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May 2, 2024

Los Angeles City Council
C/O Office of the City Clerk
200 North Spring Street, Room 395
Los Angeles, CA 90012

Attention: Honorable Katy Yaroslavsky, Chair, Energy & Environment Committee
Honorable Bob Blumenfield, Chair, Budget, Finance, and Innovation Committee

LA SANITATION AND ENVIRONMENT – CLEAN WATER (WASTEWATER) PROGRAM PROPOSED RATE ACTION

Honorable Councilmembers:

Los Angeles Sanitation and Environment (LASAN; Bureau of Sanitation) herein submits analyses in support of rate adjustments for the Clean Water Program for your consideration.

RECOMMENDATIONS

That the Council, subject to the approval of the Mayor:

1. Authorize the Bureau of Sanitation to take the necessary steps to implement the following changes to Los Angeles Municipal Code Sections 64.30 and 64.41 and any associated code sections:
   a. Sewer Service Charge rates as shown in Attachment A;
   b. Remove the Low-Income Subsidy Surcharge pursuant to Proposition 218 requirements;
   c. Revise the Default Percentage Discharge to reflect the amount of flow such that the percentage shall not be less than 90% or exceed 96% for determining Sewer Service Charge rates for industrial and commercial accounts;

2. Request the City Attorney to prepare and present an ordinance amending Los Angeles Municipal Code Sections 64.30 and 64.41.03 and any associated code sections for the rate adjustments as shown in Attachment A and other necessary changes addressed in this report;
3. Authorize the Bureau of Sanitation to print and distribute notice regarding a public hearing in compliance with Proposition 218;
4. Direct departments to assist the Bureau of Sanitation, as needed, with the implementation of the rate adjustments; and,
5. Authorize the Bureau of Sanitation to make technical changes as needed to implement Mayor and City Council intentions.

SUMMARY

During the development of the Fiscal Year 2023-24 Adopted Budget, the City Council directed LASAN to report on fee studies and recommendations related to actions necessary to preserve the Bureau's operations, meet contractual and regulatory obligations, and moderate fee impacts on residents and constituents (C.F. 23-0600-S9). This report focuses primarily on the Clean Water Program and the Sewer Service Charge (SSC) as that is the largest source of revenue for the Sewer Construction and Maintenance Fund (SCM) and is critically in need of adjustment in order to sustain wastewater system operations. As a property-related user fee, adjustments of the SSC are subject to the requirements of Proposition 218 as codified in the California Constitution as well as requirements of the Government Code, addressed further below. LASAN intends to report separately regarding fee studies and recommendations for other LASAN special fund supported services. Attached to this report are the schedule of proposed rates (Attachment A), examples of charges based on the average bill (Attachment B) and the fee study (Attachment C).

BACKGROUND

LASAN operates one of the largest and most complex municipally-operated wastewater systems (System) in the nation, funded exclusively by the SCM Fund. Nearly 40 years ago, the SCM Fund was converted to an enterprise fund that requires it to be self-supporting; this is further reinforced by bond covenants that prohibit the General Fund from subsidizing the fund in any way. The last series of rate adjustments were approved in 2012, with the final increase taking effect in July 2020 (C.F. 10-1947). Since then, non-discretionary System expenses like chemicals and utilities have outpaced the Consumer Price Index (CPI) totaling a cumulative 18.1 percent from Fiscal Year 2021-22 through present, while revenues have remained flat absent adjustments deferred because of the pandemic and subsequent economic challenges.

Financial Analyses

LASAN regularly evaluates opportunities for cost savings, operational efficiencies and capital delivery improvements and has implemented cost-saving measures where possible to keep the proposed rate adjustments as low as possible. LASAN engaged two consultants to assist with the financial analysis, cost of service and rate design in support of the proposed rate adjustments. LASAN worked with Carollo Engineers, Inc. (Carollo) to modernize the SCM financial model that provides the projected expenditures and revenues necessary to operate the wastewater system over the next five years. Black & Veatch Corp. (B&V) used the financial model to develop the cost of service and rate model based on established national standards that identifies the revenue required to support the wastewater system and SSC fee adjustments needed to attain the required revenue. The two consultants have performed similar work for the cities of Burbank, San Diego, Long Beach, Phoenix, and Atlanta, as well as Los Angeles, San Bernardino, and San Diego counties, and worked closely to ensure accuracy and completeness. The attached B&V report provides additional details regarding the rigorous analyses undertaken in support of this proposal (Attachment C).

Customer Assistance Programs

LASAN is committed to continuing the existing low income customer assistance program that provides a 31 percent discount to the first 18 billable units bi-monthly for eligible single family residential customers. The Los Angeles Department of Water and Power (DWP) administers this discount program, known as the EZ-SAVE, in compliance with state and federal regulations. DWP also offers a monthly level-pay plan and rebates and other programs to incentivize water conservation. These programs are available to LASAN customers as the SSC is collected by DWP on LASAN's behalf as part of customers' bi-monthly utility bill. City residents residing in multi-family buildings consisting of 5 units or more would be covered by City rules and regulations imposed on the building owner, such as the Rent Stabilization Ordinance administered by the Los Angeles Housing Department (LAHD).

LASAN customers may also apply for a SSC adjustment for special circumstances where water was not returned to the sewer system, for example, they filled an empty swimming pool, planted a new lawn, had water leaks, a commercial property used a significant amount of water for a product, cooling tower, or irrigation, or discharged low-strength sewage.

During the pandemic, many customers fell behind in utility payments causing agencies to experience significant revenue losses with the potential to negatively impact services. The State subsequently initiated two rounds of Federally-funded pass-through grant programs, the California Water and Wastewater Extended Arrearage Payment Program (CWWAPP), allowing utility applicants to obtain funding from the State to offset eligible losses from arrearages and apply those funds as credits to customers impacted by the pandemic. LASAN successfully pursued both opportunities to alleviate the burden on customers and infuse much-needed revenues into the System. LASAN was able to

credit $55.2 million back to customers in 2022 and $59.3 million in April 2024 using these grant funds.

Rate Structure Changes

The proposed rates retain the existing rate structure with two exceptions: 1) eliminate the Low Income Subsidy Surcharge, and 2) decouple the County Sanitation District customer rate. The rate structure will continue to utilize a court-validated methodology based on winter water usage and wastewater discharged to the System.

The Low Income Subsidy Surcharge will be discontinued consistent with applicable law. As currently structured, the existing Surcharge funds approximately half of the cost of the Low Income Program at nearly $5 million for over 74,000 customers. With the elimination of the surcharge and in order to preserve the program, the General Fund will need to contribute approximately $10 million in the first year as replacement revenue.

The B&V analysis also establishes an updated methodology for determining County Sanitation District rates. These are customers that utilize the City's conveyance system only; their wastewater is treated by County Sanitation District facilities. In addition, LASAN proposes to amend the Quality Surcharge Fee (QSF) and Zero-Based Quality Surcharge Fee for industrial customers to reflect updated treatment costs. It is important to note that the rate analysis ensured that no customer class is subsidizing another customer class and the fee is based on proportionate usage in accordance with Proposition 218 as codified in the California Constitution, Articles XIII C and XIII D.

Proposition 218 Requirements and Public Education

The SSC is subject to the notification, public hearing and protest requirements of Proposition 218. Notice to all property owners and customers regarding the proposed rate adjustments and date of a public hearing no less than 45 days following mailing is required. Property owners and customers have the option to submit written protest during that time period. Proposition 218 and the Government Code establish that one valid, written protest per parcel counts towards the simple majority threshold. The City may not enact the proposed rate adjustments if a simple majority of valid protests is received. The proposed rates assume a public hearing in late Summer and implementation by October 2024.

In advance of the public hearing, LASAN intends to educate and notify customers regarding the proposed rate adjustments, the types of critical services provided subject to extensive regulatory requirements and the infrastructure investments that will be funded by these rates. LASAN will launch a website dedicated to the proposed rates, including a bill calculator and links to customer assistance information, disseminate information at fairs and outreach events, and host webinars. Additional staff resources will temporarily be provided for the Customer Call Center to be prepared to address customer inquiries.

Maintenance, Operational and Capital Investments

Aging infrastructure requires substantial investment to maintain operations; it is financially prudent to make the necessary capital investments and reduce the impacts of deferred maintenance, such as higher costs when equipment or facilities are not properly maintained and regulatory risk. Recognizing that there is a need to balance capital investments and available resources, LASAN makes every effort to prioritize the highest need capital investments to meet regulatory requirements and plan for resiliency. LASAN also proactively pursues Federal and State grants to help fund these costly investments and reduce the burden on rate payers.

The System is a complex network of pipelines, pumps and treatment plants subject to extensive regulatory requirements. As of the current fiscal year, nearly one-third of the pipes are older than 90 years, significantly past their expected life cycle of 60 to 80 years. Treatment plants have an expected average life cycle of 30 to 50 years; Hyperion underwent its last major overhaul almost 40 years ago with the conversion to Full Secondary Treatment Facilities.

Citywide, over the next five years, hundreds of SSC-funded wastewater infrastructure projects are being planned, designed, or are under construction; anticipated costs exceed $3 billion. A few of the key future projects include:

- Sewer Design and Construction

  Pipeline rehabilitation projects citywide will continue a decade-long program to renovate the aging major sewers, such as the North Outfall Sewer, the backbone of the City's wastewater system. New pipelines will replace or rehabilitate aging pipelines downtown and in other parts of the City.

- Water Reclamation Plants

  Water Reclamation Plants will undergo a variety of improvements to increase energy efficiency and continue production of extremely high-quality recycled water for groundwater injection and industrial use. Several projects are planned to reduce air emissions, improve electrical power systems, and build backup piping to protect facilities from surges that can occur during increasingly strong storms. Planning is also underway for future recycled water projects, including the Advanced Water Purification Facility at the Donald C. Tillman Water Reclamation Plant (DCTWRP).

- Operations and Maintenance

  Additional crews for pipeline assessment and cleaning to minimize sanitary sewer overflows will be supported by increased SSC revenues. Last year, LASAN crews cleaned 6,700 miles of pipes throughout the City and used Closed Circuit TV (CCTV) to assess the condition of hundreds of miles of sewers. The

additional crews will be assigned to an overnight shift to perform additional inspections and cleaning more efficiently while flows in the sewer and traffic impacts are reduced.

- Monitoring Water Quality

  LASAN staff, in conjunction with scientists at the Southern California Coastal Water Research Project, are testing beach water samples in Santa Monica Bay to determine bacterial levels using a cutting-edge technology that more quickly produces results equivalent to the current test method. The current method takes 24 hours to obtain results while the beaches remain closed. The rapid method will provide results in four to six hours letting the public know if it is safe to go back into the water on the same day as the sample collection.

FINANCIAL IMPACT TO THE GENERAL FUND

SCM is an enterprise fund with no reliance on the General Fund. In order to preserve the same level of Low Income Customer assistance, the annual General Fund contribution will range between $9 million to $21 million over the five-year term of the proposed rate adjustments. Annual projected related costs to be paid by SCM to the General Fund ranges from $108 million to $144 million over the five-year term of the proposed rate adjustment. These estimates are subject to change depending on policy decisions and the adopted Cost Allocation Plan.

FINANCIAL IMPACT TO THE SCM FUND

Over the five-year term of the proposed rate adjustment, projected revenue growth ranges from $162 million to $689 million, projected operation and maintenance expenditures range from $543 million to $657 million, capital expenditures range from $487 million to $794 million, and debt service expenditures range from $263 million to $328 million. These estimates are subject to change depending on operational and capital needs and economic and financial market conditions.

Thank you in advance for your continued support of LASAN. If you have any questions or would like to discuss any of these items further, please feel free to contact myself or Sarai Bhaga, Chief Financial Officer, at (213) 485-2210.

