

Issue Amount	Issue Description	Date of Final Official Statement	CUSIP No. of the Bonds	Captions Being Updated	Page No.
\$ 381,620,000	City of Phoenix Civic Improvement Corporation Junior Lien Wastewater System Revenue Bonds, Series 2023	10/24/23	71883PLW5 71883PMF1 71883PLX3 71883PMG9 71883PLY1 71883PMH7 71883PLZ8 71883PMJ3 71883PMA2 71883PMK0 71883PMB0 71883PML8 71883PMC8 71883PMM6 71883PMD6 71883PMN4 71883PME4	Schedule of Forecasted Net Operating Revenues, Senior Lien and Junior Lien Debt Service Requirements, and Estimated Senior Lien and Junior Lien Debt Service Coverages (actual results for most recently completed fiscal year only) Appendix A - Summary Information of the City of Phoenix Wastewater System	12 A-1

**SCHEDULE OF FORECASTED REVENUES AVAILABLE FOR SENIOR LIEN
DEBT SERVICE (NET OPERATING REVENUES), JUNIOR LIEN DEBT SERVICE
REQUIREMENTS (DESIGNATED REVENUES) AND JUNIOR LIEN
DEBT SERVICE COVERAGE
(actual results for most recently completed fiscal year)**

Fiscal Year	Revenues Available for Debt Service on Senior Lien Revenue Obligations (Net Operating Revenues)	Debt Service on Outstanding Senior Lien Revenue Obligations	Coverage of Total Debt Service on Senior Lien Revenue Obligations	Revenues Available for Debt Service on Junior Lien Revenue Obligations (Designated Revenues)	Debt Service on Outstanding Junior Lien Revenue Obligations	Coverage of Total Debt Service on Junior Lien Revenue Obligations
2024	\$ 165,011,378	\$ 20,837,250	7.92	\$ 144,174,128	\$ 62,683,125	2.30

APPENDIX A
SUMMARY INFORMATION OF THE CITY OF PHOENIX
WASTEWATER SYSTEM

ORGANIZATION AND ADMINISTRATION

The City of Phoenix has two separate sewer systems—storm drains and sanitary sewers. The City’s sanitary sewers, or Wastewater System (the “*System*”) has been operated as a financially self-supporting municipal utility service since July 1, 1980. It is organized as a functional division of the City’s Water Services Department (the “*Department*”). The Department also includes Water Operations as a separate functional division that also acts as a completely self-supporting utility service. The Department’s authority and responsibility is derived from the Phoenix City Charter and City Council adopted ordinances and resolutions. The Department is required to prepare and submit an annual budget for the Water and Wastewater Systems to the City Council prior to the beginning of each fiscal year. The City Council is required to hold a public hearing on the proposed budget and a specified notice of this hearing must be given to any bondholder who requests such notice in writing. If for any reason a budget is not adopted, the budget of the preceding fiscal year shall apply. The City Council adopts both the water and wastewater budgets, establishes water and wastewater rate structures, and sets overall policy for the Department.

The Water Services Director currently reports to a Deputy City Manager. The three Assistant Water Services Directors for the Finance and Administration, Water, Wastewater, and Technical Services Divisions report to the Water Services Director.

Ginger Spencer, Deputy City Manager, was named Deputy City Manager for the City in May 2021. Previously, Ms. Spencer served as Director of the City’s Public Works Department since 2017. During her 25 years of service with the city, Ms. Spencer has served in various leadership positions including Assistant Public Works Director, Deputy Public Works Director, Family Advocacy Center Director, Arts and Culture Administrator, and Special Assistant to the City Manager. Ms. Spencer serves on the board of directors for Phoenix Community Development & Investment Corporation, Arizona Science Center, and the Arizona City/ County Management Association. A native of Phoenix, Ms. Spencer holds a master of science in Public Policy and Management from Carnegie Mellon University, and a bachelor of arts in Spanish from Arizona State University. In 2022, Ms. Spencer was recognized as Who’s Who in American Infrastructure and in 2021, Ms. Spencer was recognized by the American Public Works Association as one of the Top 10 Public Works Leaders in the nation.

Troy Hayes, Water Services Director, has over 27 years of civil engineering and management experience in the water and wastewater industry. In this role prior to becoming the Water Services Director, he served as Assistant Water Services Director and Deputy Water Services Director for the Water Production Division. He holds a bachelor’s degree in Chemical Engineering from the University of Arizona, a master’s degree in Business Administration from the University of Phoenix and is a licensed professional civil engineer in the states of Arizona and Colorado. He also holds Arizona Department of Environmental Quality Grade 4 Operator License in all disciplines of water and wastewater.

