\$24.1	\$20.5	\$21.1	\$22.8	\$23.7

Other revenue in FY 2022 through FY 2026 is projected to stay relatively flat, reflecting stable unrestricted balances and slightly increased interest earnings. Changes from year to year are largely the cause of changes to projected interest income, as well as projected changes in charges for services, including storage and transportation agreements with other local agencies.

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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 expenditure, projected growth rates, and a discussion of critical strategic expenditures.

#### 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 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 2021 Adopted Budget for the Sewer Funds salaries, wages, and fringe benefits was \$99.8 million and included 902.86 FTEs. Table 5.1 displays forecasted baseline personnel expenditure projections for FY 2021 through FY 2026.

Table 5.1 - Personnel Expenditures - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Salary & Wages Projection	\$58.1	\$58.1	\$58.1	\$58.1	\$58.1	\$58.1
Fringe Benefits Projection	\$41.7	\$41.7	\$41.7	\$41.7	\$41.7	\$41.7

Adjustments within the salary and wages category incorporate only those expenditures associated with staff included in the FY 2021 Adopted Budget. Position adds identified for FY 2022-2026 to support critical expenditures are discussed below. The PUD Outlook does not project for the potential impacts of any future MOUs with REOs.

## Critical Strategic Expenditures

Table 5.2 - Critical Strategic Expenditures - Personnel						
Request	FTE/Exp	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
AMI Support	FTE	-	-	-	1.50	1.50
	Expense	\$0	\$0	\$0	\$104,016	\$104,016
Customer Service Support	FTE	1.00	1.00	1.00	1.00	1.00
	Expense	\$94,324	\$94,324	\$94,324	\$94,324	\$94,324
EAM Support	FTE	1.06	1.06	1.06	1.06	1.06
	Expense	\$80,429	\$80,429	\$80,429	\$80,429	\$80,429
Field Services & Investigations	FTE	0.50	0.50	0.50	0.50	0.50
	Expense	\$47,546	\$47,546	\$47,546	\$47,546	\$47,546
Laboratory Operations	FTE	3.00	3.00	3.00	3.00	3.00
	Expense	\$374,744	\$374,744	\$374,744	\$374,744	\$374,744
Preventative Maintenance	FTE	4.00	4.00	4.00	4.00	4.00
	Expense	\$425,475	\$425,475	\$425,475	\$425,475	\$425,475
Pure Water Support	FTE	13.00	24.00	33.00	33.00	33.00
	Expense	\$1,186,993	\$2,241,285	\$3,058,044	\$3,058,044	\$3,058,044
<b>Total FTE</b>		<b>22.56</b>	<b>33.56</b>	<b>42.56</b>	<b>44.06</b>	<b>44.06</b>
<b>Total Expense</b>		<b>\$2,209,510</b>	<b>\$3,263,803</b>	<b>\$4,080,561</b>	<b>\$4,184,578</b>	<b>\$4,184,578</b>

Table 5.2 above identifies increased personnel expenditures, including fringe benefits, for the addition of staff to support various key Department functions. These include support for the Department's AMI Smart Meter program, Customer Support, and implementation of Enterprise Asset Management (EAM) systems in the Department. Additional staff are also proposed to support a shift toward increased preventative maintenance as well as increased laboratory testing consistent with current and anticipated regulatory requirements.

The identified funding needs for the Pure Water Program are for the operation and maintenance of new and expanding Pure Water facilities and staffing. Pure Water positions are gradually being ramped up so personnel is on hand and fully trained to operate and maintain the facilities when they come on line. A total of 33.00 FTEs from the Wastewater System (of 67.00 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 facility on line.

## Supplies

The Supplies category includes costs for chemicals, machine parts, electrical materials, laboratory supplies, and pipe fittings. Table 5.3 displays the FY 2021 through FY 2026 projections for the Supplies category.

