



## THE CITY OF SAN DIEGO

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### OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT

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# IBA Review of the Public Utilities Department FY 2024-2028 Five-Year Financial Outlook

## OVERVIEW

The [\*Public Utilities Department Fiscal Year 2024-2028 Five-Year Financial Outlook\*](#) (PUD Outlook) was released on November 10, 2022, concurrent with the release of the General Fund Fiscal Year 2024-2028 Five-Year Financial Outlook (General Fund Outlook). Similar to the General Fund, [\*Council Policy 000-02: Budget Policies\*](#) states that the PUD Outlook is intended “to guide long-range planning and serve as the framework for the development of the next year’s Proposed Budget for the Water and Sewer Enterprise Funds.” While the General Fund Outlook has been an annual report since 2006, this is the fourth PUD Outlook and the third to be presented at a meeting of the full City Council.<sup>1</sup> In addition to projecting what may be included in future proposed budgets, the PUD Outlook also serves as the basis of needed expenditure projections and revenue needs for the next set of proposed water rates detailed in a Cost of Service Study, which was also released concurrently with the PUD Outlook. This Water Cost of Service Study covers the next two years (FY 2024 and FY 2025) and will be discussed further by our Office in a subsequent report.

As discussed in our review of the General Fund Outlook ([\*IBA Report 21-32\*](#)), the Office of the Independent Budget Analyst (IBA) is charged with providing the City Council with review and analysis of all major budget reports including the financial outlooks, quarterly budget monitoring reports, Mayor’s Proposed Budget, Mayor’s May Revision to the Proposed Budget, and Capital Improvements Program (CIP) budget reports. While the City Council cannot change this PUD Outlook, City Council is the ultimate budget authority and can make changes to the Proposed Budget for PUD during its review of the FY 2024 Proposed Budget following its release in April 2023. City Council will also review any proposed water and sewer rate cases, ultimately approving changes following the Proposition 218 process. In this report our Office provides additional

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<sup>1</sup> The first PUD Outlook was released roughly three years ago, in January 2019, and was only presented to the Budget and Government Efficiency Committee.

information, context, analysis, and issues for Council to consider as it reviews the PUD Outlook, the proposed FY 2024 Budget, and upcoming proposed water rate adjustments.

## FISCAL/POLICY DISUSSION

The Public Utilities Department (PUD) operates two major systems, the City’s Water system and the Wastewater (sewer) system, and the PUD Outlook has discrete sections for these two major functions which are accounted for and budgeted in separate funds. Water rate revenues must be used to support the activities of providing water, while sewer rate revenues are used to support the operations of the collection, treatment and disposal of wastewater.<sup>2</sup> The PUD Outlook projects expenditures of approximately \$2.2 billion in FY 2024 for water and wastewater operations, baseline and Pure Water CIP, debt service, and reserve requirements of both systems as summarized in the table below. Expenditure projections peak in FY 2024 due to the Pure Water Phase 1 CIP which is under construction and anticipated to be delivering 30 million gallons per day of water in FY 2027.

<b>Summary of Public Utilities FY 2024-2028 Five-Year Financial Outlook Expenditures (in millions)</b>						
	<b>FY 2023 Adopted</b>	<b>FY 2024 Projection</b>	<b>FY 2025 Projection</b>	<b>FY 2026 Projection</b>	<b>FY 2027 Projection</b>	<b>FY 2028 Projection</b>
Water Fund	\$ 1,109.8	\$ 1,148.3	\$ 1,059.5	\$ 1,055.4	\$ 1,107.8	\$ 1,079.5
Wastewater Funds	613.2	1,085.0	1,046.7	553.8	774.2	420.8
<b>COMBINED</b>	<b>\$ 1,723.0</b>	<b>\$ 2,233.3</b>	<b>\$ 2,106.2</b>	<b>\$ 1,609.2</b>	<b>\$ 1,882.0</b>	<b>\$ 1,500.3</b>

In contrast to the General Fund Outlook, PUD’s Outlook does not reflect a gap (deficit or surplus) between revenues and expenditures. While the City’s General Fund is constrained by available tax revenues to support expenditures, the Water and Wastewater systems are supported primarily by rates paid by customers using the systems. The PUD Outlook focuses first on projecting the costs of maintaining and operating the water and sewer systems, and then estimates any revenue increases needed to fund those expenditures. The Outlook serves as the basis and first step for developing a cost of service (COS) study to determine expenditure projections and revenue needs which are the basis for the next set of water rates. The PUD Outlook identifies the overall system needs, whereas the COS analysis further allocates the cost of those needs to establish equitable and proportionate rate recovery by different user classes.<sup>3</sup>

Overall, there are no major changes or surprises in the PUD Outlook, and Pure Water is a continued driver of financial outcomes. For both the Water and Wastewater Systems, baseline operating expenditures are projected to grow moderately over the five-year period. As Phase 1 of the Pure Water Program comes online, increases are expected in (1) critical operating expenditures for operations and maintenance of the facilities and (2) debt service expenditures for construction costs (of Pure Water Phase 1). CIP expenditures are expected to peak in FY 2024 and then

<sup>2</sup> Note that the Wastewater system is broken down into separate funds for the (1) collection of wastewater from municipal customers in the City of San Diego (the Muni Fund) and (2) treatment and disposal of wastewater which is provided for City of San Diego customers as well as other agencies in the region that utilize our wastewater treatment system (the Metro Fund). For the purposes of the PUD Outlook, these two sewer funds have been combined.

<sup>3</sup> User classes for the Water system include Single-Family Domestic Customers, Multi-Family/Other Domestic Customers, Commercial and Industrial Customers, Temporary Construction, and Irrigation Customers.

gradually decrease through FY 2028, as Phase 1 construction of the Pure Water Program nears completion and efforts shift to design and planning for Phase 2. Additionally, baseline CIP consisting of non-Pure Water capital investments for repair, replacement, upgrades, and system expansion is expected to remain relatively level throughout the forecast period, with a minor decrease in the final years of the PUD Outlook.

### **Rate Increases**

Water and wastewater rates are determined through a process prescribed by state law under Proposition 218, which requires a COS analysis, the opportunity for a majority protest by impacted parcels/customers, and approval of the legislative body (the City Council) of any rate adjustments at a public hearing.<sup>4</sup> COS studies provide detail on projected expenditures, determine the total revenue required to cover those expenditures, and allocate those revenue needs based on the system functions and the demands each customer class places on the water and wastewater systems. It was initially anticipated that PUD would conduct a COS study for both water and wastewater in CY 2021, but the water COS was delayed due to ongoing litigation.<sup>5</sup>

As summarized in the table below, the PUD Outlook shows the need for and expectation of rate increases to support the water and wastewater systems over the next five years. These percentages are at the aggregate, summary level for each system and do not reflect how costs will be allocated to different rate components or customer groups. That level of detail is or will be included in the rate design portion of the appropriate COS study. It is important to note that the projected rates could reflect higher percentage increases for some customer classes and lower increases – or even decreases – for others.

<b>Summary of PUD Outlook Water and Sewer Rate Increases FY 2024-2028</b>						
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Water <sup>a</sup>	2.5%	9.3%	7.6%	9.8%	8.9%	8.2%
Sewer <sup>b</sup>	4.0%	4.0%	3.0%	5.0%	5.0%	4.0%

<sup>a</sup> FY 2023 rate increase represents final pass through rate previously approved. FY 2024 and FY 2025 rates are included in current cost of service study

<sup>b</sup> FY 2023 through FY 2025 rates represent up-to rate increases already approved.

<sup>4</sup> Among other requirements, Proposition 218 requires a majority protest vote and public hearing before approval of proposed rates (Article XIII D, Section 6), and stipulates that rates charged to customers “must not exceed the proportional cost of the service attributable to the parcel or customer.” (Article XIII D, Section 6, Subdivision (b))

<sup>5</sup> The City’s Water System is currently involved in litigation in *Patz v. City of San Diego* regarding the use of a tiered water rate structure for single-family residential customers. The lawsuit alleges the City’s rates for water service do not reflect the actual cost to provide the water service to each parcel and are in violation of Proposition 218. The City contends that its water rates are strictly based on cost of service principles and compliant with Proposition 218. On September 13, 2021, the court ruled in favor of the plaintiffs on the Proposition 218 claim and on March 25, 2022, the petitioner class was awarded \$79.5 million in refunds based on estimated overcharges, as well as other damages. The City disagrees with the ruling and filed an appeal on April 1, 2022. Single family residences are the largest customer class of the Water System and a ruling against the City could have a wide-ranging impact of the rates charged to that customer group moving forward. The PUD Outlook has assumed the liability through the end of FY 2023, when it is expected to know the results of the appeal during FY 2024.