Nazario Prieto, Assistant Water Services Director — Wastewater, has over 22 years of civil engineering and management experience in the water and wastewater industry. In his current role, Mr. Prieto oversees the Wastewater Engineering, Wastewater Collection, and Wastewater Treatment Divisions. Prior to becoming an Assistant Water Services Director, he served as a Deputy Water Services Director for the Assets and Development Planning Division. He holds a bachelor’s degree in Civil Engineering from the University of Texas at El Paso and is a licensed professional civil engineer in the State of Arizona.

Holly Rosenthal, Assistant Water Services Director — Finance & Administration, has over 27 years of private and public sector executive management experience in the design, construction and water industries. She currently oversees business planning, innovation and improvement; data analytics, economic forecasting and rate setting; operating and capital program budget and finance; supply chain; and customer services. Previously she served as Executive Director of the Onondaga County Metropolitan Water Board, and Treasurer and Deputy Executive Director of the Onondaga County Water Authority, successfully consolidating these two regional water utilities. Ms. Rosenthal holds a bachelor’s degree in Landscape Architecture/Environmental Studies and is completing a master’s in Public Administration from Syracuse University. She is a certified mediator and an accredited professional in Leadership in Energy and Environmental Design. Ms. Rosenthal serves on the Board of the Association of Metropolitan Water Agencies.

Jim Swanson, Assistant Water Services Director — Technical Services, has over 32 years of water/wastewater operations, regulatory, water resources, and management experience across the water and wastewater industry. In his current role, Mr. Swanson

oversees Technical Services which includes the following divisions: Environmental Services, Assets and Development Planning, Infrastructure Records, and Process Control. These divisions manage various aspects of the Departments water quality compliance, regulatory compliance, water resources and conservation, development planning, master planning, safety and training, security, GIS records, and process control across the City’s water and wastewater systems. Prior to becoming the Assistant Water Services Director, he served as Deputy Water Services Director over the Water Distribution Division and the Water Meter Division. Mr. Swanson holds a bachelor of science degree in Geology from Arizona State University, a grade 4 certified Water Distribution System Operator license, and a Water Treatment System Operator license from the State of Arizona.

FINANCIAL PLANNING AND RATES DEVELOPMENT

Financial planning and wastewater rates development are provided by the Finance Department in coordination with the Department. In addition, the Finance Department reviews the timeliness and accuracy of the billing services, provides all financial reporting and financial information, establishes financial policies, and recommends rates and fees. Wastewater rates are set to recover the direct and indirect costs of service.

In addition, the Water/Wastewater Rate Advisory Committee acts in an advisory capacity to the City Manager and City Council on water rate and fee structure. The committee is charged with annually reviewing the Department’s Capital Improvement Program, revenue requirements and operations and maintenance budget as they impact future water and wastewater rates.

BILLING AND COLLECTION RESPONSIBILITY

The Department is responsible for a combined municipal services bill for water, sanitary sewer, and solid waste services along with a jail tax, storm water management program tax and other general applicable taxes. Water meters are read, and all accounts are billed monthly. Payment of a regular bill is due 21 days after the bill issuance date. If payment is not received within three days after the due date, a late payment charge is assessed to the outstanding account balance. All customers receive one notice of nonpayment indicating a pending turnoff if not paid. If the total amount due is not received within ten days from the date of notice of nonpayment, the process to suspend water service to the premises begins and a turn-off fee of \$55.00 plus tax is charged to the customer’s account. The total amount of the bill, including all fees, is collected before water service is restored.

Phoenix offers customers experiencing temporary financial challenges, deferred payment plans to settle outstanding city services bills while retaining service. In addition, the City offers funding from the ‘Project Assist’ program which is funded by Water Services, Public Works and customer contributions. Project assist is an income-criteria based assistance program. Funding of this program has increased to \$1,000,000 annually. Phoenix also receives funding for water and wastewater bills from the Federal Low Income Household Water Assistance Program.

The Department bills more than 432,795 accounts in an approximately 543 square mile service area for a service population of approximately 1,662,607. Approximately 392,691 (90.73%) of the accounts are single family residential, 17,687 (4.09%) multi-family residential, and 22,417 (5.18%) non-residential. For fiscal year 2023-2024, the Department billed 60,678,648 hundred cubic feet (ccf) of wastewater flow of which 34,218,713 ccf (56.39%) was from single family residential accounts, 13,147,468 ccf (21.67%) from multi-family accounts, and 13,312,467 ccf (21.94%) from non-residential accounts. The largest single wastewater customer is Shamrock Foods, which accounted for 1.214% of wastewater rate revenue. The top fifteen [wastewater] customers accounted for \$10,075,442.52 (4.57%) of total wastewater rate revenue.