Sincerely,

Barbara Romero
Director and General Manager

BR/SB/es/mf/rb/jc

Attachments

c: Carolyn Webb de Macías, Chief of Staff, Mayor's Office
Randall Winston, Deputy Mayor of Infrastructure
Nancy Sutley, Deputy Mayor of Energy and Sustainability
Matt Hale, Deputy Mayor of Finance, Operations and Innovation
Joey Freeman, Deputy Mayor of Intergovernmental Affairs
Ryan Jackson, Director of Public Works
Sharon Tso, CLA
Matt Szabo, CAO
Aura Garcia, President, BPW
Susana Reyes, Commissioner, BPW
LASAN Executive Team

ATTACHMENT A

PROPOSED RATE ADJUSTMENTS

Sewer Service Charge (SSC) Rates by Customer Class	CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
Rates below apply to City of Los Angeles Sewer Service Charge customers								
SSC Customers ($/HCF)	$5.80	$7.08	$7.56	$8.48	$9.28	$10.13	$11.01	$11.96
Rates below apply to City of Los Angeles Low-Income Sewer Service Charge customers								
SSC Customers, Low-Income ($/HCF)	$4.00	$4.89	$5.22	$5.85	$6.41	$6.99	$7.60	$8.25
Rates below apply to industrial customers monitored by the Indusrial Waste Management Division								
Low Strength ($/HCF)	$4.02	$4.15	$4.38	$5.01	$5.41	$6.00	$6.50	$7.12
Biochemical Oxygen Demand ($/lb. of BOD)	$0.604	$0.735	$0.798	$0.860	$0.960	$1.021	$1.103	$1.170
Total Suspended Solids ($/lb. of TSS)	$0.608	$0.642	$0.698	$0.745	$0.832	$0.860	$0.920	$0.972
Rates below apply to customers that receive wastewater collections services from the City of Los Angeles and treatment services from the Los Angeles County Sanitation Districts.								
Sewage Conveyance Charge ($/HCF)	$0.87	$1.89	$1.95	$2.25	$2.38	$2.51	$2.63	$2.91
Sewage Conveyance Charge Low-Income ($/HCF)	$0.60	$1.30	$1.35	$1.55	$1.64	$1.73	$1.82	$2.01

ATTACHMENT B

IMPACTS TO TYPICAL BILLS

Single Family Residential Customer

Rates based on **per billable unit** or per hundred cubic feet (HCF) of water used

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 5.80	$ 7.08	$ 7.56	$ 8.48	$ 9.28	$ 10.13	$ 11.01	$ 11.96
Change	$ 1.28	$ 0.48	$ 0.92	$ 0.80	$ 0.84	$ 0.88	$ 0.95

Projected Sewer Service Charges for the typical **bi-monthly** bill*

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 72.27	$ 92.08	$ 98.30	$ 110.26	$ 120.68	$ 131.64	$ 143.12	$ 155.50
Change	$ 16.36	$ 6.22	$ 11.96	$ 10.42	$ 10.96	$ 11.48	$ 12.38

**Based on average water consumption of 13 billable units or HCF*

Single Family Residential Customer – Low Income

Rates based on **per billable unit** or per hundred cubic feet (HCF) of water used*

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 4.00	$ 4.89	$ 5.22	$ 5.85	$ 6.41	$ 6.99	$ 7.60	$ 8.25
Change	$ 0.89	$ 0.33	$ 0.63	$ 0.55	$ 0.58	$ 0.61	$ 0.66

**Water consumption up to 18 billable units or HCF per billing period discounted by 31%*

Projected Sewer Service Charges for the typical, low income **bi-monthly** bill*

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$52.02	$ 63.54	$ 67.84	$ 76.08	$ 83.28	$ 90.84	$ 98.76	$ 107.30
Change	$ 11.52	$ 4.30	$ 8.24	$ 7.20	$ 7.56	$ 7.92	$ 8.54

**Based on average water consumption of 13 billable units or HCF*

ATTACHMENT B (continued)

Commercial and Multi-Family

Rates based on **per billable unit** or per hundred cubic feet (HCF) of water used

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 5.80	$ 7.08	$ 7.56	$ 8.48	$ 9.28	$ 10.13	$ 11.01	$ 11.96
Change	$ 1.28	$ 0.48	$ 0.92	$ 0.80	$ 0.84	$ 0.88	$ 0.95

Projected Sewer Service Charges for the typical small multi-family **bi-monthly** bill (up to 4 units)*

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 145.00	$ 177.00	$ 189.00	$ 212.00	$ 232.00	$ 253.26	$ 275.26	$ 299.00

**Based on average water consumption of 15 billable units or HCF*

Projected Sewer Service Charges for the typical large multi-family **bi-monthly** bill (5 units or more)*

CURRENT	OCT 2024	MAR 2025	JULY 2025	JAN 2026	JULY 2026	JULY 2027	JULY 2028
$ 858.40	$ 1,047.84	$ 1,118.88	$ 1,255.04	$ 1,373.44	$ 1,499.24	$ 1,629.48	$ 1,770.08

**Based on average water consumption of 148 billable units or HCF*

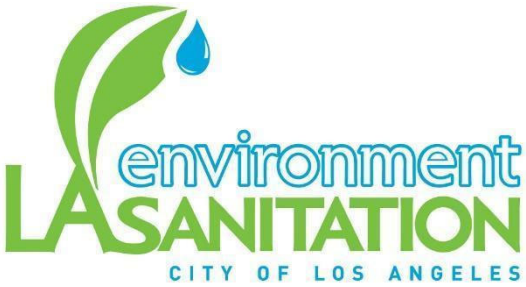
ATTACHMENT C

DRAFT

WASTEWATER COST OF SERVICE STUDY

BLACK & VEATCH PROJECT NO. 416393

PREPARED FOR



City of Los Angeles, CA

02 MAY 2024

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Acronyms

AWPF	Advanced Water Purification Facility
B	Billion
Black & Veatch	Black & Veatch Corporation
BOD	Biochemical Oxygen Demand
CIP	Capital Improvement Program
City	City of Los Angeles
CWP	Clean Water Program
DCTWRP	Donald C. Tillman Water Reclamation Plant
Districts	Los Angeles County Sanitation Districts
DWCF	Dry Winter Compensation Factor
EPA	Environmental Protection Agency
FY	Fiscal Year (July 1 to June 30)
HCF	Hundred Cubic Feet
HWRP	Hyperion Water Reclamation Plant
I&I	Inflow and Infiltration
LADWP	Los Angeles Department of Water and Power
LAGWRP	Los Angeles-Glendale Water Reclamation Plant
LASAN	Los Angeles Sanitation and Environment
lbs	Pounds
M	Million
mgd	Million Gallons per Day
mg/L	Milligrams per liter
MoP27	Manual of Practice No. 27
O&M	Operation and Maintenance
QSF	Quality Surcharge Fees
SCM	Sewer Construction and Maintenance Fund
SSC	Sewer Service Charge
Study	Wastewater Cost of Service Study
TIWRP	Terminal Island Water Reclamation Plant
TSS	Total Suspended Solids
TY	Test Year
WEF	Water Environment Federation
WIFIA	Water Infrastructure Finance and Innovation Act
WWTP	Wastewater Treatment Plant

Legal Notice

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The projections set forth in this report are intended as "forward-looking statements." In formulating these projections, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. While Black & Veatch believes the assumptions are reasonable, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that occur. As such, Black & Veatch does not take responsibility for the accuracy of data or projections provided by or prepared on behalf of LASAN, nor does Black & Veatch have any responsibility for updating this report for events occurring after the date of this report.

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1.0 Executive Summary

The City of Los Angeles' (City) Sanitation & Environment (LASAN) is responsible for the conveyance, treatment, and reclamation of wastewater generated by residential, commercial, and industrial users in the City of Los Angeles and certain surrounding communities. LASAN manages the Clean Water Program (CWP), which operates and maintains one of the world's largest wastewater conveyance and treatment systems. The system encompasses 6,700 miles of sewer pipelines, 42 pumping plants, four water reclamation plants, with a combined treatment capacity of 580 million gallons per day (mgd).

This report was prepared by Black & Veatch Corporation (Black & Veatch) in cooperation with LASAN in response to the recommendations on May 18, 2023, by City Council Motion (CF-23-0600-S9) that directed LASAN in conjunction with the City Attorney to prepare fee studies and recommendations[1]. This report includes a five-year financial plan, cost-of-service analysis, and the design of rates. The key objectives of the study were to:

- Review the financial plan for the CWP covering five-years for ongoing operations and planned capital improvements developed by LASAN.
- Allocate CWP's projected revenue requirements to the various customer classes in accordance with their respective service requirements.
- Develop a suitable rate schedule that produces revenues adequate to meet financial needs while recognizing customer costs of service and regulatory considerations such as Proposition 218 and applicable judicial decisions.

1.1 Wastewater System

The City's wastewater system provides conveyance, treatment, and disposal services for a service area of about 574 square miles, including most of the City and adjacent communities. Natural drainage patterns determine the service area within the Los Angeles Basin and generally do not conform to City boundaries. Therefore, some areas within City limits are served by other wastewater agencies, specifically the Los Angeles County Sanitation Districts (Districts).

The City's wastewater system consists of two distinct service areas: (1) Hyperion Service Area which encompasses 553 square miles in central, western, and northern areas of the City. These areas are tributary to the Hyperion Water Reclamation Plant. (2) Terminal Island Service Area which encompasses 21 square miles in the southern harbor area of the City. This area is a tributary to the Terminal Island Water Reclamation Plant. The Hyperion Service Area handles about 96% of the City's total wastewater flows.

1.2 Existing Facilities

To provide service to its customers, the City's wastewater system comprises different types of facilities throughout the service areas. These facilities are grouped into seven main categories:

1. **Conveyance**: The conveyance system consists of more than 6,700 miles of mains, over 100,000 maintenance holes, and other miscellaneous facilities. The conveyance system is split between primary sewers (greater than 15 inches in diameter) and secondary sewers (15 inches or smaller in diameter). The primary sewers are divided into 24 basins while the secondary sewers are divided into 240 basins. Both help transport the wastewater flow to the four treatment plants.

[1] Los Angeles City Clerk. Council File 23-0600-S9.
https://cityclerk.lacity.org/lacityclerkconnect/index.cfm?fa=ccfi.viewrecord&cfnumber=23-0600-S9

2. **Hyperion Water Reclamation Plant (HWRP):** The HWRP is the City's oldest and largest wastewater treatment facility. Located adjacent to Dockweiler Beach, HWRP has been operating since 1894. It has undergone several upgrades throughout the years and now has a capacity of 450 mgd.
3. **Donald C. Tillman Water Reclamation Plant (DCTWRP):** The DCTWRP began operation in 1985. It is in the Van Nuys neighborhood and has a capacity of 80 mgd. It currently generates 2.5 mgd of recycled water for irrigation and industrial purposes. All biosolids generated at DCTWRP are treated at HWRP.
4. **Los Angeles – Glendale Water Reclamation Plant (LAGWRP):** The LAGWRP began operation in 1976. It is located adjacent to the City of Glendale and has a capacity of 20 mgd. All biosolids generated at LAGWRP are treated at HWRP.
5. **Terminal Island Water Reclamation Plant (TIWRP):** The TIWRP began operation in 1935. It is in the San Pedro neighborhood and has a capacity of 30 mgd. TIWRP has a 12 mgd advanced water treatment capacity to generate high quality recycled water to help offset potable water use.
6. **Pumping Plants:** The pumping network consists of 42 pumping plants throughout the service areas. The Venice Pumping Station is the main center for monitoring and controlling all the pumping plants.
7. **Systemwide:** Systemwide consists of support facilities or services that apply to the entire wastewater system but are not part of the other six categories.

1.3 Clean Water Program

The CWP is a self-supporting enterprise through the Sewer Construction and Maintenance (SCM) Fund. The SCM Fund is an umbrella term used to describe a group of funds related to the CWP. The CWP receives no support from the City's General Fund and pays for all expenses associated with the program through direct appropriations and the payment of related costs. The annual budget for the fiscal year ending (FY) that spans between July 1 and June 30 is summarized for the CWP on Schedule 14 of the City's Budget[2].

As a self-supporting enterprise, LASAN must develop a financial plan for the CWP that provides sufficient revenues to meet all operation and maintenance (O&M) expenses, debt service requirements, capital improvement program (CIP), and direct appropriations.