It's notable that over the Outlook period (FY 2024-2028), total rate increases are 52.2% for water and 22.8% for sewer.

**Wastewater** – For the Wastewater System, sewer rates and the corresponding revenues from a recent COS study approved in September 2021 are reflected in the Outlook for FY 2023 through FY 2025. As shown in the table above, the Outlook includes maximum wastewater rate increases ranging from 3.0% to 5.0% through January 1, 2025. Our Office's independent consultant, Stantec, completed an in-depth review of the wastewater COS study and provided recommendations, as discussed in the "Oversight and Review" section of this report. Note that Industrial Wastewater Control Permit (IWCP) fee changes were approved as part of the sewer rate increases by City Council in September 2021 and are being phased in to get full cost recovery.<sup>6</sup>

**Water** – As noted, the water COS study initially planned for CY 2021 was delayed to this year due to ongoing litigation. As shown in the table above, the PUD Outlook includes projected water rate revenue adjustments needed to support projected expenditures, fund reserves appropriately, and achieve target financial metrics, ranging from 7.6% to 9.8% over the five-year period. The current proposed water COS study has the FY 2024 rate increase beginning on November 1, 2022, and the FY 2025 increase on January 1, 2025. Other projected rate increases included in the Outlook that go beyond the COS study also begin on January 1 in subsequent fiscal years. Actual rate increases and the individual customer class impact will be subject to revision and finalization during consideration of the COS study that is currently pending City Council consideration and input. For reference, the most recent water COS study and rate case was approved by City Council in November 2015 (which authorized aggregate rate increases for each of those five years ranging from 5.0% to 9.8% for 2016-2020) and there were no water rate increases in CY 2020-21. We raise two key points regarding water rates:

- The current PUD Outlook assumes substantial increases for water rates, and in particular for rates required to cover City operations and maintenance costs. As will be discussed further below, the increases are tied more to changes in water demand assumptions and delays in water rate increases than to additional expenditure needs.
- In September 2022, City Council approved a passthrough water rate increase of up to 3.0%, which will be implemented as 2.5% based on updated information (shown in the previous table), effective January 1, 2022 for increasing costs of water purchased from the San Diego County Water Authority (CWA). For the years of the Outlook (FY 2024-2028), roughly one-third of the proposed water rate increases are necessary to pay for increased CWA water rates. Uncertainties related to CWA rate increases are discussed in more detail in the "Water Purchases" section of this report.

### **Oversight and Review of the Financial Plan and COS Studies**

To provide additional expertise and to assist the City Council in understanding and evaluating PUD's COS studies and proposed rate increases for the water and wastewater systems, our Office

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<sup>6</sup> The IWCP issues discharge permits, performs inspections, conducts wastewater monitoring, and enforces sewer discharge standards for businesses and industries based on the U.S. Environmental Protection Agency's restrictions on pollutants that can be discharged into the sewer system. Council approval of fee changes was important to address cost recovery issues for industrial users of the wastewater system, as identified in a July 2020 [City Auditor report](#).

hired Stantec, a consulting firm with expertise in rate development and evaluation, to conduct an in-depth, independent review.<sup>7</sup>

**Cost of Service (COS) Studies**

**Wastewater** – Stantec issued its [Independent Review of the Wastewater Financial Plan, Cost of Service, and Rate Study](#) in May 2021. This review included analysis of historical and forecasted financial information, PUD’s rate model and proposed COS study, and supplemental data and information used to develop key inputs and assumptions. Stantec concluded the COS study developed by PUD and their consultant was thoughtful and consistent with industry practices. The report included several findings and recommendations, including some with the potential to impact rates, and identified important areas that should be addressed in the next wastewater COS study. As noted previously, sewer rate increases were approved by the City Council in September 2021.

**Water** – Stantec and our Office are reviewing the current PUD Outlook and identifying areas for further research and evaluation in preparation for our review of the recently released water COS study for FY 2024 and FY 2025. This review includes assumptions, trends and policies used by PUD and their consultant Raftelis. The planned approach for the review and key areas of evaluations are discussed in the following section.

**Key Areas for Evaluating the PUD Outlook, Financial Plan and Water COS**

The first step in reviewing the City’s COS study is to evaluate the Outlook and long-term financial plan with a specific focus on the two-year rate-setting period of FY 2024 through FY 2025 which forms the revenue requirements used to calculate rates. Similar to the review of the wastewater COS study, this review will include the following tasks:

1. Test model inputs and calculations for accuracy and completeness,
2. Review inputs and assumptions for reasonableness, and
3. Identify and evaluate key financial policies, targets, and decisions within the two-year forecast that affect the timing and amount of annual revenue requirements.

Any water utility financial plan includes a common set of data, inputs, assumptions, and policy decisions. The table below provides the primary elements of the financial plan and key areas that will be evaluated as part of Stantec’s independent review. The remaining sections of this report follow the framework in the table, and we include assessments of several of the key areas for evaluation.

Primary Elements of the Outlook	Key Data, Inputs, and Assumptions for Evaluation
Revenues	<ul style="list-style-type: none"> <li>– Water demand (and account growth)</li> <li>– Water sales</li> <li>– Non-rate revenues</li> </ul>

<sup>7</sup> Our office hired Stantec based on the Utility Consumers’ Action Network (UCAN) recommendation to the Environment Committee in October 2016 to hire an outside consultant to evaluate future water rate proposals. Our February 2017 report ([IBA Report 17-06: Review of UCAN Proposal for an Independent Water Rate Consultant](#)) supported UCAN’s recommendation that the IBA be authorized to engage a consultant on an as-needed basis to review the next cost of service study. The City Council subsequently adopted [Resolution R-311180](#) in June 2017 directing the IBA “to include the engagement of an as-needed consultant to review the water and wastewater cost of service studies and rate designs.”

<p><b>Operations and Maintenance Expenditures</b></p>	<ul style="list-style-type: none"> <li>- Water purchases <ul style="list-style-type: none"> <li>▪ CWA rates</li> <li>▪ Conservation</li> </ul> </li> <li>- Baseline operations budget</li> <li>- Staffing levels, augmentation, and salary adjustments</li> <li>- Critical operating expenditures for upcoming new programs</li> </ul>
<p><b>Capital Improvement Program (CIP)</b></p>	<ul style="list-style-type: none"> <li>- Pure Water Phase 1</li> <li>- Baseline CIP (Ongoing investments in infrastructure)</li> <li>- CIP funding and use of debt</li> <li>- Historical CIP execution</li> <li>- Cost escalation</li> </ul>
<p><b>Financial Policies and Rate Stabilization</b></p>	<ul style="list-style-type: none"> <li>- Debt service coverage ratio (DSCR)</li> <li>- Reserve targets</li> <li>- Financial key performance indicators (KPIs)</li> <li>- Affordability</li> </ul>

**Revenues**

**Water Demand Assumptions**

Water demand assumptions are an important component of the PUD Outlook because they impact both projected rate revenues and water purchase costs. The projected water demand is influenced by several factors, including rainfall, population growth and regional demands, and the completion schedule for the Pure Water Program Phase 1. The Outlook states PUD delivered approximately 176,950 acre-feet (AF) of potable water per year for FY 2017-2021, which is in line with the previous five-year average of 175,000 AF of potable water per year for FY 2016–2020. Previous five-year averages included 180,000 AF from FY 2015-2019, and 200,000 AF from FY 2014-2018.

One of the most notable differences in this Outlook, however, is the decrease in forecasted water sales due to ongoing conservation efforts. While the City’s [Urban Water Management Plan](#) (updated 2021) estimated a 7.6% reduction in usage due to conservation by 2045, it also forecasted single-family residential water use to increase by 0.62% over the period of 2025 to 2045 and multi-family residential water use to increase by 34% over the projection period of 2025 to 2045. This Outlook notes those changes, but further forecasts a 7% reduction in water usage from prior projections based on the reduction of water sales seen in FY 2022. The Department attributes this reduction to the conservation messaging related to droughts in both northern California as well as the Colorado River Basin, and further expects this level of conservation to continue into the future. The table below provides a comparison of the water demand forecasts utilized in the previous Outlook as compared to the current one. Recognizing the fact that the revenue increases calculated during the water COS study establish maximum increases, it is prudent to maintain conservatism in the forecast of water sales. In the event water sales rebound and are greater than projected, the possibility exists that future increases can be less than the established maximum, holding all else constant.