WASTEWATER RATE STRUCTURE

Wastewater rate schedules are adopted by the Mayor and City Council by ordinance, subject to certain statutory restrictions on rates charged to non-residents. Since July 1, 1980, wastewater rates have been reviewed annually, in accordance with the Council’s adopted policy. The City’s principal consideration in adjusting wastewater rates is to maintain the System’s operations as a completely self-supporting enterprise. Within the last twenty-one years, the City has approved thirteen rate revenue adjustments, with the most recent approved in June 2023 of 6.5% effective October 2023, 6.5% effective March 2024, and 7.0% effective March 2025.

The following table summarizes the effective dates of these adjustments and the corresponding annualized percentage change in wastewater rate revenue:

<u>Effective Date</u>	<u>Annualized % Change in Wastewater Rate Revenues (1)</u>
March 4, 2002.....	3.5
March 3, 2003	8.0
March 3, 2004	7.0
March 2, 2005	9.0
March 2, 2006	9.0
March 2, 2007	9.5
March 3, 2008	7.0
March 3, 2009	5.0
March 1, 2010	4.5
July 1, 2012	-7.5
March 1, 2016	2.0
March 1, 2017	2.0
October 1, 2023	6.5
March 1, 2024.....	6.5

- (1) There were no rate revenue adjustments in 2011, from 2013 through 2015, or from 2018 through 2022.
- (2) On June 28, 2023, Phoenix City Council approved Wastewater rate revenue increases of 6.5% effective October 2023, 6.5% effective March 2024, and 7.0% effective March 2025.

SEWER SERVICE CHARGES

Sewer Volume and Monthly Charges

The City’s current wastewater (sewer) rate structure includes several customer classes with rates for each customer class based on the relative strength of the sewage discharge. The higher the customer’s sewage strength, the higher the rate will be. The strength-based volume charges recover most costs except for costs associated with billing and collection and environmental compliance. The costs of billing and collection are recovered through a fixed monthly charge of \$1.00 per account. There is a minimum charge of \$4.50 per billing per month for all customers.

For sewer system customers, except industrial customers and self-service laundries, a percentage of winter (January through March) water usage is used to estimate sewage flows and calculate monthly bills. Estimated sewage flows for each customer are updated annually in July based on the current year’s winter usage. The annual estimated sewage flows for all customers, except industrial, are adjusted as necessary based on a sewer flow stabilization factor to ensure that the overall base level of revenue is achieved.

Environmental Charge

An environmental charge, which is assessed to recover the annual cost of complying with new environmental standards, was implemented on December 1, 1992. The current rate of \$0.7652 per ccf became effective on October 1, 2023. The charge is indicated as a separate line item on the customer’s bill. Revenues from this charge are used to cover all operation, maintenance, replacement, administrative and capital expenses necessary for water treatment processes and facilities to meet federal, state and county environmental regulations.

Industrial Wastewater Charges

In addition to the sewer service charges, industrial customers pay fees to recover the annual cost of the Industrial Pretreatment Program. Cost recovery for this program is through a pretreatment monitoring charge of \$0.2918 per ccf of sewage discharged to all industrial users and an annual pretreatment permitting fee of \$1,009 per location to the significant industrial users.

Commercial Inspection Fee

A commercial inspection fee of \$19.53 per month is applied to commercial and self-service laundries, car washes, bakeries, restaurants, service stations/auto repair shops, and all commercial customers with dining facilities. The fee recovers costs incurred by the Environmental Services Division to inspect and monitor the facilities.

DEVELOPMENT OCCUPATIONAL FEE

The Development Occupational Fee was established in May 1982 to be applied to new and existing water and wastewater service connections when the water meter size is increased, or additional meters are installed. The fee is currently \$600 for each single-family service connection and varies by meter size for other types of connections. The use of revenues from this fee is restricted to the funding of projects listed in the approved infrastructure financing plan adopted by City Council related to water and wastewater growth capital improvement projects or debt service on outstanding water and wastewater obligations issued for growth related purposes.