Table 5.3 - Supplies - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	3.0%	3.0%	3.0%	3.0%
Projection	\$26.5	\$26.5	\$27.3	\$28.1	\$29.0	\$29.8

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. As a result, the 3.0% growth rate that was applied to the Supplies category represents a weighted growth rate that was calculated after applying the corresponding growth rate for each component. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.

### Critical Strategic Expenditures

Table 5.4 - Critical Strategic Expenditures - Supplies					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Pure Water Support	\$0	\$0	\$1,157,754	\$1,710,055	\$3,207,506
<b>Total Expense</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,157,754</b>	<b>\$1,710,055</b>	<b>\$3,207,506</b>

Table 5.4 identifies increased expenditures associated with the expansion of the Pure Water Program. 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.

### Contracts

Contracts are a non-personnel expense category that includes the cost of professional consultant fees, general government services billing, City services billings, fleet vehicle usage and assignment fees, contractual services, other contractual expenses. Table 5.5 displays the FY 2021 through FY 2026 projections for the Contracts category.

Table 5.5 - Contracts - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	2.0%	2.0%	2.0%	2.0%
Projection	\$95.9	\$95.9	\$97.8	\$99.8	\$101.8	\$103.8

The Contracts category includes various components that each has different applicable growth rates. Growth rates for each category are based on historical analysis and other adjustments based on known and anticipated events, including anticipated contract expirations. As a result, the growth rate for the Contracts category represents a weighted growth rate that was calculated after applying the corresponding growth rate for each component. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.



## Critical Strategic Expenditures

Table 5.6 - Critical Strategic Expenditures - Contracts					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Condition Assessments	\$860,000	\$660,000	\$660,000	\$660,000	\$660,000
Environmental Support & Compliance	\$90,000	\$90,000	\$90,000	\$50,000	\$50,000
Financial Support	\$50,000	\$0	\$37,500	\$350,000	\$150,000
Pure Water Support	\$0	\$0	\$657,034	\$1,377,068	\$5,886,267
Security System Upgrades	\$58,830	\$58,830	\$58,830	\$58,830	\$39,750
Wastewater Facility Maintenance	\$2,300,000	\$3,300,000	\$1,000,000	\$0	\$0
Wastewater Collection Flow & Depth Monitoring	\$2,415,000	\$2,440,000	\$2,485,000	\$2,510,000	\$1,800,000
<b>Total Expense</b>	<b>\$5,773,830</b>	<b>\$6,548,830</b>	<b>\$4,988,364</b>	<b>\$5,005,898</b>	<b>\$8,586,017</b>

Table 5.6 identifies increased contractual expenditures in several areas. Significant expenditures are associated with increased support for Phase 1 of the Pure Water Program as it comes online, increased maintenance at wastewater facilities to ensure all systems are properly maintained, and flow and depth monitoring to ensure ongoing monitoring of the effectiveness of the wastewater collection and treatment system.

Additional amounts are in support of increased condition assessments, environmental support and compliance to ensure compliance with various local, state, and federal requirements such as the Habitat Conservation Plan and Multiple Species Conservation Plan, financial support, and upgrades to various Wastewater System security systems.

## Information Technology

The Information Technology category includes both discretionary expense and non-discretionary allocations to the Sewer Revenue Funds. 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 below displays the FY 2021 through FY 2026 projections for the Information Technology category.

Table 5.7 - Information Technology - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	4.2%	2.0%	2.0%	2.0%
Projection	\$12.4	\$12.1	\$12.6	\$12.9	\$13.1	\$13.4

The projections include estimates of IT costs related to desktop support, networks, data-centers, applications, and systems critical to wastewater treatment plant operations for FY 2021 through FY 2026. Expenditures were inflated by 2% to account for potential cost increases in IT services and hardware/software products, and one-time expenditures in FY 2021 were removed from FY 2022 projections. Due to PUD's historical actual operating trends being lower than budgeted amounts and

the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are otherwise carried forward from FY 2021.