<b>Water Demand Assumptions (AF)</b>							
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
FY 2023-2027 Outlook	167,584	167,977	168,370	168,764	169,160	169,556	169,953
FY 2024-2028 Outlook	161,588	156,305	156,305	156,305	156,012	156,376	156,740
<b>Difference</b>	<b>(5,997)</b>	<b>(11,672)</b>	<b>(12,065)</b>	<b>(12,459)</b>	<b>(13,147)</b>	<b>(13,180)</b>	<b>(13,213)</b>

This trend of declining sales impacts the current financial analysis within the Outlook. While water conservation efforts reduce PUD’s need to purchase water from outside sources, it is important to note that a significant portion of operating expenditures for the water system are fixed costs, which generally do not change regardless of the volume of water usage or conservation. For example, personnel, information technology, and administrative costs, in addition to debt service expenses, do not vary based on the level of water usage by customers. This presents additional challenges when a significant portion of water rate revenues are collected based on water usage, and decreases in usage have disproportionately large impacts on revenues relative to expenditures.

For an illustrative example, the table below provides a comparison of the expenditures, rate revenue projections, and projected rate increases between the previous Outlook and the current Outlook. While expenditure projections remain relatively constant, the current Outlook’s projected water sales revenue is lower in each comparable year despite rate increases that are significantly higher than last year’s Outlook. While a portion of rate increase assumption for FY 2024 is due to the difference in the projected FY 2023 rate increase compared to the actual passthrough increase, the largest change between the two Outlooks impacting rates and water sales revenue is the lower water demand assumptions presented above.

<b>Water Expenditures, Revenues, and Rates</b>							
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>FY 2023-2027 Outlook</b>							
Expenditures	615.8	659.4	695.1	737.1	761.2	799.6	
Water Sales Rate Revenue	602.3	628.1	672.9	720.8	770.5	817.4	
Rate Increase	3.0%	6.9%	6.3%	6.4%	6.4%	6.9%	
<b>FY 2024-2028 Outlook</b>							
Expenditures	627.4	610.1	674.5	730.0	786.2	807.0	793.7
Water Sales Rate Revenue	558.5	586.1	632.8	679.6	736.5	806.8	872.0
Rate Increase	3.0%	2.5%	9.3%	7.6%	9.8%	8.9%	8.2%

Given the combined impacts to rate revenues and water purchase costs, water demand projections are an important component of the financial plan and will be evaluated by Stantec as part of its review of the water COS study to ensure we fully understand the impact of changes on the financial outlook.

**Operations and Maintenance Expenditures**

**Water Purchase Assumptions**

The City provides water primarily from two sources: (1) local supplies from rainfall and runoff that flows into reservoirs, which provide on average 10 - 15% of water needs, and (2) water purchased from its wholesaler, the CWA, which provides 85 - 90% of water needs. Because the

City currently imports a significant percentage of its water supply, representing \$263.7 million or 44% of the Water Utility Fund expenditures in FY 2023, water purchase assumptions are a critical component of the PUD Outlook.

The PUD Outlook projects expenditures for imported water purchases to increase from \$290.0 million to \$316.1 million over the five-year Outlook period. The PUD Outlook assumes the City’s Pure Water Program Phase 1 will be complete and providing its full capacity of potable water for use by FY 2027, which is a reasonable and conservative estimate. As shown in the table below, water purchase expenses in FY 2027 and FY 2028 are projected to decline due to the shift toward local water supply produced from Pure Water Phase 1 to meet a portion of annual water demands.

<b>Water Purchases Estimated in PUD Outlook</b>							
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Acre Feet to Purchase	166,792	143,226	152,502	152,340	151,320	130,017	119,216
Estimated Cost <i>(in Millions)</i>	\$ 278.5	\$ 263.7	\$ 290.0	\$ 309.2	\$ 329.9	\$ 317.1	\$ 316.1

The decline in water purchase costs in FY 2027 is offset by forecasted increases in wholesale rates charged by CWA for the remaining water purchases, as recently forecasted in the [CWA Long Range Financing Plan](#). The Outlook projects the cost per acre foot (AF) to increase 44% during the PUD Outlook period, based on current guidance provided by CWA and under CWA’s current rate structure.

San Diego County Water Authority (CWA) Rates

The largest single expenditure for PUD in the Outlook – and the largest non-personnel expense for the City – is the purchase of water from CWA. The City and its regional partners’ current reliance on imported water leaves the City’s primary source of supply susceptible to rate increases beyond the control of the City. The City of San Diego is also the largest user of CWA water, accounting for about 40% of system usage. Bringing Pure Water Phase 1 into production in FY 2027 will have a significant impact on demand for CWA water.

CWA’s Long-Range Financing Plan provides an “Annual All-in” range with high and low rate and charge increases forecasted from 2.6%-11.3%, but actual rate increases will be implemented based on multiple rate and charge categories. Applicable rate and charge categories for the City include four fixed categories (Storage, Customer Service, Supply Reliability, and Infrastructure Access) and a volumetric rate based on the actual volume of water purchased. For the purpose of the Outlook, PUD used the mid-point of the high-low scenario to estimate CWA rate increases. As shown in the table below, anywhere from one-third to almost half of the projected water rate increases are needed to pay for increased CWA water rates. Increases in revenue necessary to support PUD water system operations range from 4.3% to 6.6% in each year of the Outlook period.

<b>Projected Water Rate Increases by CWA Pass-through Costs and Water System Costs</b>						
	<b>1/1/2023</b>	<b>11/1/2023</b>	<b>1/1/2025</b>	<b>1/1/2026</b>	<b>1/1/2027</b>	<b>1/1/2028</b>
CWA Pass-through Cost	2.5%	2.7%	3.3%	3.5%	2.9%	2.2%
Water System Costs	0.0%	6.6%	4.3%	6.3%	6.0%	6.0%
Total Rate Increase	2.5%	9.3%	7.6%	9.8%	8.9%	8.2%



CWA is currently evaluating their rate structure, and the PUD Outlook does not make any assumptions on the outcome of this effort. Depending on different rate increases by category or other structural changes, the result may have a significant impact on the City. For instance, if fixed charges are increased to recover a greater share of revenue from fixed sources, the City could be impacted substantially more than if volumetric rates are increased. This type of structural change would reduce the cost savings associated with shifting a portion of the City's water supply from CWA to Pure Water. Given the potential change in water demand from the City and other regional customers, the expectation is that CWA may work to increase the amount of fixed charges moving forward to ensure its own revenue stability.

There are also proposed projects on the horizon that may further impact costs from the CWA. The CWA has been studying the feasibility of building a Regional Conveyance System (RCS) to the Colorado River. This project would have a considerable capital cost, and as the largest member agency, City of San Diego ratepayers are significantly impacted by decisions made by CWA.<sup>8</sup> The RCS project continues to be controversial, and concerns and opposition have been raised by City representatives, other member agencies, environmental groups, and others. **The City's primary concern is the impact to ratepayers over the next two to four decades given that the costs of the proposed RCS project are not affordable in combination with the City's Pure Water Program.**

Although the decision whether to move forward with RCS and its consequences may occur outside of the PUD Outlook period, the opportunity to influence that decision is now and in the next few years. Staff at CWA are still currently working on Phase B planning for the RCS, which when presented in May 2021 to the CWA Board of Directors was projected to be complete by June 2022. However, in July 2022 staff at CWA noted that they were still working on the project, and that a presentation on the work would be forthcoming. The City has 10 members on the CWA Board of Directors whose roles are to represent the City's interests. **It will be important that City representatives, staff and Board Members continue to engage with CWA to ensure its upcoming COS study is sound, CWA operations are efficient, and decisions impacting the City's ratepayers are affordable.**

### **Baseline O&M Expenditures**

Similar to the General Fund Outlook, the PUD Outlook starts with the FY 2023 Adopted Budget for operations and maintenance (O&M) costs, and applies either a series of inflation factors or other discrete adjustments to develop the projection for O&M expenditures for the Outlook period. The table below provides the inflation factors utilized for various expenditure categories.