DEVELOPMENT IMPACT FEE

Development Impact Fees were established at various times in growth areas beginning in the late 1980s and are applied to new and existing water service customers when the water meter size is increased, or additional meters are purchased. The fee is charged in the northern and southern growth areas where most of the new development in the City is now occurring. There are separate charges for the northern area and the southern area. Fees for other meters vary according to size and maximum capacity. The fee is collected at the time the developer pays for building permits. Developers may be given Development Impact Fee credits or pay reduced fees if capital projects are constructed and contributed by the developer that typically are the responsibility of the City. The use of revenues from this fee is restricted to the funding of projects listed in the approved infrastructure financing plan adopted by City Council related to water and wastewater growth capital improvement projects or debt service on outstanding water and wastewater obligations issued for growth related purposes.

CONNECTIONS TO PUBLIC SEWERS, SEWER EXTENSIONS

All users of the System must obtain a permit prior to connecting to the System. Industrial users must satisfy more stringent permit requirements than residential and other users. Plans of the design and specifications, quantity, location, method of connection and size of all sewer connections are submitted for review and approval before a permit is issued.

For new subdivisions and developments within the City, public sewers are authorized by the Planning & Development Department Director. For new subdivisions and developments outside the City, public sewers are authorized by the Water Services Director. Such public sewers are to be constructed at the developer's expense in accordance with the City building codes and approved by the respective Director. The costs for the preparation and review of plans and specifications, the staking of the location of the new public sewers, the cost of inspecting the construction, the cost of acquiring rights-of-way and easements and preparation of as-built plans is the responsibility of the developer. The ownership of all public sewer lines, lift stations, treatment facilities, equipment and other appurtenances to the System which are maintained or accepted for maintenance by the Department is vested in the City.

The main sewer extension policy for areas beyond present City trunk lines requires the developer to pay all costs for engineering, design, and construction of main sewers. The main sewers must be of such size as to afford adequate capacity and service for their specific service areas to be served by City trunk sewers. The design and engineering are required to be in accordance with the specifications of the City and approved by the Water Services Director prior to construction. Upon completion, the main sewer line becomes the property of the City, and the City has exclusive control of connections to the proposed main sewer line.

PRIVATE SEWERAGE SYSTEMS

Except as provided in the Phoenix City Code, it is unlawful to construct or maintain within the City or an area of the City jurisdiction a private sewer system, including any privy, privy vault, septic tank, cesspool, onsite wastewater treatment system, or other facility intended or used for the disposal of sewage. However, where a public sanitary sewer is not available, a building may be connected to a private sewage disposal system. The private sewer system must be designed, installed, maintained, and operated or used at all times in strict conformance with State and County private sewer system requirements. When a public sewer becomes available for connection, the home or building must discontinue its use of the private sewer disposal system and connect to the public sewer.

INDUSTRIAL USERS, INDUSTRIAL PRETREATMENT PROGRAM

As part of its coordinated efforts to meet federal and state standards, the City requires industrial users of the System to meet certain requirements, obtain special permits and to participate in the City's Industrial Pretreatment Program ("IPP"). There are 167 permitted industrial users of which 98 are designated as a significant industrial user ("SIU") and are required to obtain a Class A permit prior to discharging industrial waste into the System. Significant industrial users must assist the Water Services Director in determining the exact concentration and volume of any pollutant intended for discharge to the System, and upon request, must allow the examination and copying of all relevant records or documents available to the user and the inspection of the user's business locations. Additionally, the user must provide the Water Services Director with self-monitoring reports relating to the user's industrial discharge and must allow the Department to take and remove samples of wastewater discharged to the System. The Water Services Director has authority to carry out a sampling program and perform the necessary analyses. If the testing shows that a variation exists between the user's certified data regarding discharge and the data monitored by the Department, the City may adjust charges to that user. Users found not to be in compliance with required standards are issued notices to conform to the proper standards. In some cases, civil monetary penalties have been assessed and collected when conformance has not been reached within the prescribed time frame.

WASTEWATER SYSTEM - FACILITIES

The System currently consists of two Wastewater Treatment Plants ("WWTP") — the 23rd Avenue WWTP, and the 91st Avenue WWTP, and one Water Reclamation Plant ("WRP") — the Cave Creek WRP. The 23rd Avenue WWTP has the capacity to treat 63.00 million gallons per day (mgd) of City of Phoenix-only flows, and the 91st Avenue WWTP has the capacity to treat 230.00 mgd of combined flow from the five participating cities. After the allocation of the increased capacity from the Unified Plant Expansion 2005, the City of Phoenix share of total capacity is 112.80 mgd.

To meet future anticipated wastewater flows in the northern areas, the City has the Cave Creek WRP. The facility can serve areas of new development north of State Route 101 and outside the service areas of the 91st Avenue and 23rd Avenue WWTPs. The first 8.00 mgd of capacity for the Cave Creek WRP became operational in December 2001, but the plant was shut down in October 2009 until flows return to higher levels. Opening and expansion of the Cave Creek WRP is currently under design to increase treatment requirements needed to service new development in the north. The Cave Creek WRP can be expanded to a capacity of 32.00 mgd.