### Critical Strategic Expenditures

Table 5.8 Critical Strategic Expenditures - Information Technology					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Customer Service Support	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000
Desktop Computer Replacement	\$0	\$795,000	\$0	\$0	\$0
<b>Total Expense</b>	<b>\$175,000</b>	<b>\$970,000</b>	<b>\$175,000</b>	<b>\$175,000</b>	<b>\$175,000</b>

Additions in the IT category include additional support for customer service IT systems and replacement of desktop computers in the Department in FY 2023.

### Energy & Utilities

The Energy and Utilities category includes the Sewer Fund's costs for electricity, water services, fuel, and other utility and energy expenses. Table 5.9 displays the FY 2021 through FY 2026 projections for the Energy and Utilities category.

Table 5.9 - Energy & Utilities - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	0.4%	0.4%	0.4%	0.4%
Projection	\$22.6	\$22.6	\$22.7	\$22.8	\$22.9	\$23.0

The Energy and Utilities category includes various costs. Each cost component has a different applicable rate. Growth rates for energy are based on growth rates prepared by the U.S. Energy Information Administration<sup>6</sup>; those growth rates showed no projected increases for energy, but some increases for fuel. Due to PUD's historical actual operating trends being lower than budgeted amounts and the continued uncertainty surrounding the impacts of the COVID-19 pandemic on operations, FY 2022 baseline amounts are carried forward from FY 2021.

### Critical Strategic Expenditures

Table 5.10 - Critical Strategic Expenditures - Energy & Utilities					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Contractual Energy Use	\$3,400,000	\$3,420,000	\$3,420,000	\$3,420,000	\$3,420,000
Pure Water Support	\$0	\$0	\$0	\$416,434	\$4,164,343
<b>Total Expense</b>	<b>\$3,400,000</b>	<b>\$3,420,000</b>	<b>\$3,420,000</b>	<b>\$3,836,434</b>	<b>\$7,584,343</b>

Table 5.10 above identifies increased energy and utility expenditures for the Wastewater System. Contractual Energy Use covers increased expenditures for methane energy generation at the Metropolitan Biosolids Center and for a fuel cell energy project at the South Bah facility. Expenditures for Pure Water are necessary as new and expanding Pure Water facilities come online and include

<sup>6</sup> U.S. Energy Information Administration, <https://www.eia.gov/outlooks/aeo/>

expenditures for the Morena pump station, North City Water Reclamation Plant, and the Metro Biosolids Center facilities.

## Other Expenditures

Expenses included in this category are transfers out 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 Improvement Program section of this report. Table 5.11 displays the FY 2021 through FY 2026 projections for the Other Expenditures category.

Table 5.11 - Other Expenditures - Baseline Expenditure Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.0%	0.0%	0.0%	0.0%	0.0%
Projection <sup>(1)</sup>	\$5.5	\$5.5	\$5.5	\$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 2021 Projection is based on the FY 2021 Adopted Budget which is adjusted to account for historical trends.

## Critical Strategic Expenditures

Table 5.12 - Critical Strategic Expenditures - Other Expenditures					
Request	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
AMI Support	\$23,400	\$23,400	\$23,400	\$23,400	\$23,400
Laboratory Operations	\$585,000	\$15,000	\$15,000	\$15,000	\$15,000
Pure Water Support	\$40,000	\$0	\$0	\$0	\$0
<b>Total Expense</b>	<b>\$648,400</b>	<b>\$38,400</b>	<b>\$38,400</b>	<b>\$38,400</b>	<b>\$38,400</b>

Table 5.12 above identifies small increases in other expenditures, including additional support for laboratory operations, and smaller amounts for immediate Pure Water Program support and ongoing support for the AMI Program.