1.4 Financial Plan

LASAN developed the financial plan that projects operating revenue, operating expenses, and capital financing costs for the CWP over a five-year planning period beginning July 1, 2024 and ending June 30, 2029. The key elements are summarized below:

- Operation and Maintenance Expenses: The O&M expenses are expected to increase from $543.1 million (M) in FY 2024-25 to $657.5M in FY 2028-29.
- Debt Service: The anticipated annual debt service payments range from $262.9M in FY 2024-25 to $328.6M in FY 2028-29. The debt service is associated with existing and proposed long-term debt issuances.
- Capital Improvements: The plan is expected to execute $3.1 billion (B) in capital projects from FY 2024-25 to FY 2028-29 through debt financing at $2.1B and cash financing for $1.0B.
- Reserves: LASAN will continue funding the existing operating reserve, debt service reserve, emergency reserve, and insurance reserve. These reserves are required by City policies and bond resolutions.
    - The legally required operating reserve is equivalent to 45 days of budgeted O&M expenses.

[2] Los Angeles City Budget and Financial Information. City Administrative Officer of Los Angeles (lacity.org).

- The debt service reserve is to pay principal and interest on senior lien bonds if there is insufficient money to pay the full amount when it is due. The required minimum equals the maximum annual debt service on all issued and outstanding senior lien bonds.
- The $5.0M emergency reserve is a bond resolution requirement.
- The $3.0M insurance reserve is a bond resolution requirement.

1.5 Adequacy of Existing Revenues to Meet Cost of Service

Based on the financial plan, the study recommends the revenue adjustments shown in Table 1-1 to meet the projected revenue requirements for the five-year planning period. These do not represent proposed rate increases to customers. Rather, these represent the additional revenue increases the CWP needs to meet its obligations, maintain operating and reserve balances, and continue investing in the wastewater system infrastructure.

Table 1-1 Proposed Revenue Adjustments

Fiscal Year	Effective Date	Revenue Adjustment
FY 2024-25	October 1, 2024	25.0%
FY 2024-25	March 1, 2025	7.0%
FY 2025-26	July 1, 2025	9.75%
FY 2025-26	January 1, 2026	9.75%
FY 2026-27	July 1, 2026	7.0%
FY 2027-28	July 1, 2027	7.0%
FY 2028-29	July 1, 2028	7.0%

1.6 Cost of Service Analysis

The cost-of-service analysis allocates the costs to the various customer classes of service fairly and equitably. The methodology used in the study is specific to wastewater operations. The following is a brief description of the methodology.

The wastewater cost-of-service allocation performed in this study follows the Functional Cost Allocation Method endorsed by the Water Environment Federation (WEF) Financing and Charges for Wastewater Systems, Manual of Practice 27 (MoP27) manual. The wastewater cost-of-service analysis allocates costs to the different customer classes in proportion to their use of the wastewater system. As recommended by WEF, Black & Veatch distributed functional costs or cost centers to volume and strength parameters. This allocation methodology produces unit costs for allocation to individual customer classes based on the projected customer service requirements.

1.7 Rate Design

The Right to Vote on Taxes Act, also known as Proposition 218, was passed by California voters in 1996 and added Article XIIIC and Article XIIID to the California Constitution. These articles provide the regulatory framework that guides and informs the rate-setting process. The cost-of-service analyses provide the cost nexus to validate the cost recovery is proportionate to the cost of providing the service when developing the proposed rate structures.

To minimize impacts, retain simplicity, and confirm the reasonable stability of revenue, Black & Veatch recommends the following:

- Retain the Sewer Service Charge (SSC) per hundred cubic feet (HCF) of wastewater flow.

  - Wastewater flow for single family residential and small multifamily (two to four units) customers is based on the lowest winter water use multiplied by a Dry Winter Compensation Factor (DWCF)[3]. The DWCF compensates for a rainy season with insufficient rainfall to obviate irrigation of outdoor plants.
  - Wastewater flow for large multifamily (five plus units) and non-residential customers is based on the percentage of the customers' water usage discharged to wastewater. The percentage of water usage returned as wastewater is known as the return factor. The current default return factor is 93%.
- Retain the low-strength SSC for industrial customers. These customers are monitored by the City's Industrial Waste Management Division and are charged strength charges separately. Therefore, the customers only pay for the flow component of the SSC.

Table 1-2 summarizes the recommended five-year SSC and low-strength SSC schedule.

Table 1-2 Proposed Five-Year SSC Schedule

Effective Date	Sewer Service Charge ($/HCF)	Low-Strength Service Charge ($/HCF)
October 1, 2024	$7.08	$4.15
March 1, 2025	$7.56	$4.38
July 1, 2025	$8.48	$5.01
January 1, 2026	$9.28	$5.41
July 1, 2026	$10.13	$6.00
July 1, 2027	$11.01	$6.50
July 1, 2028	$11.96	$7.12

- Retain the 31% low-income discount program on the SSC for the first 18 HCF of wastewater flow per two-month billing period, or the first 9 HCF for each one-month billing period. The discount program will continue to apply only to qualifying single family residential.
- Amend the SSCs for Districts customers to reflect their cost share more accurately. Districts customers benefit from the City's secondary conveyance system, but do not use the City's primary conveyance system and treatment plants.

Table 1-3 summarizes the recommended five-year Districts SSC schedule.

Table 1-3 Proposed Five-Year Districts SSC Schedule

Effective Date	Districts Sewer Service Charge ($/HCF)
October 1, 2024	$1.89
March 1, 2025	$1.95
July 1, 2025	$2.25
January 1, 2026	$2.38
July 1, 2026	$2.51
July 1, 2027	$2.63
July 1, 2028	$2.91

[3] Dry Winter Compensation Factor. Article 4.1 Sewer Service Charge.
<https://codelibrary.amlegal.com/codes/los_angeles/latest/lamc/0-0-0-162125>

- Amend the Quality Surcharge Fees (QSF) and Zero-Based Quality Surcharge Fees for industrial customers to reflect the updated cost of treating Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) characteristics in wastewater flow. QSFs are applied to industrial users who discharge wastewater flow with strengths that can be lower or higher than that of domestic sewage.

Table 1-4 summarizes the recommended five-year QSF schedule.

Table 1-4 Proposed Five-Year QSF Rate Schedule

Effective Date	BOD Rate ($/pounds of BOD)	TSS Rate ($/pounds of TSS)
October 1, 2024	$0.735	$0.642
March 1, 2025	$0.798	$0.698
July 1, 2025	$0.860	$0.745
January 1, 2026	$0.960	$0.832
July 1, 2026	$1.021	$0.860
July 1, 2027	$1.103	$0.920
July 1, 2028	$1.170	$0.972

2.0 Revenue and Revenue Requirements

To meet the costs associated with providing wastewater services to its customers, the CWP derives revenue from various sources, including SSCs, wholesale service contracts, industrial waste surcharges, sewerage facilities charges, and other operating and non-operating revenues. As a large utility with many projects, CWP is constantly looking for different sources of revenue, such as low interest debt, grants, and reimbursements, to fund wastewater infrastructure investments. The study has projected the future revenue required by analyzing future system needs.

The following sections provide a high-level summary of the financial plan developed by LASAN.

2.1 Customer Data

2.1.1 Customer Classes

The City's customers consist of two major customer categories.

1. City of Los Angeles: These customers reside within the City boundaries and receive full wastewater conveyance and treatment services from the City of Los Angeles.
2. Los Angeles County Sanitation Districts: These customers primarily reside within the City boundaries but receive only secondary conveyance services from the City of Los Angeles. While these residents reside within the City's boundaries, having the Districts provide primary conveyance and treatment services is cost-efficient due to natural drainage patterns.[4]

Within these two major customer categories, there are four classes:

1. Single Family Residential: These customers are primarily related to domestic sewage production from single residential dwelling premises[5]. Single family residential is further subdivided into general and low-income. Low-income customers qualify for the Los Angeles Department of Water and Power's (LADWP) EZ-SAVE program. To be eligible for the program, customers must meet household income requirements[6].
2. Small Multifamily: These customers are primarily related to domestic sewage production from a premise consisting of multiple residential dwellings of 4 units or less served by a single water meter. Multiple residential dwellings include apartment houses, condominiums, stock cooperatives, and community apartments.
3. Large Multifamily: These customers are primarily related to domestic sewage production from premises consisting of multiple residential dwellings of 5 units or more served by a single water meter.
4. Non-Residential: These customers are primarily commercial, industrial, and government. Commercial customers are premises for business, trade, commercial or as a church or public meeting place. Industrial customers are premises related to manufacturing or processing activities. Government customers include municipal corporations, city, county, state, federal, and governmental agencies. Non-residential is further subdivided into non-residential and non-residential low strength. Low strength customers are monitored by the City's Industrial Waste Management Division and are charged strength charges separately. Therefore, the customers only pay for the flow component of the SSC.

[4] These customers are distinct from contract customers residing in Districts 4, 5, 9, 16, and 27 which are billed directly to the Districts for conveyance and treatment services provided.

[5] Premises are one or more contiguous parcels of real property under one ownership.

[6] Los Angeles Department of Water and Power. EZ-SAVE Program | Los Angeles Department of Water and Power (ladwp.com)

2.1.2 Billable Wastewater Flow

The customer classes generate wastewater flow that is collected and conveyed to the City's water reclamation plants. The wastewater flow is obtained from metered water consumption documented by LADWP. The wastewater flows are calculated as follows:

- Wastewater flow for single family residential and small multifamily customers is based on the lowest winter water use multiplied by a DWCF. The DWCF compensates for a rainy season with insufficient rainfall to obviate irrigation of outdoor plants.
- Wastewater flow for large multifamily and non-residential customers is based on the percentage of the customers' water usage discharged to wastewater. The percentage of water usage returned as wastewater is known as the return factor. The current default return factor is 93%.

Table 2-1 shows the projected billable wastewater flow for the study period.

Table 2-1 Billable Wastewater Volume

Line No.	Description	Fiscal Year Ending June 30,				
		2025	2026	2027	2028	2029
	(in thousands)	HCF	HCF	HCF	HCF	HCF
	City of LA Customers					
1	Single Family Residential	35,919	35,135	34,368	33,617	32,883
2	SFR Low Income	4,745	4,921	5,103	5,293	5,489
3	Small Multifamily	9,686	9,346	9,018	8,701	8,396
4	Large Multifamily	37,590	37,321	37,054	36,789	36,526
5	Non-Residential	29,051	28,506	27,972	27,449	26,936
6	Non-Residential Low Strength	1,844	1,844	1,844	1,844	1,844
7	Subtotal	118,835	117,072	115,359	113,693	112,075
	Districts Customers					
8	Single Family Residential	1,214	1,187	1,161	1,136	1,111
9	SFR Low Income	311	323	335	347	360
10	Small Multifamily	657	634	611	590	569
11	Large Multifamily	780	774	768	763	758
12	Non-Residential	1,013	994	976	959	942
13	Subtotal	3,974	3,912	3,852	3,795	3,740
14	**Total Billable Wastewater Volume**	**122,808**	**120,984**	**119,211**	**117,488**	**115,814**

2.1.2.1 Dry Winter Compensation Factor

The Dry Winter Compensation Factor is "a factor of 1.0 or less, which is multiplied by the winter water use of a premise to compensate for a rainy season with insufficient rainfall to obviate irrigation of outdoor planting."[7] Essentially the factor acknowledges that during dry winters, the customer will use more outdoor water, resulting in less wastewater flow contribution to the wastewater system.

A new methodology for determining the DWCF was derived through a litigation process that satisfied both the plaintiff and defendant which was implemented for FY 2022-23. That new methodology serves as the basis for the DWCF in this study.

2.1.3 Strength Loadings

Through the wastewater flow, the customer classes contribute strength loadings. Strength loadings are generated from pollutants that the City's water reclamation plants must treat before releasing them into Santa Monica Bay or

[7] City of Los Angeles. Ordinance 171531. February 27, 1997.

generating recycled water. The two primary pollutants in wastewater flow are Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS). BOD is the amount of dissolved oxygen needed to degrade the organic matter in wastewater. TSS is the total amount of suspended material in the wastewater flow. These pollutants have a strength in milligrams per liter (mg/L), which are then multiplied by the wastewater flow and conversion factor to arrive at loadings in pounds (lbs.).