Collection System

The wastewater collection system, which does not include the storm water system, contains more than 5,061 miles of sewers. These sewers range in size from 4 inches to 90 inches in diameter. There are 101,548 manholes and 8,280 cleanouts available for access to the main sewer system.

23rd Avenue Wastewater Treatment Plant

The 23rd Avenue WWTP provides wastewater treatment for central Phoenix and is located on a 55-acre site between Durango Street and Lower Buckeye Road at the extended alignment of 23rd Avenue. The plant is surrounded by various government maintenance and operation facilities. In general, the boundaries of the service area can be described as follows: the south boundary is Buckeye Road and Sky Harbor International Airport, the north boundary is Cactus Road, the east boundary is 56th Street, and the west boundary is the Black Canyon ("I-17") Freeway. The plant's service area includes the downtown sections of Phoenix and various residential neighborhoods near the central business district. The area is extensively developed with growth coming from redevelopment, including the conversion of older neighborhoods to commercial business or high density residential.

The original 23rd Avenue WWTP was built in 1931; however, most of the original facilities have been replaced. The current plant consists of facilities constructed in 1960 that have been doubled in size and were significantly modified and upgraded in 1994. The plant presently operates as an advanced wastewater treatment process. The plant is designed to treat a capacity of 63.00 mgd. The plant consists of a series of unit processes that remove pollutants from wastewater. Removed pollutants fall into two main categories, total suspended solids (“TSS”) and organics as measured by a chemical oxygen demand (“COD”) test. The treated water is disinfected to destroy disease-causing organisms. The treatment unit processes at the plant consist of preliminary screening and grit removal; primary sedimentation; secondary treatment consisting of biological activated sludge with nitrification and denitrification followed by secondary sedimentation; tertiary treatment consisting of chemical addition, flocculation, and filtration; and chlorination/dechlorination (disinfection). A large portion of the treated water is utilized by the Roosevelt Irrigation District (“RID”) to irrigate crops and the remainder is discharged to the Salt River. The residual solids, which are by-products of the aforementioned primary and secondary unit processes, are treated on site in anaerobic digesters. The digested solids are dewatered by centrifuges on site and then are trucked off site to be applied as a soil amendment to agricultural land, processed into a compost product, or landfilled.

91st Avenue Wastewater Treatment Plant

The 91st Avenue WWTP is located on a 560-acre site just east of 91st Avenue, south of Broadway Road and on the north side of the Salt River. Within a two-mile radius, the plant is surrounded by rural-agricultural development. Within a two-to-four-mile radius, scattered new residential developments are occurring mainly in the area to the north. The Gila River Indian Community is located on the south bank of the Salt River channel, approximately one mile south of the existing plant location. The 91st Avenue WWTP provides regional wastewater treatment for the multi-city Subregional Operating Group (“SROG”), including the City of Phoenix except for the central area served by the 23rd Avenue WWTP. The City of Phoenix participates with the cities of Glendale, Mesa, Scottsdale, and Tempe in the joint exercise powers agreement (“JEPA”) for the construction, operation, and maintenance of jointly used facilities, including the 91st Avenue WWTP, the Salt River Outfall Sewer (“SRO”), the Southern Avenue Interceptor (“SAP”), 99th Avenue Interceptor, and other related transportation facilities. As lead agency, the City is responsible for the planning, budgeting, construction, operation, and maintenance of the plant. The City provides all management personnel and accepts federal grants on behalf of the participants. The other cities pay for costs of operation and maintenance based on sewage flows and strengths, and for purchased capacity in plant and related transportation facilities based on approved engineering billing schedules.