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<sup>8</sup> Based on [Black & Veatch's Regional Conveyance System Study Phase A Final Report](#) (August 2020), the City's ratepayers would need to contribute approximately \$500 million in pre-construction soft costs and \$5 billion in construction costs and resulting debt service expenses if the Regional Conveyance System moves forward.

<b>Baseline Inflation Factors</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
Personnel Costs	3.05%	3.05%	3.05%	3.05%	3.05%
Fringe Benefits	4.50%	4.50%	2.50%	2.75%	2.50%
Supplies	6.50%	5.00%	3.00%	3.00%	3.00%
Contracts	3.50%	3.50%	0.00%	2.00%	2.00%
Information Technology	2.00%	2.00%	2.00%	2.00%	2.00%
Energy & Utilities	4.00%	5.00%	0.40%	0.40%	0.40%
<b>Wastewater System</b>					
Personnel Costs	3.05%	3.05%	3.05%	3.05%	3.05%
Fringe Benefits	2.50%	2.50%	2.50%	2.50%	2.50%
Supplies	7.00%	5.00%	3.00%	3.00%	3.00%
Contracts	2.00%	2.00%	2.00%	2.00%	2.00%
Information Technology	2.00%	2.00%	2.00%	2.00%	2.00%
Energy & Utilities	5.50%	3.50%	0.40%	0.40%	0.40%

For personnel expenditures, the PUD Outlook accounts for negotiated pay increases through FY 2023 and assumes that salaries and wages will grow in FY 2024-2028 at the 3.05%, which is consistent with the General Fund Outlook. The PUD Outlook also incorporated fringe benefit assumptions from the General Fund Outlook as well, but also makes adjustments for water and wastewater based on historical trends. However, there are no additional costs for the unwinding of Proposition B incorporated into the Outlook at this time since those costs are still unknown.

One major change in the current Outlook is a sharp increase in the growth estimates for supplies costs. This is in response to increases in the market that have been driven by global supply chain issues, which have made PUD increase the costs of supplies in numerous contracts in order to maintain operations. This trend is likely to continue in the near term before prices stabilize.

Additionally, beyond the Critical Operating Expenditures discussed below, there are some additional costs that have not been included in the Outlook. One major potential future cost, which our Office also discusses in our report of the General Fund Outlook, is the cost to electrify the City fleet, which is a major part of the City’s updated Climate Action Plan (CAP). Costs for this endeavor have not been included as pricing for many of the medium- and heavy-duty vehicles that are utilized by City forces, and particularly PUD, are unknown since there are not many electric vehicles (EV) on the market today that could replace current City vehicles. However, when they do become available, Fleet Services Division staff have indicated that it could require substantially greater investment to convert the City fleet to EVs. Fleet staff are currently working on a City Fleet Vehicle Replacement and Electrification Strategy, which is anticipated to be complete in spring 2023.

**Critical Operating Expenditures for Upcoming New Programs**

The PUD Outlook includes critical operating expenses for upcoming new programs for both Water and Wastewater for the addition of staff and related expenses as well as non-personnel expenses

for supplies, contracts, and energy and utilities needed to support Department needs. These adds include up to 135.50 new FTEs and up to a combined total of \$78.6 million across both the water and wastewater systems, as shown in the table below.

<b>Critical Operating Expenditures Totals</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	39.64	78.05	113.30	119.80	119.80
Expense	\$ 4,497,950	\$ 8,895,394	\$ 12,778,253	\$ 13,723,777	\$ 14,089,539
<b>Nonpersonnel</b>					
Supplies	\$ 1,358,655	\$ 949,280	\$ 11,986,548	\$ 8,257,392	\$ 8,217,392
Contracts	\$ 8,391,118	\$ 18,651,947	\$ 31,153,151	\$ 9,704,090	\$ 8,063,620
Information Technology	\$ 4,063,604	\$ 8,825,710	\$ 3,301,051	\$ 3,444,164	\$ 3,601,372
Energy and Utilities	\$ -	\$ -	\$ 7,241,181	\$ 14,482,361	\$ 14,482,361
Other	\$ 2,223,250	\$ 1,107,600	\$ 1,250,000	\$ 1,750,000	\$ 182,500
<b>Total Non-personnel</b>	<b>\$ 16,036,627</b>	<b>\$ 29,534,537</b>	<b>\$ 54,931,931</b>	<b>\$ 37,638,007</b>	<b>\$ 34,547,245</b>
<b>Total Operating Expenses</b>	<b>\$20,534,577</b>	<b>\$38,429,931</b>	<b>\$67,710,184</b>	<b>\$51,361,784</b>	<b>\$48,636,784</b>
<b>Waste water System</b>					
<b>Personnel</b>					
FTE	11.11	12.70	12.70	12.70	15.70
Expense	\$ 1,375,531	\$ 1,621,662	\$ 1,665,523	\$ 1,710,723	\$ 2,126,315
<b>Nonpersonnel</b>					
Supplies	\$ 547,250	\$ 559,720	\$ 559,720	\$ 559,720	\$ 559,720
Contracts	\$ 4,262,805	\$ 1,823,880	\$ 1,259,630	\$ 809,630	\$ 584,630
Information Technology	\$ 1,932,109	\$ 5,806,283	\$ 3,751,160	\$ 4,002,021	\$ 4,202,122
Energy and Utilities	\$ 1,500,000	\$ 1,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000
Other	\$ 820,350	\$ 1,074,400	\$ 1,128,000	\$ 1,000,000	\$ 1,137,600
<b>Total Non-personnel</b>	<b>\$ 9,062,514</b>	<b>\$ 10,764,283</b>	<b>\$ 9,198,510</b>	<b>\$ 8,871,371</b>	<b>\$ 8,984,072</b>
<b>Total Operating Expenses</b>	<b>\$10,438,045</b>	<b>\$12,385,945</b>	<b>\$10,864,033</b>	<b>\$10,582,094</b>	<b>\$11,110,387</b>
<b>Combined Total</b>	<b>\$ 30,972,622</b>	<b>\$ 50,815,876</b>	<b>\$ 78,574,217</b>	<b>\$ 61,943,878</b>	<b>\$ 59,747,171</b>

Critical operating expenditures for water and wastewater included in the PUD Outlook are the following:

<b>Water</b>	<b>Wastewater</b>
<ul style="list-style-type: none"> <li>• Pure Water Phase 1</li> <li>• Pure Water Phase 2 Program Management</li> <li>• Dam Repair and Replacement</li> <li>• Water System Safety and Resiliency</li> <li>• Regulatory Compliance and Equipment</li> <li>• Data Driven Decisions and Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Pure Water Phase 1</li> <li>• Pure Water Phase 2 Program Management</li> <li>• Wastewater System Safety and Resiliency</li> <li>• Regulatory Compliance and Equipment</li> <li>• Data Driven Decisions and Systems</li> </ul>

#### Pure Water Phase 1 Operating Expenses

Given the Pure Water Phase 1 CIP is currently in construction and anticipated to be producing its full capacity of potable water in FY 2027, the Outlook includes funding needs for the operation and maintenance of new and expanded Pure Water facilities and related staffing needs. The

following table provides a comprehensive view of Pure Water Phase 1 operating expenditures for Water and Wastewater over the Outlook period. Pure Water positions are gradually being ramped up, so personnel are fully trained to operate and maintain the facilities when they come online. A total of 55.00 FTEs (29.00 FTEs from the Water System and 26.00 FTEs from the Wastewater System) are anticipated to be required when Pure Water Phase 1 is fully operational, some of which were already added in the FY 2023 Adopted Budget. The PUD Outlook projections also include non-personnel costs for supplies (chemicals), energy and utilities, contracts, and laboratory equipment related to running the facilities. According to PUD, Pure Water-related projections will be further refined as the City gets closer to bringing the facilities online.