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## Reserve 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 2021, the Sewer Revenue Fund is estimating total reserves of approximately \$142.0 million. Table 5.13 below 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 Reserve Fund is funded above targeted levels; it can be used to provide one-time operating revenue to offset or mitigate the need for sudden or dramatic rate increases. The PUD Outlook projects use of the Rate Stabilization Reserve Fund in FY 2021 through FY 2023, and contributions to that Reserve in FY 2024 and FY 2025.

Table 5.13 - Reserve Targets and Estimated Funding Levels (\$ in Millions)						
	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026
Operating Reserve Target (\$)	\$50.4	\$52.7	\$53.7	\$54.2	\$55.1	\$57.4
Operating Reserve Level (\$)	\$50.7	\$52.7	\$53.7	\$54.2	\$55.1	\$57.4
Rate Stabilization Fund Target (\$)	\$18.3	\$18.9	\$19.4	\$20.1	\$20.8	\$21.3
Rate Stabilization Fund Level (\$)	\$81.3	\$63.8	\$41.3	\$46.3	\$53.8	\$53.8
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 Improvement 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:

- implementation of the Pure Water Program;
- improving infrastructure to reduce emergency spills and repairs;
- improving process technology;
- expansion of 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, and 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 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 Fiscal Years 2022 through 2026.

Table 6.1 - Summary of Projected CIP Projects						
Fiscal Year 2022-2026						
(\$ in Millions)						
Wastewater CIP Projects	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total
Pure Water Program	\$157.4	\$189.0	\$109.2	\$43.4	\$10.1	\$509.1
Trunk Sewers	\$56.9	\$24.7	\$21.2	\$27.1	\$35.6	\$165.6
Muni Pump Station	\$1.3	\$0.9	\$1.6	\$6.4	\$16.8	\$26.9
Sewer Pipelines	\$70.0	\$72.7	\$88.8	\$63.3	\$58.3	\$353.1
Miscellaneous Projects	\$6.1	\$8.5	\$27.9	\$34.0	\$7.9	\$84.5
SDG&E Relocation Advance	\$28.4	\$0.0	\$0.0	\$0.0	\$0.0	\$28.4
Sewer Treatment Plants	\$29.4	\$34.2	\$19.7	\$10.9	\$2.4	\$96.6
Large Sewer Pump Station	\$5.2	\$6.8	\$7.1	\$1.1	\$1.8	\$21.9
Recycled Water	\$0.4	\$0.4	\$0.4	\$0.4	\$0.2	\$1.6
<b>Total</b>	<b>\$355.1</b>	<b>\$337.1</b>	<b>\$275.9</b>	<b>\$186.5</b>	<b>\$133.2</b>	<b>\$1,287.8</b>

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## Capital Improvement Financing Plan

Table 6.2 describes the projected sources of funds to finance the Wastewater System CIP for Fiscal Years 2022 through 2026. PUD anticipates incurring approximately \$447.2 million of additional debt obligations for the Baseline Wastewater System CIP and \$564.3 million of additional obligations for the Pure Water CIP over the PUD Outlook period. Additional amounts will be funded with grants, capacity fee revenue, and cash.

Table 6.2 - Sources of Funds for the Wastewater Capital Improvement Program (\$ in Millions)					
Source of Funds	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL
<b>Pure Water CIP</b>					
SRF Loans	\$172.5	\$122.9	\$57.4	\$16.2	\$564.3
Grants	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Capacity Fees / Cash	\$16.4	(\$13.6)	(\$14.0)	(\$6.1)	(\$55.2)
<b>Total</b>	<b>\$189.0</b>	<b>\$109.2</b>	<b>\$43.4</b>	<b>\$10.1</b>	<b>\$509.1</b>
<b>Baseline CIP</b>					
Commercial Paper/Revenue Bonds	\$80.0	\$60.0	\$0.0	\$0.0	\$290.0
SRF Loans	\$7.5	\$38.0	\$53.5	\$51.2	\$157.2
Grants	\$0.0	\$0.0	\$0.0	\$0.0	\$0.3
Capacity Fees / Cash	\$60.7	\$68.7	\$89.6	\$71.9	\$331.1
<b>Total</b>	<b>\$148.2</b>	<b>\$166.7</b>	<b>\$143.1</b>	<b>\$123.1</b>	<b>\$778.7</b>
<b>Total Funding</b>	<b>\$337.1</b>	<b>\$275.9</b>	<b>\$186.5</b>	<b>\$133.2</b>	<b>\$1,287.8</b>