The original 91st Avenue WWTP was built in 1958; however, most of the original facilities have been replaced. The portions of the plant as they are used today have been modified and upgraded since the original construction. The present-day plant operates as an advanced wastewater treatment process consisting of a nitrification/denitrification activated sludge treatment process. The treatment unit processes at the plant consist of preliminary screening and grit removal; primary sedimentation; secondary treatment consisting of biological activated sludge with nitrification and denitrification followed by secondary sedimentation; and chlorination/ dechlorination (disinfection). A large portion of the effluent is used by the Palo Verde Nuclear Generating Station for cooling reactors. A minimal amount is discharged into the Salt River for the Buckeye Irrigation District (“BID”) to withdraw downstream for crop irrigation. The remaining effluent is discharged to the Tres Rios wetlands for additional treatment, ground recharging and effluent reuse. The wetlands also provide flood control, ecosystem restoration, wildlife habitat and education components. The residual solids, which are by-products of the aforementioned primary and secondary unit processes, are treated on site in anaerobic digesters. Centrifuges on site dewater approximately 99% of the digested solids, and the remaining 1% is dewatered in solar drying beds. The dewatered solids are trucked off site to be applied as a soil amendment to agricultural land, processed into a compost product, or landfilled. In 2019 the City of Phoenix in partnership with Ameresco began commercial operations to convert biogas into renewable natural gas (“RNG”). The biogas is cleaned and compressed and then injected into a high-pressure natural gas pipeline and used as a renewable energy commodity. The biogas-to-RNG facility is capable of processing 3,250 standard cubic feet per minute (“scfm”) of the digester gas produced at the plant.

The 91st Avenue WWTP Unified Plant Expansion project series, which creates a unified plant rather than a series of individual plants, adds operational flexibility and dependability, and increases the total plant capacity. The first project, Unified Plant Expansion 2001 (“UP01”) was completed at the end of 2008 and increased capacity from 179.25 mgd to 204.50 mgd. The second project, Unified Plant Expansion 2005 (“UP05”) increased capacity to 230.00 mgd (the City’s capacity share is 112.80 mgd) and improved overall plant operational performance. Design and construction on UP05 were divided into two phases. Phase A was completed in 2010 and connects the effluent stream to the Tres Rios Wetlands. Construction of Phase B was completed in 2012 and improves the digestion and thickening processes.

Cave Creek Wastewater Reclamation Plant

The Cave Creek WRP provides wastewater treatment in the northeast area of Phoenix. The plant is located on a 116-acre plant site at the northeast corner of Deer Valley Road and Cave Creek Road. The plant began operations in December 2001 with an initial design capacity of 8.00 mgd. The plant can be expanded to a capacity of 32.00 mgd.

The Cave Creek WRP is a conventional activated sludge wastewater treatment plant with advanced treatment using nitrification/denitrification processes, and filtration. The plant consists of screening, primary clarification, nitrification/denitrification, secondary clarification, filtration, ultra-violet disinfection, and reclaimed water storage facilities. Sludge from the treatment plant is transferred through existing sewer pipelines to the 91st Avenue WWTP for further treatment and disposal. All process basins are covered and ventilated to control and scrub odors.

Due to lower wastewater flows resulting from prior economic conditions, the plant was shut down in October 2009, until flows return to higher levels. Currently, the lower flows are bypassed to the 91st Avenue WWTP where sufficient capacity exists to process the additional load. This temporary change results in more efficient operation of the System. Although currently shut down, the plant could provide additional water resources by treating wastewater and producing reclaimed water for irrigation of turf facilities larger than five acres in the service area and retractable groundwater recharge in the northeast area of Phoenix. The reclaimed water could then be delivered to turf facilities through a separate reclaimed water distribution system. During the shutdown of the plant, turf facilities previously using reclaimed water from the Cave Creek WRP are delivered raw CAP water. Long-term analysis of the System has determined a need to expand treatment capacity and return the plant to service. Before Cave Creek WRP is operational, the physical treatment process for the plant requires modification to meet advanced treatment requirements to use effluent discharge for recharge and reuse. The current plan is to rehabilitate and expand the plant treatment capacity to 16 mgd and return the plant to service in Fiscal Year 2025-26. However, in the event that additional flows are identified in the service area, an accelerated schedule to return the plant to service will be initiated.

HISTORICAL ANNUAL SEWAGE FLOW

The average annual City of Phoenix-only flows collected by the sewers and treated at the two WWTPs and the Cave Creek WRP for the past ten years in million gallons per day are as follows:

<u>Fiscal Year</u>	<u>23rd Avenue</u>	<u>91st Avenue</u>	<u>Cave Creek (1)</u>	<u>Total</u>
2013-14.....	33.06	84.11 (1)	—	117.17
2014-15.....	32.00	83.50 (1)	—	115.50
2015-16.....	32.15	80.75 (1)	—	112.90
2016-17.....	33.61	80.33 (1)	—	113.94
2017-18.....	32.13	83.76 (1)	—	115.89
2018-19.....	31.48	81.87 (1)	—	113.35
2019-20.....	32.69	83.52 (1)	—	116.21
2020-21.....	32.17	87.05 (1)	—	119.22
2021-22.....	32.38	96.49 (1)	—	128.87
2022-23.....	34.38	99.61 (1)	—	133.99
2023-24.....	33.86	100.83 (1)	—	134.69

(1) The Cave Creek WRP was shut down in October 2009, until flows return to higher levels. Flows are bypassed to the 91st Avenue WWTP.