<b>Pure Water Phase 1 Critical Operating Expenditures (Personnel and Nonpersonnel)</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	5.24	15.74	20.24	21.24	21.24
Expense	\$ 595,503	\$ 1,799,267	\$ 2,335,765	\$ 2,460,682	\$ 2,526,369
<b>Nonpersonnel</b>					
Supplies	\$ 983,655	\$ 574,280	\$ 11,236,548	\$ 7,507,392	\$ 7,467,392
Contracts	\$ 123,630	\$ 585,971	\$ 1,245,200	\$ 486,090	\$ (994,380)
Energy and Utilities	\$ -	\$ -	\$ 7,241,181	\$ 14,482,361	\$ 14,482,361
Other	\$ 933,250	\$ 252,600	\$ 1,250,000	\$ 1,750,000	\$ 182,500
<b>Total Non-personnel</b>	<b>\$2,040,535</b>	<b>\$1,412,851</b>	<b>\$ 20,972,929</b>	<b>\$ 24,225,843</b>	<b>\$ 21,137,873</b>
<b>Total Operating Expenses</b>	<b>\$2,636,038</b>	<b>\$3,212,118</b>	<b>\$23,308,694</b>	<b>\$26,686,525</b>	<b>\$23,664,242</b>
<b>Waste water System</b>					
<b>Personnel</b>					
FTE	5.76	5.76	5.76	5.76	5.76
Expense	\$ 670,002	\$ 687,898	\$ 706,339	\$ 725,343	\$ 744,927
<b>Nonpersonnel</b>					
Supplies	\$ 47,250	\$ 59,720	\$ 59,720	\$ 59,720	\$ 59,720
Contracts	\$ 51,770	\$ 176,970	\$ (387,280)	\$ (912,280)	\$ (1,412,280)
Energy and Utilities	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Other	\$ 135,350	\$ 74,400	\$ 8,000	\$ -	\$ 137,600
<b>Total Non-personnel</b>	<b>\$ 234,370</b>	<b>\$ 311,090</b>	<b>\$ 680,440</b>	<b>\$ 147,440</b>	<b>\$ (214,960)</b>
<b>Total Operating Expenses</b>	<b>\$ 904,372</b>	<b>\$ 998,988</b>	<b>\$ 1,386,779</b>	<b>\$ 872,783</b>	<b>\$ 529,967</b>
<b>Combined Total</b>	<b>\$3,540,410</b>	<b>\$4,211,106</b>	<b>\$ 24,695,473</b>	<b>\$ 27,559,308</b>	<b>\$ 24,194,209</b>

#### Pure Water Phase 2 Operating Expenses

While most of Phase 2 expenses are outside this Outlook period, the Outlook includes project management-related operational expenses, including personnel expenses and contracts that are summarized in the following table. Most of these costs are related to the oversight and procurement of the project management contract for Phase 2, which will follow a similar model and path to Phase 1. Notably, there are also some expenses included in the CIP as well, discussed later in this report.

<b>Pure Water Phase 2 Critical Operating Expenditures (Personnel and Nonpersonnel)</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	1.24	1.24	1.24	1.24	1.24
Expense	\$ 172,870	\$ 177,595	\$ 182,465	\$ 187,484	\$ 192,656
<b>Nonpersonnel (Contracts)</b>	\$ 1,240,000	\$ 1,240,000	\$ 1,240,000	\$ 1,240,000	\$ 1,240,000
<b>Total Operating Expenses</b>	<b>\$1,412,870</b>	<b>\$1,417,595</b>	<b>\$ 1,422,465</b>	<b>\$ 1,427,484</b>	<b>\$ 1,432,656</b>
<b>Wastewater System</b>					
<b>Personnel</b>					
FTE	0.76	0.76	0.76	0.76	0.76
Expense	\$ 105,952	\$ 108,849	\$ 111,834	\$ 114,910	\$ 118,079
<b>Nonpersonnel (Contracts)</b>	\$ 760,000	\$ 760,000	\$ 760,000	\$ 760,000	\$ 760,000
<b>Total Operating Expenses</b>	<b>\$ 865,952</b>	<b>\$ 868,849</b>	<b>\$ 871,834</b>	<b>\$ 874,910</b>	<b>\$ 878,079</b>
<b>Combined Total</b>	<b>\$2,278,822</b>	<b>\$2,286,444</b>	<b>\$ 2,294,299</b>	<b>\$ 2,302,394</b>	<b>\$ 2,310,735</b>

Dam Repairs and Replacement

In addition to the Pure Water additions, there are other significant Critical Operating Expenditures included within the PUD Outlook. One of the larger additions is for Dam Repair and Replacement, which adds up to 42.00 FTEs and between \$8.7 million and \$32.1 million in certain years to the Outlook, as shown in the table below. The positions would form a dedicated team to oversee both short- and long-term projects related to improvements and/or the replacements of existing dams, which is estimated to cost in excess of \$1 billion in the future. This team would manage that effort, with additional contract expenditures to address minor construction projects that have already been identified in previous condition assessments. These expenditures peak in FY 2026 at \$21 million. While there is a large amount of funding added for this endeavor on the operations side, the CIP, as discussed below, still does not include significant funding for major construction related to the dams.

<b>Dam Repairs and Replacement Critical Operating Expenditures</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	14.50	33.00	42.00	42.00	42.00
Expense	\$ 1,693,673	\$ 3,853,159	\$ 4,997,691	\$ 5,131,605	\$ 5,269,603
<b>Non-personnel (Contracts)</b>	<b>\$ 7,027,488</b>	<b>\$ 14,054,976</b>	<b>\$ 27,087,951</b>	<b>\$ 6,802,000</b>	<b>\$ 7,022,000</b>
<b>Total Operating Expenses</b>	<b>\$ 8,721,161</b>	<b>\$17,908,135</b>	<b>\$32,085,642</b>	<b>\$11,933,605</b>	<b>\$12,291,603</b>

Water/Wastewater System Safety and Resiliency

Other critical strategic expenditures are divided up into categories, beginning with water and wastewater system safety and resiliency. For both systems, this addition will address the water distribution valve system and other infrastructure aspects, which will allow PUD to ensure the system is able to quickly respond to main breaks and limit impacted areas.

<b>Water/Wastewater System Safety and Resiliency Critical Operating Expenditures</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	13.50	20.91	40.41	40.41	40.41
Expense	\$ 1,386,764	\$ 2,212,902	\$ 4,169,286	\$ 4,278,634	\$ 4,391,318
<b>Nonpersonnel</b>					
Supplies	\$ 375,000	\$ 375,000	\$ 750,000	\$ 750,000	\$ 750,000
Contracts	\$ -	\$ 2,761,000	\$ 1,570,000	\$ 1,166,000	\$ 786,000
Information Technology	\$ 4,063,604	\$ 8,825,710	\$ 3,301,051	\$ 3,444,164	\$ 3,601,372
Other	\$ 655,000	\$ 655,000	\$ -	\$ -	
<b>Total Non-personnel</b>	<b>\$ 5,093,604</b>	<b>\$ 12,616,710</b>	<b>\$ 5,621,051</b>	<b>\$ 5,360,164</b>	<b>\$ 5,137,372</b>
<b>Total Operating Expenses</b>	<b>\$ 6,480,368</b>	<b>\$ 14,829,612</b>	<b>\$ 9,790,337</b>	<b>\$ 9,638,798</b>	<b>\$ 9,528,690</b>
<b>Waste water System</b>					
<b>Personnel</b>					
FTE	-	1.59	1.59	1.59	1.59
Expense	\$ -	\$ 209,074	\$ 214,749	\$ 220,598	\$ 226,626
<b>Nonpersonnel</b>					
Supplies	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Contracts	\$ 1,814,125	\$ -	\$ -	\$ -	\$ -
Information Technology	\$ 1,932,109	\$ 5,806,283	\$ 3,751,160	\$ 4,002,021	\$ 4,202,122
Energy and Utilities	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
<b>Total Non-personnel</b>	<b>\$ 5,746,234</b>	<b>\$ 7,806,283</b>	<b>\$ 5,751,160</b>	<b>\$ 6,002,021</b>	<b>\$ 6,202,122</b>
<b>Total Operating Expenses</b>	<b>\$ 5,746,234</b>	<b>\$ 8,015,357</b>	<b>\$ 5,965,909</b>	<b>\$ 6,222,619</b>	<b>\$ 6,428,748</b>
<b>Combined Total</b>	<b>\$ 12,226,602</b>	<b>\$ 22,844,969</b>	<b>\$ 15,756,246</b>	<b>\$ 15,861,417</b>	<b>\$ 15,957,438</b>

One notable expense here is the increase in Information Technology costs, which is expected to allow the Department to gain remote access and control of critical systems across the City’s treatment and distribution network. This enhancement will improve system response and also harden the system against external attacks and exposure. Expenditures under contracts will address repairs identified in condition assessments for Pump Stations 1 and 2 as well as an analysis of system-wide backup power needs.