The City anticipates financing all (approximately \$581 million) of the Wastewater System's portion of Pure Water Phase 1 through low-interest State Revolving Fund (SRF) loans which will provide funding in Fiscal Years 2022 through 2026. The SRF proceeds will reimburse not only projected expenditures for Fiscal Years 2022 through 2026, but also expenditures from prior years. Because SRF loans are provided on a reimbursable basis, cash is initially used to fund construction amounts before reimbursements are received; this is reflected in the table above by negative cash values for Pure Water financing in FY 2022, and FY 2024 through FY 2026.

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 \$157.2 million of the Wastewater System Baseline CIP with SRF loans in Fiscal Years 2022 through 2026. This includes approximately \$9.0 million from existing SRF loans which the City has already secured, and \$148.2 million from loans for which the City has applied or is in the process of applying. Additionally, the City anticipates financing approximately \$290.0 million of the Wastewater System Baseline CIP through revenue bonds over the same period. It is expected that a total of \$ 331.4 million will come from grants, 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. The projected DSCRs over the PUD Outlook period are displayed in Table 6.3 below.

Table 6.3 - Projected Debt Service Coverage Ratios <sup>1</sup> (\$ in Millions)					
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net System Revenues	\$161.7	\$174.7	\$158.2	\$167.1	\$172.4
Debt Service	\$109.2	\$118.0	\$103.3	\$105.4	\$110.9
<b>Debt Service Coverage Ratio</b>	<b>1.48 x</b>	<b>1.48 x</b>	<b>1.53 x</b>	<b>1.59 x</b>	<b>1.55 x</b>

<sup>1</sup> Note - DSCRs shown here are based budgetary projections; DSCRs reported in CAFR statements may differ due to variances in non-budget transactions.

## Wastewater System Revenues

The following section provides details of revenue projections for the Sewer Revenue Funds. The primary revenue sources of the Wastewater System are generated from sewer 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 it impacts 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 improvement of the Metro Sub-System and the Muni Sub-System.

The City establishes fees based upon the costs incurred by the City to collect, treat and discharge wastewater and pay for required capital improvements.

Sewer service charges are based on the characteristics of the wastewater discharged by each sewer user. All sewer 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.

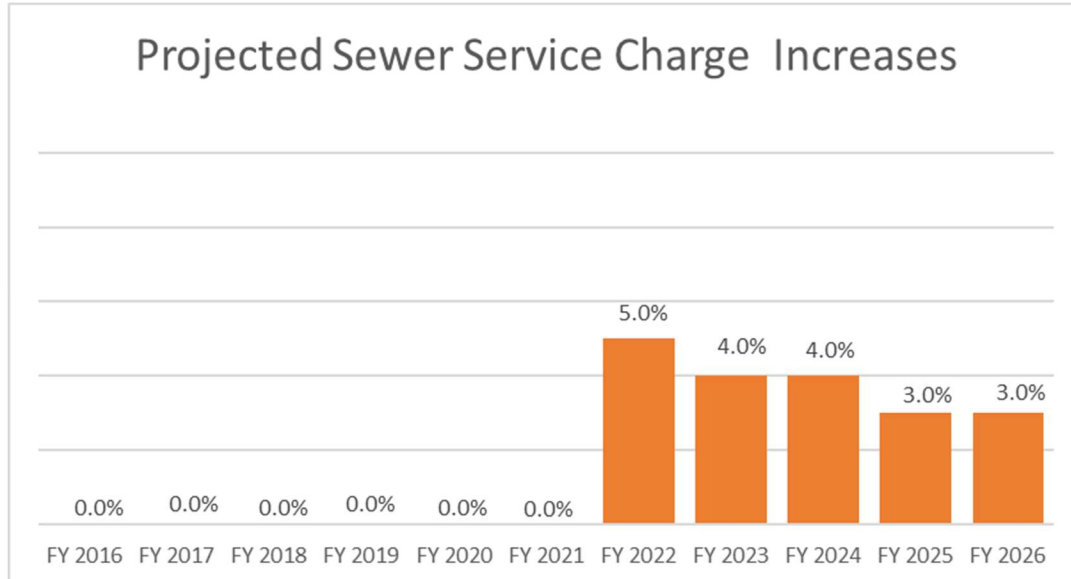
Sewer service charge revenues are comprised of two parts: a base fee and a sewer service charge (flow charge). The base fee is a fixed monthly service fee charged to all customers to recover certain