Table 2-2 and Table 2-3 show the projected BOD and TSS loadings, respectively.

Table 2-2 BOD Loadings

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	lbs	lbs	lbs	lbs	lbs
	City of LA Customers					
1	Single Family Residential	80,178	80,178	80,178	80,178	80,178
2	SFR Low Income	9,990	9,990	9,990	9,990	9,990
3	Small Multifamily	21,917	21,917	21,917	21,917	21,917
4	Large Multifamily	82,665	82,665	82,665	82,665	82,665
5	Non-Residential	64,645	64,645	64,645	64,645	64,645
6	Subtotal	259,394	259,394	259,394	259,394	259,394
	Districts Customers					
7	Single Family Residential	2,710	2,710	2,710	2,710	2,710
8	SFR Low Income	655	655	655	655	655
9	Small Multifamily	1,486	1,486	1,486	1,486	1,486
10	Large Multifamily	1,714	1,714	1,714	1,714	1,714
11	Non-Residential	2,252	2,252	2,252	2,252	2,252
12	Subtotal	8,816	8,816	8,816	8,816	8,816
13	**Total BOD Loadings**	**268,210**	**268,210**	**268,210**	**268,210**	**268,210**

Table 2-3 TSS Loadings

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	lbs	lbs	lbs	lbs	lbs
	City of LA Customers					
1	Single Family Residential	71,014	71,014	71,014	71,014	71,014
2	SFR Low Income	8,848	8,848	8,848	8,848	8,848
3	Small Multifamily	19,412	19,412	19,412	19,412	19,412
4	Large Multifamily	73,217	73,217	73,217	73,217	73,217
5	Non-Residential	57,257	57,257	57,257	57,257	57,257
6	Subtotal	229,749	229,749	229,749	229,749	229,749
	Districts Customers					
7	Single Family Residential	2,400	2,400	2,400	2,400	2,400
8	SFR Low Income	580	580	580	580	580
9	Small Multifamily	1,316	1,316	1,316	1,316	1,316
10	Large Multifamily	1,518	1,518	1,518	1,518	1,518
11	Non-Residential	1,994	1,994	1,994	1,994	1,994
12	Subtotal	7,809	7,809	7,809	7,809	7,809
13	**Total TSS Loadings**	**237,557**	**237,557**	**237,557**	**237,557**	**237,557**

2.1.3.1 Mass Balance

A mass balance analysis was performed using FY 2021-22 water consumption records to estimate and validate annual wastewater flows and the BOD/TSS loadings for all customer classes. Data reliability is critical because historical wastewater flows, and strength loadings are used to project future customer class annual flows and loadings. The flows and loadings are used in the cost-of-service analysis (to derive the unit costs of service and user class costs). Therefore, a mass balance analysis is usually performed to verify the appropriateness of the estimated flows and loadings.

Mass balance is the process of matching and reconciling calculated total annual flows and loadings in pounds with the quantities received at the treatment facilities. The mass balance analysis considers all flows including inflow & infiltration (I&I) flows that enter the wastewater system. I&I flows refer to stormwater and/or groundwater that enters a wastewater system from sources such as cracked wastewater mains, manholes and vents. Variances between the actual flows and loadings received at the treatment facilities and the calculated flows and loadings are used to assess the validity of assumptions.

The mass balance incorporates all customer flows and loadings to the treatment plants. In addition to the flows from City of Los Angeles customers, flows and loadings from contract agencies, quality surcharge loadings, and septage flows and loadings. Contract agencies represent 29 agencies with agreements with the LASAN to convey their wastewater through the City's sewers to be treated at the City's treatment facilities. Quality surcharge loadings represent additional loadings from industrial customers that are above the average domestic strength. Septage flows and loadings represent wastewater hauled by truck to the septage handling facility at DCTWRP for processing.

The results of the mass balance analysis provide the normal strength for BOD, TSS and I&I flow and strength contribution.

Table 2-4 shows the mass balance analysis for FY 2021-22.

Table 2-4 Mass Balance Analysis

Line No.	Description	Billed Sewage	BOD Conc.	BOD Loadings	TSS Conc.	SS Loadings
		mgd	mg/L	1,000 lbs.	mg/L	1,000 lbs.
1	Single Family Residential (1)	9.48	350	10,102	310	8,947
2	SFR Low Income (1)	80.21	350	85,455	310	75,689
3	Small Multifamily (1)	19.79	350	21,083	310	18,673
4	Large Multifamily (2)	81.45	350	86,784	310	76,866
5	Non-Residential (2)	72.58	350	77,332	310	68,494
	Subtotal	263.51		280,756		248,670
6	Contract Agencies	40.30	223	27,357	217	26,631
7	Surcharge			12,470		6,867
8	Septage	0.05	3,222	447	10,352	1,437
9	Total to the Treatment Plants	303.86		321,031		283,606
10	Total measured at Treatment Plants	319.76	125	333,286	111	295,034
11	Estimated I&I	15.90	92	12,255	86	11,428
12	I&I Percentage	5.2%		3.8%		4.0%

(1) Single Family, Low Income, and Small Multifamily flows are based on winter water usage.
(2) Large Multifamily and Non-Residential have a default return factor of 93%.

The calculated average annual wastewater flow is 303.9 mgd, with BOD loadings of 321,031 thousand lbs., and TSS loadings of 283,606 thousand lbs. excluding I&I contributions. The analysis indicates a variance of 5.2% in flow, 3.8% in BOD loadings, and 4.0% in TSS loadings when comparing the calculated annual flow and loadings to the reported values. The variance is attributed to I&I flows.

The mass balance analysis supports the methodology of winter water use with a DWCF for single family residential and small multifamily, a return factor of 93% for large multifamily and non-residential. The analysis also indicates normal domestic strengths of 350 mg/L for BOD and 310 mg/L for TSS and I&I strengths of 92 mg/L for BOD and 86 mg/L for TSS.

2.2 Revenue

The CWP derives revenues from operating and non-operating sources. Operating revenues are split between (1) rate revenues, (2) other operating revenues, and (3) non-operating revenues.

- Rate revenues include SSCs, industrial waste fees, sewer permits, and related fees. In this study, only SSC revenues are recommended to have annual revenue increases. Further analysis is recommended for the other rate revenue.
- Other operating revenues include the O&M portion of contract agency payments, the O&M portion of recycled water operations, sewerage facility charges, interest income on all funds except construction and debt related funds, and other assorted miscellaneous revenue.
- Non-operating revenues include damage claims and settlements, interest on construction and debt related funds, Build America Bonds and Recovery Zone Economic Development Bonds subsidy payments, and other transfers.

The primary source of revenue for the SCM is the SSCs which represent about 90% of the total annual revenue.

Table 2-5 shows the projected revenues.

Table 2-5 Revenues

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	$	$	$	$	$
	Proforma Statement Layout					
	REVENUES					
	Operating Revenues					
1	Sewer Service Charges	637,319	637,956	638,594	639,232	639,872
2	Increased Rates (1)	162,198	383,719	519,884	601,579	689,124
3	Industrial Waste App Inspection and Quality Charges	19,700	19,700	19,719	19,719	19,739
4	Increased Rates (1)	1,391	3,924	5,475	6,402	7,394
5	Sewer Permit and Related Fees	1,621	1,621	1,621	1,621	1,621
6	Total User Charges Revenue	$822,229	$1,046,920	$1,185,294	$1,268,554	$1,357,749
7	Other Operating Revenue (2)	75,937	66,391	69,422	72,640	97,758
8	Subtotal Projected Operating Revenues	$898,166	$1,113,311	$1,254,715	$1,341,193	$1,455,507
9	Non-Operating Revenues (3)	29,444	15,038	14,776	14,979	15,360
10	**TOTAL SOURCES OF FUNDS**	**$927,609**	**$1,128,349**	**$1,269,492**	**$1,356,172**	**$1,470,867**

(1) Includes Sewer Service Charge and Industrial Waste Fees. Annual revenue increases are 25% on October 1 and 7% on March 1 for FYE 2024-25, 9.75% on July 1 and January 1 for FYE 2025-26, and 7% on July 1 thereafter for FYE 2026-27, FYE 2027-28 and FYE 2028-29. Sewer Service Charge also includes a 6% collection bill factor to account for unrealized revenues.
(2) Other operating revenues eligible to be included in the coverage calculation as defined in the Bond Resolutions.
(3) Non-operating revenues that are not eligible to be included in the coverage calculation.

2.3 Operating and Maintenance Expenses

The CWP incurs ongoing operating costs for the operation and maintenance of the wastewater system. The wastewater system incurs indirect and direct costs which must be funded to operate the existing facilities at the current service level. These costs include:

- Departmental Appropriations represent indirect costs from other City departments and offices that provide services to the CWP.
- Public Works represents indirect costs from other bureaus in the Department of Public Works that provide services to the CWP. LASAN is the biggest contributor of services by providing planning, operation and coordination services followed by the Bureau of Engineering which provides design and construction management services.
- Clean Water Special Purpose Fund represents costs associated with billing and collection of the SSC by the LADWP.
- Expense and Equipment represent direct costs associated with operations, expense and equipment. LASAN incurs the largest of such costs by providing contractual services, field equipment, operating supplies, furniture, and security improvements. Another significant cost is LASAN utilities for gas, water, electricity and telephone expenses at the plants and field locations.
- Recycled Water O&M represents costs associated with generating recycled water. The LADWP, the water purveyor of recycled water, reimburses these costs.

Table 2-6 shows the projected O&M expenses.

Table 2-6 O&M Expenses

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	$	$	$	$	$
1	Departmental Appropriations	13,836	14,383	14,953	15,547	16,167
2	Public Works	9,221	9,390	9,567	9,752	9,947
3	LASAN - PW	162,707	170,843	179,385	188,354	197,772
4	Clean Water Special Purpose Fund	2,981	2,981	2,981	2,981	2,981
5	Expense and Equipment	113,461	118,580	123,940	129,551	135,427
6	LASAN - Expense and Equipment	195,220	201,077	207,109	213,322	219,722
7	LASAN - Utilities	45,701	47,072	48,484	49,938	51,437
8	Recycled Water O&M	0	0	0	23,300	23,999
9	**Total**	**$543,126**	**$564,324**	**$586,418**	**$632,746**	**$657,451**

2.4 Debt Service Requirements

The CWP uses debt financing to help finance large capital improvement projects. Currently CWP has $2.6B in outstanding long-term debt. Debt financing options available to the CWP include (1) revenue bonds, (2) state revolving fund loans, (3) Water Infrastructure Finance and Innovation Act (WIFIA) loans, and (4) commercial paper.

1. Revenue bonds are the most common debt financing tool. Revenue bonds are municipal bonds in which the repayment of the obligation is guaranteed by the operating revenues of the entity. For bonds, there are senior bonds that are prioritized for repayment ahead of subordinate bonds which have a lower priority during payback.

2. State revolving fund loans are capitalized loans subsidized by federal grants, state appropriations and dedicated revenues that are repaid over time following the completion of a specific capital project.

3. WIFIA is a federal credit program administered by the Environmental Protection Agency (EPA) and was established in 2014 to help fund wastewater infrastructure projects. Similar to state revolving loans, they are specific to certain capital projects.

4. Commercial paper is an unsecured, short-term debt used to bridge the gap between when capital costs are incurred, and funds are received from long-term debt from bonds or loans.

Lending covenants associated with the issuance of bonds include terms defining the debt coverage ratio. For LASAN, the minimum debt service coverage ratio (net operating income divided by the current debt service) required by covenant is 1.25x for senior lien debt and 1.1x for all debt. Even with the minimum requirements set forth by the bond resolution, the City sets a target of 2.45x for senior lien debt and 1.45x for all debt to maintain the high bond ratings that decrease the cost of borrowing. As of the date of this report, the CWP is meeting its covenant requirements and the rating agencies have affirmed the City's high bond ratings, but the revenue adjustments discussed in this report are required for those ratings to be maintained.

Table 2-7 shows the existing and projected debt service payments.