#### Regulatory Compliance and Equipment

The next category of additions is for regulatory compliance and equipment additions, which focus on identifying microplastics within the water treatment plants, as well as replacement costs for the wastewater ocean monitoring vessel. The costs associated with these additions are in the table below. Additionally, these additions also include a new program manager position for the Advanced Metering Implementation (AMI) project, which is the only addition in the Outlook related to the AMI program. That program is still experiencing delays, and the new position will increase project oversight of the program. Once more information is known about potential costs for AMI, additional expenditures may be included in future Outlooks.

<b>Regulatory Compliance and Equipment Critical Operating Expenditures</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	2.91	4.91	7.16	12.66	12.66
Expense	\$ 353,049	\$ 548,341	\$ 780,632	\$ 1,344,421	\$ 1,379,845
<b>Nonpersonnel</b>					
Contracts	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Other	\$ 635,000	\$ 200,000	\$ -	\$ -	
<b>Total Non-personnel</b>	<b>\$ 635,000</b>	<b>\$ 210,000</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>
<b>Total Operating Expenses</b>	<b>\$ 988,049</b>	<b>\$ 758,341</b>	<b>\$ 790,632</b>	<b>\$ 1,354,421</b>	<b>\$ 1,389,845</b>
<b>Waste water System</b>					
<b>Personnel</b>					
FTE	0.84	0.84	0.84	0.84	3.84
Expense	\$ 118,093	\$ 121,325	\$ 124,655	\$ 128,087	\$ 500,637
<b>Nonpersonnel</b>					
Contracts	\$ 1,636,910	\$ 886,910	\$ 886,910	\$ 961,910	\$ 1,236,910
Other	\$ 685,000	\$ 1,000,000	\$ 1,120,000	\$ 1,000,000	\$ 1,000,000
<b>Total Non-personnel</b>	<b>\$ 2,321,910</b>	<b>\$ 1,886,910</b>	<b>\$ 2,006,910</b>	<b>\$ 1,961,910</b>	<b>\$ 2,236,910</b>
<b>Total Operating Expenses</b>	<b>\$ 2,440,003</b>	<b>\$ 2,008,235</b>	<b>\$ 2,131,565</b>	<b>\$ 2,089,997</b>	<b>\$ 2,737,547</b>
<b>Combined Total</b>	<b>\$ 3,428,052</b>	<b>\$ 2,766,576</b>	<b>\$ 2,922,197</b>	<b>\$ 3,444,418</b>	<b>\$ 4,127,392</b>

Data Driven Decisions and Systems

The final Critical Strategic Expenditure addition is for positions to handle large data sets and other future system platforms within the Department.

<b>Data Driven Decisions and Systems Critical Operating Expenditures</b>					
	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water System</b>					
<b>Personnel</b>					
FTE	2.25	2.25	2.25	2.25	2.25
Expense	\$ 296,091	\$ 304,130	\$ 312,414	\$ 320,951	\$ 329,748
<b>Waste water System</b>					
<b>Personnel</b>					
FTE	3.75	3.75	3.75	3.75	3.75
Expense	\$ 481,484	\$ 494,516	\$ 507,946	\$ 521,785	\$ 536,046
<b>Combined Total</b>	<b>\$ 777,575</b>	<b>\$ 798,646</b>	<b>\$ 820,360</b>	<b>\$ 842,736</b>	<b>\$ 865,794</b>

**Capital Improvement Program (CIP)**

Capital investments are a key driver of costs and revenue requirements in the PUD Outlook for both the water and sewer systems, and include two key categories of projects: (1) Pure Water (particularly Phase 1 construction costs), and (2) Baseline CIP (ongoing investments in infrastructure repairs, replacements, and improvements). As shown in the following table, Pure Water expenditures significantly decrease from FY 2025 through FY 2027 when construction of Phase 1 is planned to be completed and the facilities go into production.

Overall, CIP projections remain stable over the Outlook period and are consistent with previous PUD outlooks. Projected spending on Baseline CIP projects is projected to slightly increase over the five-year period for both the water and sewer systems, while Pure Water Phase 1 project expenditures reflect some timing shifts due to construction and project commissioning timing. One

key area for future analysis and review is a comparison of historical levels of CIP investment relative to forecasted CIP. Benchmarking future investment levels against historical performance can provide insight into the feasibility to deliver on planned projects based on currently available resources. This analysis may indicate an overestimate of future investment plans, or a need to add staff or resources to deliver on the volume of projects forecasted, either of which could have a material impact on the forecast of needed rate increases.

Additionally, a review of the current project cost estimates included in the plan and historical changes in capital cost estimates, combined with continual monitoring of current and projected capital cost escalation rates will be important to maintain a long-term financially viable plan during this period of high uncertainty in capital cost escalation.

<b>Total CIP (in millions)</b>							
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Total</b>
<b>Pure Water</b>							
Water	\$ 312.2	\$ 218.3	\$ 112.7	\$ 64.9	\$ 18.5	\$ 33.4	\$ 447.8
Sewer	\$ 212.9	\$ 211.7	\$ 114.4	\$ 28.8	\$ 7.1	\$ 14.3	\$ 376.3
<b>Total Pure Water</b>	<b>\$ 525.1</b>	<b>\$ 430.0</b>	<b>\$ 227.1</b>	<b>\$ 93.7</b>	<b>\$ 25.6</b>	<b>\$ 47.7</b>	<b>\$ 824.1</b>
<b>Baseline CIP</b>							
Water	\$ 219.3	\$ 263.5	\$ 239.0	\$ 229.3	\$ 267.4	\$ 245.4	\$ 1,244.6
Sewer	\$ 138.4	\$ 217.8	\$ 230.6	\$ 227.2	\$ 149.9	\$ 107.2	\$ 932.7
<b>Total Baseline CIP</b>	<b>\$ 357.7</b>	<b>\$ 481.3</b>	<b>\$ 469.6</b>	<b>\$ 456.5</b>	<b>\$ 417.3</b>	<b>\$ 352.6</b>	<b>\$2,177.3</b>
<b>Total CIP</b>	<b>\$ 882.8</b>	<b>\$ 911.3</b>	<b>\$ 696.7</b>	<b>\$ 550.2</b>	<b>\$ 442.9</b>	<b>\$ 400.3</b>	<b>\$ 3,001.4</b>

### Pure Water Phase 1 & 2

PUD provided a comprehensive update on the Pure Water Program to the Environment Committee in April 2021. Phase 1 planning and design work is complete, and construction began in May 2019. Construction includes several large pumping and piping projects, the expansion of the North City Water Reclamation Plant (NCWRP), and the construction of the new North City Pure Water Facility (NCPWF). In August 2020, the Pure Water team began bid advertisement of the additional 10 construction contract bid packages. All construction contracts have been awarded, and the PUD Outlook notes that construction is approximately 25% complete.

Pure Water staff and consultants recently updated the cost for Pure Water Phase 1. Since the 2018 construction estimates, projected construction costs have increased from \$1.4 billion to \$1.5 billion due to a variety of factors including litigation-related delays and pandemic-related supply constraints. The City Council has shown significant support for Pure Water by increasing the construction award authority for Pure Water Phase 1 by \$130.5 million to \$1.2 billion, and also the limit on change orders that do not require Council approval from \$1.0 million to \$2.0 million to help keep projects on track.

The Water and Wastewater Funds share in these expenditures according to a cost allocation based on completed design and engineering studies. Based on the cost allocation assumed in the City's second Water Infrastructure Finance and Innovation Act (WIFIA) Loan, approximately \$827.6 million (55%) is allocated to the Water Utility Fund and approximately \$671.6 million (45%) is allocated to the Sewer Revenue Fund. Total cost allocations will continue to be adjusted as the final construction contracts are awarded, and as change orders are issued for the project.