fixed and indirect costs. The flow charge is based on the amount (flow) and strength of the wastewater discharged to the sewer 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, while Commercial/Industrial (C/I) customers average a 73% return to sewer and vary 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 Department last presented a wastewater rate case in 2006 (the 2006 Rate Case). The 2006 Rate Case covered four years and was based on comprehensive forecasted annual operations and maintenance costs and projected capital expenditures. The 2006 Rate Case covered Fiscal Years 2007 through 2010 and was approved by the City Council in February 2007. The rate case included rate increases of 8.75% on May 1, 2007, 8.75% on May 1, 2008, 7.00% on May 1, 2009, and 7.00% May 1, 2010. Sewer rates have remained unchanged since then.

Based on projected expenditure and revenue needs, this PUD includes projected sewer service charge revenue adjustments of 5.0% in FY 2022, 4.0% in FYs 2023 and 2024, and 3.0% in FYs 2025 and 2026, as shown in Figure 6.1 below. Actual rate increases and the specific impact on each customer class will be subject to finalization of the cost of service study that is currently underway and City Council consideration.

**Figure 7.1 – Sewer Service Charge Rate Increases.**



**Forecast.** Table 7.2 shows the forecast for FY 2021 through FY 2026 for revenue from sewer service charges. This revenue source represents approximately 73% of the Sewer Revenue Funds overall revenue receipts. The forecast assumes a 0.25% increase in accounts and reflects projected rate increases beginning in FY 2022 through FY 2025.



Table 7.2 - Sewer Service Charge Revenue Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	4.40%	4.26%	4.26%	3.26%	3.26%
Projection	\$290.1	\$302.9	\$315.8	\$329.2	\$339.9	\$351.0

**Economic Trends.** Overall demand for sewer services closely tracks population growth. 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.

**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 \$2.9 to \$3.3 million for each percent added or subtracted from projected rate increases depending on the year in which sewer service charges are adjusted. Adjustments to projected rates in earlier years would compound this amount.

## Wastewater Capacity Charges

**Background.** Capacity charges are development fees imposed on 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. Capacity charge proceeds are used to construct, improve and expand the Wastewater System to accommodate the additional business 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.