Table 2-7 Long-Term Debt Service

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	$	$	$	$	$
	Debt Service					
	Senior Lien Bonds					
1	Existing Senior Lien Bonds (1)	61,290	49,725	61,547	71,574	65,523
2	Additional Senior Lien Bonds (2)	0	11,284	14,873	31,184	43,001
3	Total Senior Lien Bonds Debt Service	$61,290	$61,009	$76,420	$102,758	$108,524
	Subordinate Bonds					
4	Existing Subordinate Bonds (3)	164,953	177,866	167,113	138,415	141,983
5	Additional Subordinate Bonds (4)	17,677	31,931	37,431	50,902	63,979
6	Total Subordinate Lien Bonds Debt Service	$182,630	$209,798	$204,544	$189,317	$205,962
7	State Revolving Loans	13,606	0	0	0	0
8	Commercial Paper Interest Expense (5)	5,367	7,564	10,208	10,208	10,208
9	WIFIA Loan (6)	0	3,919	3,919	3,919	3,919
10	**Subtotal All-In Debt Service**	**$262,892**	**$282,289**	**$295,091**	**$306,202**	**$328,613**
	Other Expenditures					
11	Cash Financing of Construction	170,671	167,794	174,267	178,435	185,473
12	**Subtotal Other Expenditures**	**$170,671**	**$167,794**	**$174,267**	**$178,435**	**$185,473**
13	**TOTAL USES OF FUNDS**	**$924,376**	**$961,116**	**$1,006,587**	**$1,064,748**	**$1,259,839**
	Projected Debt Service Coverage (7)					
14	Total Senior Debt	5.51x	8.79x	8.45x	6.52x	6.98x
15	Total Senior and Subordinate Debt	1.26x	1.76x	2.07x	2.11x	2.22x

(1) Represents principal and interest becoming due and payable on all Senior Lien Bonds issued and Outstanding in each Fiscal Year, net of Refundable Credits.
(2) Assumes the issuance of additional Senior Bonds in the amounts of $172 million, $55 million, $249 million, $181 million, and $175 million in FYE 2024-25, FYE 2025-26, FYE 2026-27, FYE 2027-28, and FYE 2028-29, respectively, with 30-year amortization structured on a level debt service basis at an interest rate of 5.00%.
(3) Represents principal and interest becoming due and payable on all Existing Subordinate Bonds issued and Outstanding in each Fiscal Year.
(4) Assumes the issuance of additional Subordinate Bonds in the amounts of $172 million, $55 million, $249 million, $181 million, and $175 million in FYE 2024-25, FYE 2025-26, FYE 2026-27, FYE 2027-28, and FYE 2028-29, respectively, with 30-year amortization structured on a level debt service basis at an interest rate of 5.00%.
(5) Reflects varying levels of issuance of Wastewater System Commercial Paper Notes to fund needs of capital projects and interest at an assumed annual interest rate of 3.0%.
(6) Assumes the issuance of WIFIA Loan in the amounts of $224 million in FYE 2025-26, with 30-year amortization structured on a level debt service basis at an interest rate of 1.75%.
(7) Debt Service Coverage Targets are 2.45x for Senior Debt and 1.45x for Total Debt. Minimum requirement set forth by financial institutions are 1.25x for Senior Debt and 1.10x for Total Debt.

2.5 Capital Improvement Program

The CWP develops a multi-year capital improvement program that identifies projects to be executed during the study period as shown in Table 2-8. The costs estimated for the projects are set forth below based on two primary cost centers: Conveyance and Treatment. A cost center in wastewater is a group of related assets contributing to a specific purpose. The costs may increase, and the expected execution dates of completion may be delayed due to unexpected events, circumstances, or conditions. The following are key projects included in the CIP.

- Conveyance System

- Secondary Sewer Renewal Program: The program evaluates all secondary sewers and rehabilitates damaged sewer reaches. Secondary sewers are those 15 inches or smaller in diameter.
- Pumping Plants: Rehabilitate various pumping plants throughout the service area targeting pumping plants 602 (Union Pacific), 616 (Cahuenga), 648 (Thompson), and 669 (Harris PI).

- Treatment Plants
  - Hyperion WRP: Perform several improvements to improve Hyperion's resiliency and prepare the plant to transform into an advanced water purification facility.
  - Donald C. Tillman WRP: Execute the Advanced Water Purification Facility (AWPF) project. The AWPF project will construct a microfiltration/reverse osmosis advanced oxidation process facility to produce recycled water.
  - Los Angeles – Glendale WRP: Construct a primary effluent equalization storage project that will add 2.5 million gallons of primary effluent storage, two primary tanks, three aeration tanks, two secondary clarifiers and associated upgrades.
  - Terminal Island WRP: Implement the digester insulation replacement project that will rehabilitate the insulation of the four digesters.
  - Recycled water is identified separately, but most projects at the four treatment plants are associated with upgrades and rehabilitation projects.

Table 2-8 Capital Improvement Projects

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029	Total
	(in thousands)	$	$	$	$	$	$
	Capital Improvement Program						
1	Conveyance System	94,911	61,744	123,789	123,730	173,811	577,985
2	Pumping Plant	5,346	13,682	15,291	4,398	4,873	43,590
3	Hyperion Water Reclamation Plant	87,098	71,904	97,278	130,393	51,118	437,791
4	LA-Glendale Water Reclamation Plant	9,401	104	37,522	37,737	9,164	93,929
5	Tillman Water Reclamation Plant	17,567	17,657	13,137	269	143	48,772
6	Terminal Island Water Reclamation Plant	13,471	7,447	3,867	311	15,274	40,369
7	System Wide Improvements	2,835	3,233	3,281	33,873	33,166	76,387
8	Recycled Water Projects	134,827	438,705	205,322	31,366	0	810,220
9	Construction Capital Subtotal	$365,455	$614,476	$499,486	$362,077	$287,549	$2,129,044
10	Non-Construction Capital Expenditures	187,690	179,890	188,170	193,198	199,468	948,415
11	**Total CIP**	**$553,145**	**$794,366**	**$687,656**	**$555,275**	**$487,017**	**$3,077,459**

The FY 2024-25 CIP is based on preliminary budget developed during the FY 2023-24 budget cycle. It is expected that the CIP for FY 2024-25 will be amended as the City Council approves its budget.

2.5.1 Capital Improvement Financing Plan

To execute the planned CIP, the CWP will use various funding sources as shown in Table 2-9. The primary funding sources available are: (1) system revenues, (2) wastewater service contracts, and (3) debt financing.

1. System revenues derived from user fees (i.e., SSCs) are used primarily to fund ongoing operations, but a portion is allocated for the capital program.
2. Wastewater service contract payments have two components: operating and capital. The capital payments from the 29 contract agencies are reimbursements to the City for certain capital improvements and related engineering and contract administration costs.
3. Debt financing provides the largest share of funds for capital projects. The CWP has traditionally relied on commercial paper, revenue bonds, and State and federal loans.

Table 2-9 Construction Fund Financing Plan

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029	Total
	(in thousands)	$	$	$	$	$	$
	Sources of Funding for Capital Improvement Program						
1	System Revenues	170,671	167,794	174,267	178,435	273,022	964,188
2	Debt Proceeds (1)	365,455	614,476	499,486	362,077	200,000	2,041,494
3	Contract Agency Capital Payments	17,000	12,096	13,904	14,763	13,995	71,757
4	**Total Sources of Funds**	**$553,145**	**$794,366**	**$687,656**	**$555,275**	**$487,017**	**$3,077,459**

(1) Reflects use of proceeds from Revenue Bonds, Commercial Paper Notes, SRF Loans, WIFIA Loans and/or other indebtedness in the indicated fiscal year.

2.6 Reserves

Reserves are established for several reasons, such as to cover shortfalls in operating revenues, maintain strong bond ratings, cover day-to-day operating costs, and ease the burden on ratepayers associated with large rate increases. The CWP has four established reserves, per the bond resolutions, that need to be maintained.

- The legally required operating reserve is equivalent to 45 days of budgeted O&M expenses.
- The debt service reserve is to pay principal and interest on senior lien bonds if there is insufficient money to pay the full amount when it is due. The required minimum equals the maximum annual debt service on all issued and outstanding senior lien bonds.
- The $5.0M emergency reserve is a bond resolution requirement.
- The $3.0M insurance reserve is a bond resolution requirement.

2.7 Financial Plan

The financial plan combines all projected revenue and expenses of the SCM Fund. Based on a review of revenues and expenses, the study recommends the revenue adjustments shown in Table 2-10 to meet the projected revenue requirements for the study period. Table 2-11, Lines 3, 5 and 7 show the additional revenues generated from these adjustments. These do not represent proposed rate increases to customers. Rather, these represent the overall revenue increases the CWP needs to meet the overall obligations and maintain current service levels.

The revenue adjustments represent the total additional revenue the utility needs to meet its total revenue requirements. The rate adjustments represent the rate increases needed by customer type to generate the identified total revenue. The rate adjustments may differ from revenue adjustments as each customer type places a different burden on the system and therefore the rates reflect the difference in demand.

Table 2-10 Proposed Revenue Adjustments

Fiscal Year	Effective Date	Revenue Adjustment
FY 2024-25	October 1, 2024	25.0%
FY 2024-25	March 1, 2025	7.0%
FY 2025-26	July 1, 2025	9.75%
FY 2025-26	January 1, 2026	9.75%
FY 2026-27	July 1, 2026	7.0%
FY 2027-28	July 1, 2027	7.0%
FY 2028-29	July 1, 2028	7.0%

The analysis examined several revenue adjustment alternatives that would provide the CWP with the revenue needed to maintain reserves and prepare the wastewater system to become more resilient. The recommended adjustments in Table 2-10 were selected through discussions with City staff and management.

The City adopted the last comprehensive rate and charge action in 2011 for a duration of 10 years. Therefore, the last revenue adjustment occurred on July 1, 2020 for FY 2020-21. Since FY 2020-21, operating and capital costs have increased resulting in the CWP relying on operating and capital fund balances to help operate and maintain the wastewater system. From July 2020 to July 2023, the Consumer Price Index for the Los Angeles region has seen a cumulative increase of 15% increase in the costs of goods and services. Therefore FY 2024-25 proposed increases are designed to help the CWP replenish fund balances necessary to maintain revenue stability and meet financial metrics. The remaining annual increases are designed to provide the necessary investment to create a resilient wastewater system that continues to meet permit requirements, regulatory standards, and climate change impacts.

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Table 2-11 Financial Plan

Line No.	Description	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
	(in thousands)	$	$	$	$	$
	SOURCE OF FUNDS					
1	Projected Beginning Cash Balance (1)	$143,593	$215,899	$282,465	$357,462	$443,422
	REVENUES					
	Operating Revenues					
2	Sewer Service Charges	637,319	637,956	638,594	639,232	639,872
3	Increased Rates (2)	162,198	383,719	519,884	601,579	689,124
	Industrial Waste App Inspection and					
4	Quality Charges	19,700	19,700	19,719	19,719	19,739
5	Increased Rates (2)	1,391	3,924	5,475	6,402	7,394
6	Sewer Permit and Related Fees	1,621	1,621	1,621	1,621	1,621
7	Total User Charges Revenue	$822,229	$1,046,920	$1,185,294	$1,268,554	$1,357,749
8	Other Operating Revenue	75,937	66,391	69,422	72,640	97,758
9	Subtotal Projected Operating Revenues	$898,166	$1,113,311	$1,254,715	$1,341,193	$1,455,507
10	Non-operating Revenues	29,444	15,038	14,776	14,979	15,360
11	**TOTAL SOURCES OF FUNDS**	**$1,071,202**	**$1,344,248**	**$1,551,957**	**$1,713,634**	**$1,914,289**
	USE OF FUNDS					
12	Operation and Maintenance (3)	543,126	564,324	586,418	632,746	657,451
13	**PROJECTED NET REVENUES**	**$355,039**	**$548,987**	**$668,298**	**$708,447**	**$798,055**
	Debt Service					
14	Senior Lien Bonds	61,290	61,009	76,420	102,758	108,524
15	Subordinate Bonds	182,630	209,798	204,544	189,317	205,962
16	State Revolving Loans	13,606	0	0	0	0
17	Commercial Paper Interest Expense	5,367	7,564	10,208	10,208	10,208
18	WIFIA Loan	0	3,919	3,919	3,919	3,919
19	**Subtotal All-In Debt Service**	**$262,892**	**$282,289**	**$295,091**	**$306,202**	**$328,613**
	Other Expenditures					
20	Cash Financing of Construction	170,671	167,794	174,267	178,435	185,473
21	**Subtotal Other Expenditures**	**$170,671**	**$167,794**	**$174,267**	**$178,435**	**$185,473**
22	**TOTAL USES OF FUNDS**	**$976,689**	**$1,014,407**	**$1,055,775**	**$1,117,383**	**$1,171,537**
23	Annual Cash Balance	($49,080)	$113,942	$213,717	$238,789	$299,330
24	Projected Ending Cash Balance	$94,513	$329,841	$496,182	$596,251	$742,752
25	Transfer from (to) Capital Fund	$121,386	($47,376)	($138,720)	($152,829)	($213,471)

(1) FY 2024-25 Cash Balance is as of 7/1/2024 and includes Clean Water Program O&M (Fund 760) and Clean Water O&M Reserve. FY 2025-26 forward includes transfers from or to Sewer Capital (Fund 761).