As shown in the table above, PUD anticipates incurring approximately \$824.1 million of additional obligations for the Pure Water CIP over the PUD Outlook period. The table shown below contains the anticipated sources of funding for the Pure Water CIP over the Outlook period. WIFIA loans are covering the vast majority of the funding for the water system, while SRF loans are covering the majority of the funding for the sewer system. Most of the cash contained in FY 2027 and FY 2028 relates to the ramp up of Phase 2 activities, which were assumed to be funded in the previous Outlook through commercial paper. However, projected cash outlays may be reimbursed once the full cost of Phase 2 becomes clearer and a financing strategy for Phase 2 is established. Although grant funding is currently not reflected during the Outlook period, the Department indicated it is actively applying for additional grant funding and looking for new grant opportunities. The Outlook notes any grant funding awarded will be used to offset cash funding.

Pure Water CIP Expenditures and Revenues (in millions)								
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Outlook Total
<b>Water System</b>								
<b>Expenditures</b>	\$ 104.5	\$ 312.2	\$ 218.3	\$ 112.7	\$ 64.9	\$ 18.5	\$ 33.4	\$ 447.8
<b>Revenue Sources</b>								
WIFIA Loans	\$ 78.8	\$ 302.0	\$ 210.9	\$ 114.5	\$ 15.1	\$ -	\$ -	\$ 340.5
Grants	\$ 1.5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash	\$ 24.2	\$ 10.2	\$ 7.4	\$ (1.8)	\$ 49.8	\$ 18.5	\$ 33.4	\$ 107.3
<b>Total Revenue</b>	\$ 104.5	\$ 312.2	\$ 218.3	\$ 112.7	\$ 64.9	\$ 18.5	\$ 33.4	\$ 447.8
<b>Wastewater System</b>								
<b>Expenditures</b>	\$ 63.7	\$ 212.9	\$ 211.7	\$ 114.4	\$ 28.8	\$ 7.1	\$ 14.3	\$ 376.3
<b>Revenue Sources</b>								
SRF Loans	\$ -	\$ 282.6	\$ 185.7	\$ 127.8	\$ 30.3	\$ 0.1	\$ -	\$ 343.9
Grants	\$ 17.1	\$ 20.5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Fees/Cash	\$ 46.7	\$ (90.2)	\$ 26.0	\$ (13.4)	\$ (1.5)	\$ 7.0	\$ 14.3	\$ 32.4
<b>Total Revenue</b>	\$ 63.8	\$ 212.9	\$ 211.7	\$ 114.4	\$ 28.8	\$ 7.1	\$ 14.3	\$ 376.3

Phase 2 of Pure Water is still in the planning phases, as described in the update in April 2022. Procurement of a program management consultant for this phase is nearing completion, and construction bids for the second design testing site are complete. The second design testing site is a regulatory requirement since it will treat water from a different sewer-shed and use slightly different treatment processes due to more constrained facility sites. The Pure Water team made the decision to construct the small-scale facility at the Point Loma Wastewater Treatment Plant (PLWTP) rather than the previously selected location immediately west of the San Diego International Airport, which is anticipated to reduce the cost of the facility from an estimated \$60 million to \$22 million.

Additionally, the Department still has not made a final determination on the main remaining decision for Phase 2, which is the reservoir discharge site. Lake Murray, the San Vicente Reservoir, or both are currently being considered as discharge locations for Phase 2 purified water. In Phase 1, the Miramar Reservoir was selected as the discharge water body for purified water.

Baseline CIP – Ongoing Investments in Infrastructure

The Baseline CIP in the PUD Outlook includes funding for improvements to reduce pipeline breaks and emergency repairs; improve Hodges Dam;<sup>9</sup> enhance treatment and distribution process technology; expanding and upgrading of the Water System to accommodate growth; and maintaining compliance with the Federal Safe Drinking Water Act and Division of Drinking Water Compliance Order.

The table below provides an overview of baseline CIP expenditures and funding sources for the Outlook period. For each system, the proposed financing contains a mixture of debt as well as cash and/or capacity fees, with the water system funded with 71.3% debt financing and the sewer system with 64.6% debt financing. The various mechanisms used to fund needed capital improvements - such as commercial paper/bonds, loans, or cash - should align with the anticipated useful life and expected benefit of each improvement project. For example, debt financing of one-time system upgrades and improvements promotes intergenerational equity by distributing project costs over the life of the new asset. The optimal combination of debt and cash funding can help balance the near- and long-term impacts to ratepayers while meeting PUD’s financial targets and ratings agencies’ benchmarks. As part of its review of the water COS study, Stantec will evaluate historical trends for emergency work and benchmarking based on investment plans, depreciation, and asset lifecycle.

<b>Baseline CIP Expenditures and Revenues (in millions)</b>								
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Outlook Total</b>
<b>Water System</b>								
<b>Expenditures</b>	\$ 113.1	\$ 219.3	\$ 263.5	\$ 239.0	\$ 229.3	\$ 267.4	\$ 245.4	\$ 1,244.6
<b>Revenue Sources</b>								
Commercial Paper/Bonds	\$ 85.2	\$ 116.1	\$ 67.0	\$ 102.0	\$ 131.0	\$ 110.0	\$ 100.0	\$ 510.0
SRF Loans	\$ 0.3	\$ 0.3	\$ 79.4	\$ 103.8	\$ 110.3	\$ 56.0	\$ 28.2	\$ 377.7
Grants	\$ 0.7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Fees/Cash	\$ 26.9	\$ 102.9	\$ 117.1	\$ 33.2	\$ (12.0)	\$ 101.4	\$ 117.2	\$ 356.9
<b>Total Revenue</b>	\$ 113.1	\$ 219.3	\$ 263.5	\$ 239.0	\$ 229.3	\$ 267.4	\$ 245.4	\$ 1,244.6
<b>Wastewater System</b>								
<b>Expenditures</b>	\$ 99.1	\$ 138.4	\$ 217.8	\$ 230.6	\$ 227.2	\$ 149.9	\$ 107.2	\$ 932.7
<b>Revenue Sources</b>								
Revenue Bonds	\$ 116.8	\$ 75.0	\$ 90.0	\$ -	\$ 210.0	\$ -	\$ 140.0	\$ 440.0
SRF Loans	\$ 9.4	\$ 7.0	\$ 6.5	\$ 48.7	\$ 32.4	\$ 45.0	\$ 29.6	\$ 162.2
Capacity Fees/Cash	\$ (27.1)	\$ 56.4	\$ 121.3	\$ 181.9	\$ (15.2)	\$ 105.0	\$ (62.4)	\$ 330.6
<b>Total Revenue</b>	\$ 99.1	\$ 138.4	\$ 217.8	\$ 230.6	\$ 227.2	\$ 150.0	\$ 107.2	\$ 932.8

## **Financial Policies and Rate Stabilization**

### **Debt Service Coverage Levels**

PUD uses a combination of cash funding (such as revenue from rate payers) and debt financing to support the ongoing CIP for investment in water and sewer assets.<sup>10</sup> The debt service coverage

<sup>9</sup> The Baseline includes funding for condition assessments of dam infrastructure, but currently only the assessment of Hodges Dam has been completed. As condition assessments are completed, the Department indicated additional needed capital projects will be included in future Outlooks.

<sup>10</sup> Debt payment obligations extend well beyond the period covered in the PUD Outlook.

ratios (DSCR)<sup>11</sup> are an important factor in the Outlook, because maintaining a favorable credit rating is required to continue to receive

$$\text{Debt Service Coverage Ratio} = \frac{\text{Net System Revenue}}{\text{Debt Service}}$$

low interest rate financing. Existing PUD bond covenants require a minimum DSCR of 1.2x for senior debt and 1.1x for aggregate debt. PUD indicates that they generally target a DSCR of 1.5x for both the water and sewer systems to enhance their ability to maintain a high credit rating and receive low-cost borrowing. As shown in the table below, the Outlook includes a DSCR ranging from 1.37x to 1.89x for the water system and ranges from 1.38x to 1.61x for the sewer system.