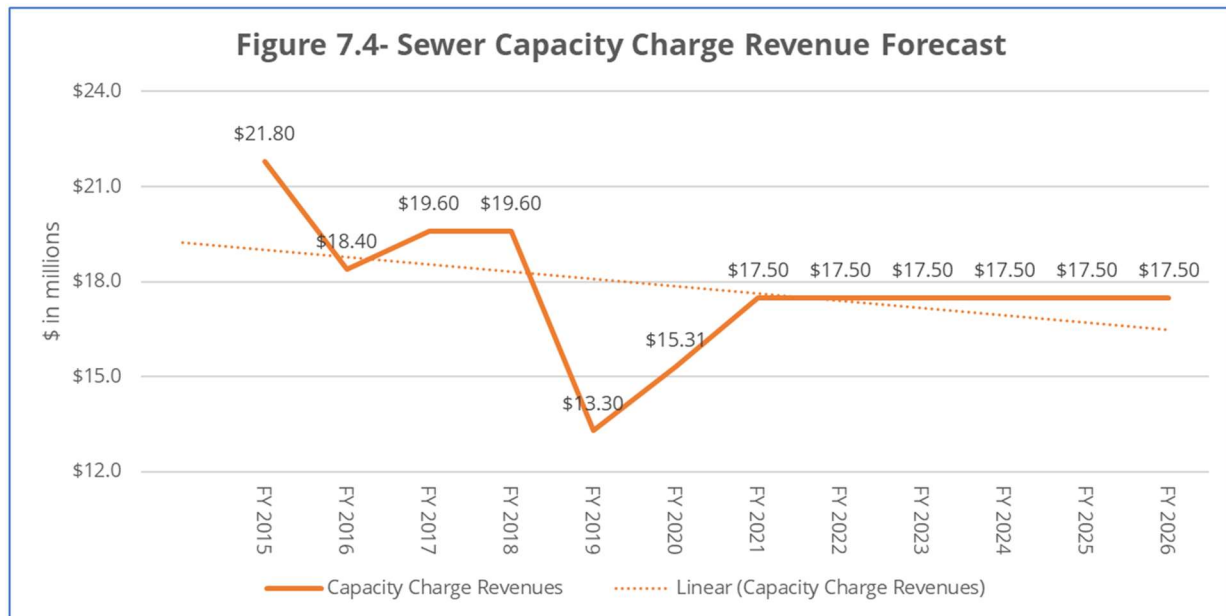
In February 2007, the City Council and Mayor approved raising the capacity charge to \$4,124 per Equivalent Dwelling Unit ("EDU"), which was estimated to provide for full cost recovery for Wastewater System expansion projects.

**Forecast.** Table 7.3 presents revenue forecast for FY 2021 through FY 2026 for revenue from sewer capacity charges. This revenue source represents approximately three percent of the Wastewater System's overall revenue receipts.

Table 7.3 - Capacity Charge Revenue Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.00%	0.00%	0.00%	0.00%	0.00%
Projection	\$17.5	\$17.5	\$17.5	\$17.5	\$17.5	\$17.5

Projected revenues for wastewater capacity charges use conservative growth estimates based on trends from FY 2016 through FY 2020, and projected construction permitting activity as shown in Figure 6.4. Average wastewater capacity fee revenue between FY 2015 and FY 2020 was approximately

\$18.0 million. Capacity fee projections of \$17.5 million over the PUD Outlook period are based on this average and take recent trends into account, as shown in Figure 7.4.



**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 City of San Diego's population has grown by approximately 7% between the 2000 Census and the 2010 Census for an aggregate increase of 84,000. As population continues to increase in the region, the demand for new single and multi-family housing is also expected to increase in order to meet 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 revenues received from Participating Agencies (PAs) for use of the City's wastewater treatment system. As discussed earlier, the 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 from the PAs. Revenues from the PAs total \$80 million per year over the PUD Outlook period and represent approximately 79% of revenues in the Other Revenue category. 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 2021 through FY 2025 projections for the Other Revenue category.

Table 7.5 - Other Revenue Projections (\$ in Millions)						
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Growth Rate	N/A	0.00%	0.00%	0.00%	0.00%	0.00%
Projection	\$98.7	\$100.1	\$99.9	\$99.8	\$105.1	\$105.3

No growth rate is applied to the Other Revenue category for the PUD Outlook period. However, revenues are projected to increase from FY 2021 through FY 2026 based on historical analysis, projected interest income, and other known and anticipated adjustments. Also, the increase in FY 2025 reflects new revenue associated with the sale of Recycled Water from the North City Water Reclamation Plant.