(2) Includes Sewer Service Charge and Industrial Waste Fees. Annual revenue increases are 25% on October 1 and 7% on March 1 for FY 2024-25, 9.75% on July 1 and January 1 for FY 2025-26, and 7% on July 1 thereafter for FY 2026-27, FY 2027-28 and FY 2028-29. Sewer Service Charge also includes a 6% collection bill factor to account for unrealized revenues.

(3) FY 2024-25 O&M expense is an estimate is based on the 2023-24 Adopted Budget, which serves as the basis for subsequent year projections. Generally, actual O&M expenditures have been less than amounts budgeted.

3.0 Cost of Service Analysis

The cost-of-service analysis requires that CWP recover needed revenues from rates allocated to customer types according to the service rendered. An equitable rate structure allocates the capture of revenue requirements to customer classes based on wastewater flow and strength loadings.

In analyzing CWP's cost of service for allocation to its customer types, Black & Veatch selected the annual revenue requirements for FY 2024-25 as the test year requirements to demonstrate the development of cost-of-service rates. Table 3-1 summarizes the total costs of service in FY 2024-25 that need to be recovered from rates.

Table 3-1 Cost of Service Revenue from Rates

Line No.	Description	Operating Costs	Capital Costs	Total Costs
	(in thousands)	$	$	$
	Revenue Requirements			
1	Departmental Appropriations	13,836		13,836
2	Public Works	9,221		9,221
3	LASAN - PW	162,707		162,707
4	Clean Water Special Purpose Fund	2,981		2,981
5	Expense and Equipment	113,461		113,461
6	LASAN Expense & Equipment	195,220		195,220
7	LASAN Utilities	45,701		45,701
8	Debt Service		262,892	262,892
9	Cash Financing of Capital Projects		170,671	170,671
10	Subtotal	$543,126	$433,563	$976,689
	Revenue Requirements Met from Other Sources			
	Operating Revenue			
11	Industrial Waste App Inspection and Quality Charges	21,091		21,091
12	Sewer Permit and Related Fees	1,621		1,621
	Other Operating Revenue			
13	Sewage Disposal Contracts O&M Charges	38,000		38,000
14	Sewer Permits	1,000		1,000
15	Sewerage Facilities Charge		13,000	13,000
16	Interest on Idle Funds	7,750		7,750
17	Other and Miscellaneous Revenues	39,466		39,466
18	Recycled Water Sales Revenues	6,146		6,146
19	RW Capital Cost Recovery		19	19
20	Funds Available	27,293	21,787	49,080
21	Annualize Rate Increase	(100,868)	0	(100,868)
22	Subtotal	$41,499	$34,806	$76,305
23	**Total COS to be Recovered from Rates**	**$501,627**	**$398,757**	**$900,385**

It is necessary to deduct revenues from other operating and non-operating sources as shown in Line 22. Line 11 corresponds to Table 2-11, Lines 4 and 5. Line 12 corresponds with Table 2-11, Lines 6 and 7. Lines 13-19 correspond with Table 2-11, Lines, 9 and 11. Line 20 corresponds with Table 2-11, Line 24 and represents the net annual cash balance during the fiscal year. The number is positive if the enterprise is drawing down funds already in the CWP. The number will be negative if the enterprise is replacing funds. Line 21 represents the additional revenues not collected because a rate increase is not effective for a full year, 9 months for the October increase and 4

months for the March increase versus a full 12 months for July. Lastly, Line 10 is the total revenue requirement that corresponds with Table 2-11, Line 23.

3.1 Cost Centers

The first step in conducting a cost-of-service analysis involves analyzing the cost of providing wastewater service by system cost centers to properly allocate the costs to various customer classes and design rates. The wastewater system has many facilities, but the two primary cost centers are conveyance and treatment.

- Conveyance: The conveyance system consists of more than 6,700 miles of sewer mains, over 100,000 maintenance holes, 42 pumping plants, and other miscellaneous facilities. The conveyance system is split between primary and secondary systems. The primary system has pipelines greater or equal to 16 inches in diameter that transport wastewater from the secondary system to the water reclamation plant. The secondary system has pipelines less than 16 inches that collect customer wastewater flow.
- Treatment: The treatment system consists of four water reclamation facilities. (1) Hyperion Water Reclamation Plant, (2) Donald C. Tillman Water Reclamation Plant, (3) Los Angeles-Glendale Water Reclamation Plant, and Terminal Island Water Reclamation Plant. These plants are composed of processes with specific facilities such as settling basins, aeration basins, disinfection, and odor control which are considered when allocating costs.

3.2 Cost Components

Once the cost centers are identified, the operating and capital costs are further separated into two primary cost-causative factors: (1) Volume, and (2) Strength.

- Volume: Volume costs represent the operating and capital costs of the system associated with the conveyance of wastewater flow to the water reclamation plants, and wastewater flow related costs within the plants. All volume costs vary directly with the quantity of wastewater flow.
- Strength: Strength costs represent those operating and capital costs associated with treating the pollutants. The treatment costs are specifically related to the strength of BOD and TSS. BOD is the amount of oxygen needed to degrade the organic matter in the wastewater flow. TSS is the total amount of suspended material in the wastewater flow.

3.3 Allocation to Cost Components

The next step of the cost-of-service process involves allocating the operating and capital cost elements based on the parameters most significantly influencing that cost element.

As previously mentioned, the wastewater system consists of various facilities designed and operated to fulfill a given function. For the wastewater system to provide adequate service to its customers, it must be capable of meeting the annual volume demands and handling the strength loadings placed on the system. Because not all customers and types of customers exert volume and strength loading demands in the same manner, the capacities of the various facilities must be designed to accommodate the demands of all classes of customers.

Each facility within the wastewater system has an underlying volume demand exerted by all customers to whom the volume cost factor applies. For those facilities designed solely to meet volume demand, 100% of the costs go to the volume factor. For facilities designed to meet volume and strength loading demands, the percentage of the costs is allocated between the volume and strength cost factors.

3.3.1 Allocation of Operating and Maintenance Expenses

The CWP books operating costs by cost center categories. Therefore, Black & Veatch used the components noted in Section 3.1 to allocate the operating expenses to the cost causative factors using the percentages in Table 3-2. LASAN annually performs cost accounting on operating expenses for the conveyance and treatment plants by cost

center and cost causative factors to derive the cost allocation percentages. The percentages are based on the latest available data which was for FY 2020-21.

Table 3-2 Allocation Percentages for O&M Expenditures

Line No.	Description	Volume		Strength	
		Primary	Secondary	BOD	SS
		%	%	%	%
	O&M Cost Allocations				
	Conveyance				
1	Primary Conveyance (greater or equal to 16")	100.00%			
2	Secondary Conveyance (less than 16")		100.00%		
	Treatment (1,2)				
3	HWRP	24.48%		41.38%	34.14%
4	DCTWRP	71.72%		22.42%	5.86%
5	LAGWRP	75.53%		20.84%	3.63%
6	TIWRP	27.95%		37.78%	34.27%
7	Average Treatment	32.58%		37.80%	29.61%
8	Average O&M	33.08%	10.68%	31.53%	24.70%

(1) The volume associated with the treatment plants is reflected in primary as it only applies to CLA customers. Districts customers do not receive treatment services.
(2) DCTWRP and LAGWRP do not treat solids at the WRPs, therefore strength allocations are lower than HWRP and TIWRP.

The detailed cost allocation of O&M expenses for FY 2024-25 are shown in Table 3-3. The cost allocations focused on the following three major cost elements:

1. Public Works - Bureau of Sanitation: These costs are primarily associated with salaries & benefits, materials and supplies, contractual services, smaller non-capital equipment, etc.
2. Expense & Equipment - Sanitation: These costs are primarily associated with larger contractual services, operating supplies, field equipment, construction materials, etc.
3. Expense & Equipment - Utilities: These costs are primarily associated with utilities (i.e., gas, water, electricity, etc.).

These three elements representing about 70% of all O&M expenses are directly associated with operating the wastewater system. All other cost elements are distributed based on the average O&M which is determined based on all the other categories. Also, as shown in Table 3-3, the allocated O&M expenses are reduced by revenues from other sources as shown in Line 54, which corresponds with Table 3-1, Line 22 to arrive at the net O&M expenses.

Table 3-3 Allocation of O&M Expenditures

Line No.	Description	Total Expense	Volume		Strength	
			Primary	Secondary	BOD	TSS
	(in thousands)	$	$	$	$	$
	Operation and Maintenance Expenses					
	Departmental Appropirations					
1	City Administrative Officer	420	139	45	133	104
2	City Attorney	769	254	82	242	190
3	City Clerk	38	13	4	12	9
4	Controller	0	0	0	0	0
5	Information Technology Agency	171	57	18	54	42
6	Emergency Management	57	19	6	18	14
7	Finance	2	1	0	1	1
8	General Services	7,229	2,392	772	2,280	1,786
9	Mayor	28	9	3	9	7
10	Personnel	2,122	702	227	669	524
11	Police	3,000	993	321	946	741
	Public Works					
12	Board of Public Works	2,402	795	257	757	593
13	Bureau of Sanitation					
14	Primary Conveyance	9,311	9,311	0	0	0
15	Secondary Conveyance	16,842	0	16,842	0	0
16	Hyperion	49,897	12,215	0	20,647	17,035
17	D.C.Tillman	8,560	6,140	0	1,919	502
18	LA-Glendale	2,815	2,126	0	587	102
19	Terminal Island	9,343	2,611	0	3,530	3,202
20	Industrial Waste	15,587	5,079	0	5,892	4,616
21	All Other	50,353	16,658	5,380	15,877	12,438
22	Transportation	235	78	25	74	58
23	Capital Finance Administration	735	243	79	232	181
24	General City Purposes	480	159	51	151	119
25	Liability Claims	5,370	1,777	574	1,693	1,327
26	Subtotal	$185,764	$61,767	$24,685	$55,723	$43,589
	Special Purpose Fund Appropriations					
	Clean Water Special Purpose Fund					
27	LADWP Billing/Collection Fee/Revenue Recovery	2,981	986	319	940	736
28	Engineering Special Services Fund	0	0	0	0	0

Table 3-3 Allocation of O&M Expenditures (Cont.)