<b>Utility System Projected Debt Service Coverage Ratio (in millions)</b>						
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water</b>						
Net Systems Revenue	\$ 162.2	\$ 157.6	\$ 174.9	\$ 189.9	\$ 211.3	\$ 299.2
Debt Service	\$ 94.0	\$ 114.7	\$ 127.7	\$ 138.3	\$ 151.5	\$ 158.1
Debt service Ratio	1.73x	1.37x	1.37x	1.37x	1.39x	1.89x
<b>Sewer</b>						
Net Systems Revenue	\$ 163.8	\$ 139.0	\$ 145.2	\$ 155.1	\$ 174.5	\$ 181.3
Debt Service	\$ 115.1	\$ 100.9	\$ 102.9	\$ 105.4	\$ 119.3	\$ 112.4
Debt service Ratio	1.42x	1.38x	1.41x	1.47x	1.46x	1.61x

The high level of borrowing projected results in DSCR levels below the management target of 1.5x, and significant use of the Rate Stabilization Fund (RSF) is projected to keep the DSCR either at or just below 1.4x. According to the Department, a significant portion of the large CIP funding need driving this DSCR outcome is associated with the Pure Water program. Additionally, the plans call for \$2.2 billion in baseline CIP for PUD to update and replace existing systems. The prudent use of debt has the ability to mitigate near-term shocks from large rate increases, though this must be balanced with long-term impacts of increasing fixed debt service costs and debt service coverage requirements, as well as potential interest rate increases which will impact long-term payment needs.

### **Rate Stabilization and Reserve Requirements**

Reserve balances and minimum targets are important factors in the PUD Outlook to ensure reserves are sufficient to provide stable, reliable operations and meet debt financing requirements. The Department maintains these reserve funds in accordance with the City's Reserves Policy ([Council Policy 100-20: Reserve Policy](#)). The Water and Sewer Utility Funds each have three reserve funds which are being funded at the targeted levels throughout the Outlook period, including the Emergency Operating Fund, Rate Stabilization Fund (RSF), and the Emergency Capital Reserve, with the exception of the water RSF in FY 2026. The Water Utility Fund also has the Secondary Purchase Reserve fund intended to mitigate risks associated with rainfall variability and unforeseen emergencies impacting supply. Like the other reserves, this Secondary Purchase Reserve is funded at target levels throughout the Outlook period. At the end of FY 2023 the Water

<sup>11</sup> The DSCR is a fund's revenues net of operating expenses divided by the total debt service owed. A DSCR less than 1.0 would indicate that the organization did not have enough revenues to support its debt payments through annual cash flows and would need to draw from fund balance or reserves or borrow additional funds in order to make debt payments.

and Sewer Utility Funds are estimated to have total reserves of approximately \$166.4 million and \$144.5 million, respectively.

The Rate Stabilization Reserve Funds are funded above targeted levels throughout the Outlook period, with the exception of FY 2026 within the water system. The high balances beginning in FY 2023 are mainly due to several one-time revenue sources. For the Water RSF, this includes the sale of the stadium site, one-time grant funding and legal settlements from the Metropolitan Water District (MWD) that have allowed the City to make large contributions to the RSF. Saving one-time revenue for use in a reserve is a financial best practice so that the funds can be used to provide one-time operating revenue to offset or mitigate the need for sudden or dramatic rate increases in the future. The PUD

**Council Policy 100-20: Reserve Policy**

- Emergency Operating Reserves equivalent to 70 days of operations (for water, this is 70 days of operations less water purchase costs).
- Emergency Capital Reserves of \$5 million each (total \$10 million for Public Utilities) budgeted in the CIP each year.
- Rate Stabilization Fund Reserves equivalent to 5% of prior year’s operating revenue.
- Secondary Purchase Reserve (water only) equivalent to 6% of the annual water purchase budget.

Outlook projects use of the RSF reserves in FY 2024 through FY 2026 for the water system, with contributions made to the RSF in FY 2027 and 2028. Projections for the sewer system assume use of the RSF during each year of the outlook period. The sewer fund balance falls to just \$0.5 million above the target in FY 2028, while the water system falls below the target in FY 2026, with modest replenishment bringing the balance back up to \$3.9 million above the target level in FY 2028. The Department notes that a plan to mitigate the water RSF falling below targeted levels will be included in a subsequent COS covering FY 2026. This strategy to draw down the RSF balance with a plan to restore the RSF reserve to the target amount in the following fiscal year is consistent with City policy.

<b>Rate Stabilization Fund Reserves in PUD Outlook (in millions)</b>						
	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water</b>						
Reserve Target	\$ 28.7	\$ 30.2	\$ 32.5	\$ 34.8	\$ 37.7	\$ 41.2
Estimated Funding Level	96.1	85.1	58.1	27.1	38.1	45.1
<b>Amount Above Target</b>	<b>\$ 67.4</b>	<b>\$ 54.9</b>	<b>\$ 25.6</b>	<b>\$ (7.7)</b>	<b>\$ 0.4</b>	<b>\$ 3.9</b>
<b>Sewer</b>						
Reserve Target	19.6	19.4	20.0	20.6	21.3	22.6
Estimated Funding Level	79.3	70.3	56.3	44.3	33.1	23.1
<b>Amount Above Target</b>	<b>\$ 59.7</b>	<b>\$ 50.9</b>	<b>\$ 36.3</b>	<b>\$ 23.7</b>	<b>\$ 11.8</b>	<b>\$ 0.5</b>

**Other Areas for Review**

While this report focuses primarily on financial elements of the Outlook and financial plan, Stantec plans to review several additional important factors as part of the water COS and rate design analyses, including the following:

- Water demand, sale, and purchase forecasts, and associated financial and cost allocation impacts.
- Costs and non-rate revenues by function within the water systems.
- Cost allocation factors and methodologies.

- Customer water demand and peaking characteristics by customer class.
- Customer class impacts resulting from potential changes to financial plans and cost allocation methodologies.
- Rate structure recommendations with consideration of recent local and statewide litigation.

## CONCLUSION

This PUD Outlook continues to build on the work done in previous outlooks and continues to show a need for additional rate increases to support the operations of the Department and to provide City residents with safe and reliable water and sewer services. The PUD Outlook provides an initial basis for expenditure and revenue forecasts for the recently released water COS study, which seeks substantial rate increases over the next two years. This Outlook also continues to demonstrate how rate increases previously approved for the wastewater system in September 2021 provide that system with financial stability.

The Pure Water Program continues to be a significant component of the PUD Outlook, driving both CIP as well as additional O&M expenses as Phase 1 the project moves closer to becoming operational. Progress made on the Pure Water Program continues to be positive for the City, as it will provide a local source of drinking water and will significantly reduce reliance on purchased water. It also prevents dumping of a scarce resource (treated water) into the PLWTP ocean outfall, helps the City comply with regulatory requirements related to the NPDES permit, and prevents the City from having to invest an estimated \$1.8 billion to upgrade PLWTP for secondary treatment. While initially delayed due to litigation and the pandemic, Phase 1 is now under construction with all construction contracts awarded. Phase 1 is anticipated to deliver 30 million gallons per day (mgd) of purified water into the City's drinking water system by 2027. Ultimately, Pure Water is projected to provide 83 mgd, or nearly half of the City's drinking water supply, upon completion of Phase 2 in 2035.

The PUD Outlook includes both CIP and critical operating expenditures for Pure Water Phase 1, with most capital costs supported through low interest SRF and WIFIA loans, as well as initial activities for Phase 2, including project management-related operating costs to ensure this phase continues forward. Most of the major costs for Phase 2, however, lie beyond the Outlook period.

As discussed throughout this report, there are a variety of financial challenges and risks that could impact projections contained in the PUD Outlook, including some that are outside of the City's control. It will be critical for the City to continue to monitor and proactively engage going forward. The risks and challenges include (but are not limited to) the following:


- Unknown resolution of litigation related to tiered rate structure for water.
- Potential range of CWA rate increases for purchased water, especially given decreases in demand occur as Pure Water and similar regional partner projects come online.
- Potential impacts if the CWA's proposed RCS goes forward.
- Changes to water demands, particularly lower than expected demands, and the associated impacts on supply costs and sales revenue.
- CIP funding strategies, including the use of cash, debt, capacity fees, and grants, to mitigate potential large rate increases while monitoring the level of fixed debt service costs and revenue needs to meet long-term DSCR requirements.

- Inflation, cost escalation, and interest rate risks given recent trends and potential inflation mitigation measures from policy makers.
- Potential costs for CAP-related projects which are not included in this Outlook, most notably EV conversions for City fleet vehicles.

Stantec’s independent review of the wastewater COS study and proposed rate increases was beneficial to assist Council, IROC, and the public in understanding the assumptions and factors that went into the rate increases and laying out needed data for future studies. We expect Stantec’s review of the current water COS study will be particularly helpful given the financial challenges and risks noted. We anticipate that Stantec’s review of the water COS study will be available by the beginning of February 2023.



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