Line No.	Description	Total Expense	Volume		Strength	
			Primary	Secondary	BOD	TSS
	(in thousands)	$	$	$	$	$
	Operation and Maintenance Expenses					
	Expense & Equipment					
29	General Services Expense and Equipment	5,654	1,870	604	1,783	1,397
	PW-Sanitation Expense and Equipment					
30	Primary Conveyance	7,111	7,111	0	0	0
31	Secondary Conveyance	12,863	0	12,863	0	0
32	Hyperion	102,687	25,138	0	42,492	35,057
33	D.C.Tillman	9,492	6,807	0	2,128	556
34	LA-Glendale	2,433	1,837	0	507	88
35	Terminal Island	13,416	3,750	0	5,069	4,598
36	Industrial Waste	615	201	0	233	182
37	All Other	46,604	15,418	4,979	14,695	11,512
38	Sanitation - Project Related	20,161	6,670	2,154	6,357	4,980
	Sanitation - Utilities					
39	Primary Conveyance	1,663	1,663	0	0	0
40	Secondary Conveyance	3,008	0	3,008	0	0
41	Hyperion	13,793	3,377	0	5,708	4,709
42	D.C.Tillman	11,717	8,404	0	2,627	687
43	LA-Glendale	2,785	2,103	0	580	101
44	Terminal Island	12,234	3,419	0	4,622	4,193
45	Industrial Waste	2	1	0	1	1
46	All Other	499	165	53	158	123
	Sewer Connection Financial					
47	Assistance Program	250	83	27	79	62
48	Sewer Service Charge Refunds	500	165	53	158	124
	Reimbursement of General					
49	Fund Costs	86,896	28,748	9,284	27,400	21,464
50	Subtotal	$357,362	$117,915	$33,345	$115,534	$90,569
	Recycled Water					
51	Recycled Water O&M	0	0	0	0	0
52	Subtotal	$0	$0	$0	$0	$0
53	Total Operating Expense	543,126	179,682	58,030	171,257	134,158
54	Less: Other Revenue	(41,499)	(13,729)	(4,434)	(13,085)	(10,251)
55	**Net Operating Expense**	**$501,627**	**$165,953**	**$53,596**	**$158,171**	**$123,907**

3.3.2 Allocation of Capital Expenditures

The CWP identifies capital costs and keeps fixed asset data of all wastewater system assets by cost center. Therefore, to derive the cost allocation percentages for FY 2024-25, Black & Veatch examined the City's fixed asset register as June 30, 2022 and assigned the assets to processes that could transition to the two primary cost centers noted in Section 3.1. Combining the existing fixed assets with the planned capital investments arrived at a total capital expenditure for the wastewater system.

The cost causative factor percentages in Table 3-4 were used to allocate the total capital expenditures. The percentages were derived from examining the existing fixed assets.

Table 3-4 Allocation Percentages for Capital Costs

Line No.	Description	Volume		Strength	
		Primary	Secondary	BOD	SS
		%	%	%	%
	Capital Allocation				
	Conveyance				
1	Primary Conveyance (greater or equal to 16")	100.00%			
2	Secondary Conveyance (less than 16")		100.00%		
	Treatment (1)				
3	HWRP	46.25%		32.63%	21.12%
4	DCTWRP	70.46%		19.30%	10.25%
5	LAGWRP	72.22%		21.22%	6.55%
6	TIWRP	58.50%		33.77%	7.73%
7	Systemwide	52.56%		30.12%	17.33%
8	Average O&M	38.71%	38.60%	12.92%	9.77%

(1) The volume associated with the treatment plants is reflected in primary as it only applies to CLA customers. Districts customers do not receive treatment services.

Understanding that capital expenditures vary annually through the study period, Black & Veatch used the existing fixed assets plus planned capital projects as a proxy for annual capital expenditures to normalize cost fluctuations between the cost causative factors. Line 13 represents the original cost (book value) less accumulated depreciation plus planned capital costs by cost causative factors.

Table 3-5 Allocation of Capital Costs

Line No.	Description	Total Expense	Volume		Strength	
			Primary	Secondary	BOD	TSS
	(in thousands)	$	$	$	$	$
	Capital Expenditures					
	Collection and Pumping					
1	Primary Conveyance	1,028,320	1,028,320	0	0	0
2	Secondary Conveyance	1,649,579	0	1,649,579	0	0
3	Pumping Stations	88,959	88,959	0	0	0
4	Treatment Plants					
5	Hyperion	1,003,671	245,699	0	415,319	342,653
6	D.C. Tillman	227,828	163,398	0	51,079	13,351
7	LA-Glendale	103,822	78,416	0	21,636	3,769
8	Terminal Island	164,548	45,991	0	62,166	56,391
9	Systemwide	7,179	3,773	0	2,162	1,244
10	Support Fixed Assets	50,498	19,549	19,490	6,526	4,932
11	Subtotal	$4,324,403	$1,674,105	$1,669,070	$558,889	$422,339
12	Other Capital Costs	185,519	71,820	71,604	23,977	18,119
13	**Total Fixed Asset + CIP**	**$4,509,923**	**$1,745,926**	**$1,740,674**	**$582,866**	**$440,458**
14	% Allocation	100.00%	38.71%	38.60%	12.92%	9.77%
15	**Capital Expenditures**	**$398,757**	**$154,371**	**$153,907**	**$51,536**	**$38,944**

3.4 Units of Service

To properly recognize the cost of service, each customer class receives its share of volume and strength costs. Following the allocation of costs, the total cost responsibility for each customer class is developed using unit costs of service for each cost factor and subsequently assigning those costs to the customer classes based on the respective service requirements of each. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories.

Table 3-6 summarizes the FY 2024-25 units of service for the various customer classes, which consist of volume and strength.

Table 3-6 Units of Service

		(1)	(2)	(3)	(4)	(5)
		Volume			Strength	
Line No.	Description	Contributed	Infiltration & Inflow	Total	BOD	TSS
	(in thousands)	HCF	HCF	HCF	lbs	lbs
	Capital Expenditures					
	City of Los Angeles Customers					
1	Single Family Residential					
2	General Services	35,919	1,970	37,889	80,678	71,641
3	Low Income	4,745	260	5,005	10,658	9,464
4	Small Multifamily	9,686	531	10,217	21,755	19,318
5	Large Multifamily	37,590	2,062	39,651	84,430	74,973
6	Non Residential	29,051	1,593	30,644	65,250	57,942
7	Non Residential - Low Strength	1,844	101	1,945	0	0
8	Subtotal	**118,835**	**6,518**	**125,352**	**262,770**	**233,337**
9	**Districts Customers**					
10	Single Family Residential					
11	General Services	1,214	67	1,280		
	Low Income	311	17	328		
12	Small Multifamily	657	36	693		
13	Large Multifamily	780	43	822		
14	Non Residential	1,013	56	1,068		
15	Subtotal	**3,974**	**218**	**4,191**	**0**	**0**
16	**Total Retail**	**122,808**	**6,736**	**129,544**	**262,770**	**233,337**
17	**Agency Customers**	19,664		19,664	27,357	26,631
18	**Excess Strength Surcharge**				9,058	3,770
19	**Total**	**142,472**	**6,736**	**149,208**	**299,185**	**263,738**

Volume represents wastewater flow contributed to the wastewater system. Wastewater flows are estimated from monthly and bi-monthly records provided by LADWP. LASAN contracted with LADWP to bill wastewater customers through their water customer billing system. Strength is associated with pollutant loadings associated with BOD and TSS characteristics. The pollutant loadings for each customer class are based on updated normal domestic strength for the entire wastewater system which is 350 milligrams per liter (mg/L) for BOD and 310 mg/L for TSS. The normal domestic strengths were determined in through the mass balance analysis.

In addition to wastewater flow, the system also is impacted by infiltration and inflow (I&I). I&I represents flow that enters the wastewater system from stormwater after precipitation or from groundwater leaking into the wastewater system through cracked pipelines. Volume and strengths are determined by performing a mass balance analysis on the system as shown in Table 2-4. The mass balance showed that the system receives about 5.2% of I&I wastewater

flow. The strength loadings for I&I are 92 mg/L for BOD and 88 mg/L for TSS, as I&I mainly consists of relatively clean water.

3.5 Cost of Service Allocations

The next process in the cost-of-service analysis is to apply the unit costs of service to each customer class based on their respective service requirements to determine the cost of service for each customer class. The total unit costs of service applied to the units of service required for each customer class results in the total cost of service for each customer class.

3.5.1 Units Cost of Service

The determination of unit cost of service for each cost causative factor is simply the total cost divided by the applicable units of service, as shown in Table 3-7. The net operating costs shown in Table 3-3, Line 55 are represented in Table 3-7, Line 4 plus 8. The capital costs shown in Table 3-5, Line 15 are represented in Table 3-7, Line 6 plus 10. The unit costs of service for each cost causative factor are calculated, as shown in Lines 12 and 13, respectively.

Table 3-7 Unit Cost of Service

		(1)	(2)	(3)	(4)	(5)
Line No.	Description	Total Costs	Volume		Strength	
			Primary	Secondary	BOD	TSS
	(in thousands)	$	HCF	HCF	lbs	lbs
	Number of Units					
1	City of Los Angeles Customers		125,352	125,352	262,770	233,337
2	Districts Customers		0	4,191	0	0
3	Total		125,352	129,544	262,770	233,337
	City of Los Angeles Customers					
	Net Operating Expense					
4	Total - $	500,019	165,953	51,988	158,171	123,907
5	Unit Cost - $/unit		1.3239	0.4147	0.6019	0.5310
	Plant Investment					
6	Total - $	392,601	154,371	147,750	51,536	38,944
7	Unit Cost - $/unit		1.2315	1.1787	0.1961	0.1669
	Districts Customers					
	Net Operating Expense					
8	Total - $	1,608		1,608		
9	Unit Cost - $/unit			0.3836		
	Plant Investment					
10	Total - $	6,156		6,156		
11	Unit Cost - $/unit			1.4687		
	Total Unit Costs of Service					
12	City of LA Customers - $/unit		2.5554	1.5934	0.7981	0.6979
13	Districts Customers - $/unit			1.8524		
	Total Cost of Service					
14	City of LA Customers - $	892,620	320,324	199,738	209,707	162,852
15	Districts Customers - $	7,764		7,764		
16	Total	$900,385	$320,324	$207,502	$209,707	$162,852

3.5.2 Distribution of Costs of Service to Customer Classes

Applying the unit costs calculated in Table 3-7, Lines 12 and 13, and the units of service in Table 3-6, we arrive at the customer class costs. This process is illustrated in Table 3-8. The costs attributable to each customer class are based on the cost causative factors described in Section 3.2. Each customer class places a burden on the system in different ways; thus, the allocation of the units is representative of this burden.

Table 3-8 Distribution of Costs to the Customer Classes

		(1)	(2)	(3)	(4)	(5)
Line			Volume		Strength	
No.	Description	Total Costs	Primary	Secondary	BOD	TSS
	(in thousands)					
	Unit Cost of Service					
	CLA Customers - $/unit		2.5554	1.5934	0.7981	0.6979
	Districts Customers - $/unit			1.8524		
	City of Los Angeles Customers					
	Single Family Residential					
	General Services					
1	Units		37,889	37,889	80,678	71,641
2	Costs - $	271,581	96,822	60,373	64,386	50,000
	Low Income					
3	Units		5,005	5,005	10,658	9,464
4	Costs - $	35,876	12,790	7,975	8,505	6,605
	Small Multifamily					
5	Units		10,217	10,217	21,755	19,318
6	Costs - $	73,233	26,109	16,280	17,362	13,483
	Large Multifamily					
7	Units		39,651	39,651	84,430	74,973
8	Costs - $	284,211	101,324	63,181	67,380	52,325
	Non Residential					
9	Units		30,644	30,644	65,250	57,942
10	Costs - $	219,649	78,307	48,829	52,074	40,439
	Non Residential Low Strength					
11	Units		217,893	136,600	143,604	111,518
12	Costs - $	8,071	4,971	3,100	0	0
13	Total City of LA Customers - $	$892,620	$320,323	$199,738	$209,707	$162,852

Table 3-8 Distribution of Costs to the Customer Classes (Cont.)

Line No.	Description	(1) Total Costs	(2) Volume Primary	(3) Volume Secondary	(4) Strength BOD	(5) Strength TSS
	(in thousands)					
	Unit Cost of Service					
	CLA Customers - $/unit		2.5554	1.5934	0.7981	0.6979
	Districts Customers - $/unit			1.8524		
	Districts Customers					
	Single Family Residential					
	General Services					
14	Units			1,280		
15	Costs - $	2,372		2,372		
	Low Income					
16	Units			328		
17	Costs - $	608		608		
	Small Multifamily					
18	Units			693		
19	Costs - $	1,283		1,283		
	Large Multifamily					
20	Units			822		
21	Costs - $	1,523		1,523		
	Non Residential					
22	Units			1,068		
23	Costs - $	1,978		1,978		
24	Total Districts Customers - $	$7,764	$0	$7,764	$0	$0
25	Total Cost of Service - $	$900,385	$320,323	$207,503	$209,707	$162,852

4.0 Rate Design

The initial consideration in deriving rate schedules for wastewater service is establishing equitable charges to the customers commensurate with the cost of providing that service. While the cost-of-service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity and extent of rate adjustments. Practical considerations sometimes modify rate adjustments by considering additional factors such as the extent of bill impacts, existing contracts, and local policies and practices.

4.1 Existing Rates

4.1.1 Sewer Service Charges

The existing SSCs consist of only a consumption charge. The consumption charge is based on units of wastewater flow (1 unit = 1 HCF = 748 gallons). Table 4-1 reflects the existing SSCs established on July 1, 2020.

Table 4-1 Existing SSC Schedule

Effective Date	Sewer Service Charge ($/HCF)	Districts Sewer Service Charge ($/HCF)	Low-Strength Service Charge ($/HCF)
July 1, 2020	$5.80	$0.87	$4.02

There are three distinct yet interrelated SSCs based on the services provided.

- The Sewer Service Charge applies to all customers. The City currently offers a low-income program with a 31% discount off the SSC for the first 18 HCF of wastewater flow per two-month billing period. The program applies only to qualifying single family residences.

  To help offset a portion of the discount, a low-income surcharge of $0.0244/HCF is applied to a portion of the SSC for all other customers.

  Districts Sewer Service Charge applies to City customers that receive treatment services from the Los Angeles County Sanitation Districts. The charge is set at 15% of the SSC and was designed to recover costs only associated with secondary conveyance services.

- The Low Strength Sewer Service Charge applies to non-residential industrial customers. The charge recovers costs associated with primary and secondary conveyance services, as well as the flow-related costs of treatment. The Industrial Waste Management Division charges for the strength related cost of treatment services separately.

4.1.2 Quality Surcharge Fees

The existing QSFs consist of a loading charge. The loading charge is based on units of pounds (1 unit = 1 lb.). Table 4-2 reflects the existing QSFs established on July 1, 2020.

- The QSF applies to non-residential industrial customers to reflect the cost of treating BOD and TSS characteristics in wastewater flow. QSFs are applied to industrial users who discharge wastewater with strengths that can be lower or higher than domestic sewage. The fees apply to Zero-Based Quality Surcharge Fees determination.

Table 4-2 Existing QSF Schedule

Effective Date	BOD Rate ($/pounds of BOD)	TSS Rate ($/pounds of TSS)
July 1, 2020	$0.604	$0.608

4.2 Proposed Rates

4.2.1 Sewer Service Charges

The proposed SSCs will continue to be a consumption only charge to minimize rate impacts, particularly to low consumption customers. The consumption charge will be based on wastewater flow using the same methodology as in the existing rates. Table 4-3 shows the derivation of the March 1, 2025 SSCs for FY 2024-25.

Table 4-3 Proposed SSCs for FY 2024-25

Description	Allocated Cost of Service	Total Volume	Sewer Service Charge
(in thousands)	$	HCF	$/HCF
City of Los Angeles Customers			
Residential, Multifamily, Non Residential (1)	$884,549	116,990	7.56
Non Residential - LS (2)	$8,071	1,844	4.38
Districts Customers			
Residential, Multifamily, Non Residential (3)	$7,764	3,974	1.95

(1) The allocated cost of service is derived from the addition of Column 1, Lines 4, 6, 8, 10, and 12 on Table 3-8. The total volume is derived from the Contributed HCF, Column 1, Lines 2 to 6 on Table 3-6.
(2) The allocated cost of service is derived from the addition of Column 1, Line 14 on Table 3-8. The total volume is derived from the Contributed HCF, Column 1, Line 7 on Table 3-6.
(3) The allocated cost of service is derived from the addition of Column 1, Lines 17, 19, 21, 23, and 25 on Table 3-8. The total volume is derived from the Contributed HCF, Column 1, Lines 11 to 14 on Table 3-6.

Table 4-4 summarizes the recommended five-year SSC schedule.

Table 4-4 Proposed Five-Year SSC Schedule

Effective Date	Sewer Service Charge ($/HCF)	Districts Sewer Service Charge ($/HCF)	Low-Strength Service Charge ($/HCF)
October 1, 2024	$7.08	$1.89	$4.15
March 1, 2025	$7.56	$1.95	$4.38
July 1, 2025	$8.48	$2.25	$5.01
January 1, 2026	$9.28	$2.38	$5.41
July 1, 2026	$10.13	$2.51	$6.00
July 1, 2027	$11.01	$2.63	$6.50
July 1, 2028	$11.96	$2.91	$7.12

The main differences between existing and proposed SSCs are as follows:

- The low-income surcharge will be removed for all customers. To help offset the discount provided to low-income customers, the CWP will rely on the City's General Fund.

- The Districts Sewer Service Charge will not be 15% of the SSC. The Districts SSC will more accurately reflect the costs the CWP incurs to provide service. In the cost-of-service analysis, Districts customers were identified separately, and costs were allocated based on their demand on the wastewater system.

4.2.2 Quality Surcharge Fees

The QSFs will continue to be applied in the same manner as the existing charges. The QSFs will apply to industrial customers monitored by the Industrial Waste Management Division for discharge wastewater flow with strengths that can be lower or higher than domestic sewage. The derivation of the March 1, 2025 QSFs for FY 2024-25 are shown in Table 3-7, Columns 4 and 5, Lines 12.

Table 4-5 summarizes the recommended five-year QSF schedule.

Table 4-5 Proposed Five-Year QSF Schedule

Effective Date	BOD Rate ($/pounds of BOD)	TSS Rate ($/pounds of TSS)
October 1, 2024	$0.735	$0.642
March 1, 2025	$0.798	$0.698
July 1, 2025	$0.860	$0.745
January 1, 2026	$0.960	$0.832
July 1, 2026	$1.021	$0.860
July 1, 2027	$1.103	$0.920
July 1, 2028	$1.170	$0.972

4.3 Typical Monthly Costs under Proposed Charges

Based on the proposed SSCs, the typical monthly bill for all customers will be adjusted according to their wastewater flows.

Table 4-6 compares typical monthly costs under existing SSC and the proposed SSC derived in this study for City and Districts customers contributing different wastewater volumes.

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Table 4-6 Typical Monthly Bill

Line No.	Description	Wastewater Flow	Existing	Fiscal Year Ending June 30,				
			2024	2025	2026	2027	2028	2029
		HCF	$/Month	$/Month	$/Month	$/Month	$/Month	$/Month
	City of LA Customers							
1	General (1)							
		0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		1	$5.82	$7.56	$9.28	$10.13	$11.01	$11.96
		2	$11.65	$15.12	$18.57	$20.25	$22.02	$23.92
		3	$17.47	$22.68	$27.85	$30.38	$33.03	$35.89
		4	$23.30	$30.24	$37.14	$40.51	$44.04	$47.85
		5	$29.12	$37.80	$46.42	$50.64	$55.05	$59.81
		6	$34.95	$45.37	$55.70	$60.76	$66.06	$71.77
		7	$40.77	$52.93	$64.99	$70.89	$77.07	$83.73
		8	$46.60	$60.49	$74.27	$81.02	$88.08	$95.69
		9	$52.42	$68.05	$83.56	$91.14	$99.09	$107.66
		10	$58.24	$75.61	$92.84	$101.27	$110.10	$119.62
		25	$145.61	$189.02	$232.10	$253.18	$275.26	$299.04
		50	$291.22	$378.04	$464.20	$506.35	$550.52	$598.09
		75	$436.83	$567.07	$696.30	$759.53	$825.78	$897.13
		100	$582.44	$756.09	$928.40	$1,012.70	$1,101.04	$1,196.18
		200	$1,164.88	$1,512.17	$1,856.80	$2,025.41	$2,202.08	$2,392.35
2	Low Income (2)							
		0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		1	$4.00	$5.22	$6.41	$6.99	$7.60	$8.25
		2	$8.00	$10.43	$12.81	$13.98	$15.19	$16.51
		3	$12.01	$15.65	$19.22	$20.96	$22.79	$24.76
		4	$16.01	$20.87	$25.62	$27.95	$30.39	$33.01
		5	$20.01	$26.09	$32.03	$34.94	$37.99	$41.27
		6	$24.01	$31.30	$38.44	$41.93	$45.58	$49.52
		7	$28.01	$36.52	$44.84	$48.91	$53.18	$57.78
		8	$32.02	$41.74	$51.25	$55.90	$60.78	$66.03
		9	$36.02	$46.95	$57.65	$62.89	$68.37	$74.28
		10	$40.02	$52.17	$64.06	$69.88	$75.97	$82.54
		18	$72.04	$93.91	$115.31	$125.78	$136.75	$148.57
3	Low Strength Industrial Customers							
		0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		25	$100.55	$109.41	$135.18	$149.97	$162.54	$177.97
		50	$201.10	$218.82	$270.36	$299.95	$325.09	$355.95
		100	$402.20	$437.65	$540.72	$599.90	$650.18	$711.90
		200	$804.40	$875.29	$1,081.44	$1,199.80	$1,300.36	$1,423.80
		300	$1,206.60	$1,312.94	$1,622.16	$1,799.69	$1,950.53	$2,135.70
		400	$1,608.80	$1,750.58	$2,162.88	$2,399.59	$2,600.71	$2,847.60
		500	$2,011.00	$2,188.23	$2,703.61	$2,999.49	$3,250.89	$3,559.50
		1,000	$4,022.00	$4,376.45	$5,407.21	$5,998.98	$6,501.78	$7,118.99

Table 4-6 Typical Monthly Bill (Cont.)

Line No.	Description	Wastewater Flow	Existing 2024	Fiscal Year Ending June 30, 2025	2026	2027	2028	2029
		HCF	$/Month	$/Month	$/Month	$/Month	$/Month	$/Month
	District Customers							
4	General (1)							
		0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		1	$0.87	$1.95	$2.38	$2.51	$2.63	$2.91
		2	$1.75	$3.91	$4.76	$5.03	$5.27	$5.83
		3	$2.62	$5.86	$7.14	$7.54	$7.90	$8.74
		4	$3.49	$7.82	$9.52	$10.06	$10.53	$11.65
		5	$4.37	$9.77	$11.90	$12.57	$13.17	$14.57
		6	$5.24	$11.72	$14.28	$15.08	$15.80	$17.48
		7	$6.12	$13.68	$16.67	$17.60	$18.43	$20.39
		8	$6.99	$15.63	$19.05	$20.11	$21.07	$23.31
		9	$7.86	$17.59	$21.43	$22.62	$23.70	$26.22
		10	$8.74	$19.54	$23.81	$25.14	$26.33	$29.14
		25	$21.84	$48.85	$59.52	$62.85	$65.84	$72.84
		50	$43.68	$97.70	$119.04	$125.69	$131.67	$145.68
		75	$65.52	$146.55	$178.55	$188.54	$197.51	$218.52
		100	$87.37	$195.39	$238.07	$251.39	$263.34	$291.36
		200	$174.73	$390.79	$476.15	$502.78	$526.69	$582.71

(1) General represents single family, small multi family, large multi family, and non-residential.
(2) Low Income represents single family customers receiving the discount up to 18 HCF.

4.4 Comparable Wastewater Utility Bills

Understanding the size and complexities associated with a wastewater system as the City's, the comparable agencies represent large wastewater utilities that serve a large metropolitan base in California. All surveyed agency rates are as of February 2024. Presented in Figure 4-1 are proposed rates compared to comparable agencies for a single-family residential customer using 7 HCF. A ¾" meter was used to analyze customer rates for agencies based on meter size. Based on the comparison, the City is currently a low-cost wastewater provider in the state. With the proposed rate increases, the City is a medium cost wastewater provider of the surveyed agencies.

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Figure 4-1 Comparison to Comparable Wastewater Utility Bills