ENVIRONMENTAL COMPLIANCE

The System must meet federal, state, and county regulations which are implemented through the permit programs administered by the responsible agencies. The Department has obtained or has applied for the required System permits. The System currently satisfies applicable water quality parameters.

City of Phoenix Civic Improvement Corporation Junior Lien Wastewater System Revenue Bonds

The City entered into purchase agreements with the City of Phoenix Civic Improvement Corporation for improvements to the System. The City of Phoenix Civic Improvement Corporation issued bonds for odor control facilities, process improvements and capacity expansions of the 91st Avenue WWTP, laboratory building improvements at the 23rd Avenue WWTP, purchase of land and construction of water reclamation facilities in the northern service area, new sewers and lift stations in growth areas and rehabilitation and replacement of sewers throughout the System. The City made a junior lien pledge of net operating revenues of the System (“*Designated Revenues*”) for the payment of principal of and interest on the bonds. Amounts due on the bonds and pursuant to the purchase agreements are as follows:

**City of Phoenix Civic Improvement Corporation
Junior Lien Wastewater System Revenue Bonded Debt Outstanding**

<u>Issue Date</u>	<u>Original Issuance</u>	<u>Purpose</u>	<u>Maturity Dates</u>	<u>Average Interest Rate</u>	<u>Bonds Outstanding As of 1-1-25</u>
04-15-14	\$ 127,810,000	Wastewater System Refunding	7-1-15/29	4.84%	\$ 54,735,000
11-16-16	225,325,000	Wastewater System Refunding	7-1-17/35	5.00	158,460,000
06-19-18	133,270,000	Wastewater System Improvements	7-1-25/43	4.68	133,270,000
11-15-23	381,620,000	Wastewater System Improvements	7-1-28/47	5.10	381,620,000
Total Junior Lien Wastewater System Revenue Bonded Debt					<u>\$ 728,085,000</u>

**City of Phoenix Civic Improvement Corporation
Schedule of Annual Debt Service Requirements
Junior Lien Wastewater System Revenue Bonded Debt Outstanding**

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024-25	\$25,155,000	\$36,309,125	\$61,464,125
2025-26	26,470,000	35,051,375	61,521,375
2026-27	27,850,000	33,727,875	61,577,875
2027-28	40,840,000	32,335,375	73,175,375
2028-29	42,940,000	30,293,375	73,233,375
2029-30	32,515,000	28,146,375	60,661,375
2030-31	34,210,000	26,520,625	60,730,625
2031-32	35,995,000	24,810,125	60,805,125
2032-33	37,875,000	23,010,375	60,885,375
2033-34	39,855,000	21,116,625	60,971,625
2034-35	41,935,000	19,123,875	61,058,875
2035-36	24,540,000	17,027,125	41,567,125
2036-37	25,770,000	15,800,125	41,570,125
2037-38	27,055,000	14,511,625	41,566,625
2038-39	28,410,000	13,158,875	41,568,875
2039-40	29,745,000	11,825,275	41,570,275
2040-41	31,105,000	10,463,625	41,568,625
2041-42	32,660,000	8,908,375	41,568,375
2042-43	34,290,000	7,275,375	41,565,375
2043-44	25,165,000	5,715,675	30,880,675
2044-45	26,485,000	4,394,513	30,879,513
2045-46	27,880,000	3,004,050	30,884,050
2046-47	29,340,000	1,540,350	30,880,350
	<u>\$728,085,000</u>	<u>\$424,070,113</u>	<u>\$1,152,155,113</u>

City of Phoenix Junior Lien Wastewater System Revenue Debt

The City entered into loan agreements with the Water Infrastructure Finance Authority of Arizona (“WIFA”) to finance the replacement of the Broadway Road Interceptor, rehabilitate approximately 41,000 linear feet of small diameter sewer and construct relief sewers in the southwest portion of the City. WIFA loaned funds derived in whole or in part from the United States Environmental Protection Agency pursuant to the federal American Recovery and Reinvestment Act of 2009 (the “Recovery Act”). The City made a junior lien pledge of Designated Revenues of the System for the payment of principal and interest on the loans. Amounts due on the loans pursuant to the loan agreement are as follows:

**City of Phoenix
Junior Lien Wastewater System Revenue Debt Outstanding**

<u>Issue Date</u>	<u>Original Issuance</u>	<u>Purpose</u>	<u>Maturity Dates</u>	<u>Average Interest Rate</u>	<u>Bonds Outstanding As of 1-1-25</u>
08-03-10	\$ 6,286,996	Wastewater System Improvements	7-1-18/26	2.97 %	\$ 1,942,722
06-01-11	3,909,270	Wastewater System Improvements	7-1-26/29	2.97	3,909,270
03-13-24	9,170,000(1)	Wastewater System Improvements	7-1-26/47	3.28	9,170,000
Total Junior Lien Wastewater System Revenue Bonded Debt					\$14,108,248

(1) Amount does not include \$1,000,000 loaned to the City but not required to be repaid pursuant to the American Recovery and Reinvestment Act and Bipartisan Infrastructure Law (the “Forgivable Principal”). Failure by the City to comply with all requirements of the loan agreement may result in a default under the loan agreement and cause the Forgivable Principal to be owed by the City. As of January 1, 2025 the City has not drawn any funds.

**City of Phoenix
Schedule of Annual Debt Service Requirements
Junior Lien Wastewater System Revenue Debt Outstanding**

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024-25	\$ 940,864	\$ 447,114	\$ 1,387,978
2025-26	1,259,750	419,189	1,678,939
2026-27	1,298,040	380,899	1,678,939
2027-28	1,337,496	341,444	1,678,940
2028-29	1,324,419	300,786	1,625,205
2029-30	331,022	260,485	591,507
2030-31	341,872	249,636	591,508
2031-32	353,077	238,431	591,508
2032-33	364,649	226,859	591,508
2033-34	376,600	214,908	591,508
2034-35	388,943	202,565	591,508
2035-36	401,691	189,817	591,508
2036-37	414,856	176,652	591,508
2037-38	428,453	163,055	591,508
2038-39	442,496	149,012	591,508
2039-40	456,998	134,509	591,507
2040-41	471,976	119,531	591,507
2041-42	487,445	104,062	591,507
2042-43	503,421	88,086	591,507
2043-44	519,921	71,586	591,507
2044-45	536,962	54,546	591,508
2045-46	554,560	36,947	591,507
2046-47	572,737	18,771	591,508
	\$ 14,108,248	\$ 4,588,890	\$ 18,697,138

City of Phoenix Outstanding Junior Subordinate Lien Obligations

The City entered into a Revolving Credit Agreement dated April 28, 2022 (the “*Wastewater Revolving Credit Agreement*”) with JPMorgan Chase Bank, National Association (the “*Wastewater Credit Agreement Provider*”) for a three-year loan period ending on April 25, 2025, during which the City may borrow, repay, and re-borrow amounts, but not exceeding \$200,000,000 outstanding in the aggregate at any one time (each a “*Loan*”). The initial Loan was prepaid in full on November 28, 2023 from proceeds of the junior Lien Wastewater System Revenue Bonds, Series 2023. Loans made under the Wastewater Revolving Credit Agreement (such loans, together with any obligations on a parity therewith, the “*Junior Subordinate Lien Obligations*”) are payable from Wastewater System Designated Revenues pledged to the City of Phoenix Civic Improvement Corporation Junior Lien System Revenue Bonds (“*Junior Lien Obligations*”) but are junior and subordinate to the Junior Lien Obligations. If any loans under the Wastewater Revolving Credit Agreement are outstanding on April 25, 2025, the City can, subject to certain conditions, convert the borrowing to a three-year term loan payable in twelve equal quarterly principal installments ending on April 25, 2028.

**City of Phoenix
Junior Subordinate Lien
Wastewater Revolving Loan Outstanding**

<u>Issue Date</u>	<u>Loan Amount</u>	<u>Purpose</u>	<u>As of 1-1-25</u>
04-28-2022	\$200,000,000	Wastewater System Improvements	\$ -

As of January 1, 2025, there is no Wastewater Revolving Loan outstanding.

Upon an event of default under the Wastewater Revolving Credit Agreement, the Wastewater Credit Agreement Provider may declare all amounts due (collectively, “*Payment Obligations*”) immediately due and payable. Events of default include, but are not limited to, failure to pay amounts to the Wastewater Credit Agreement Provider by the applicable grace period, failure to perform certain covenants such as issuance of obligations in violation of additional bonds test, sale of the City Wastewater System property in violation of applicable covenants, acceleration of other obligations payable from Wastewater System revenues on any lien in an amount of at least \$5,000,000, certain litigation, bankruptcy and insolvency events related to the Wastewater System and certain downgrades of Junior Lien Obligations. If Payment Obligations were to be accelerated, Designated Revenues would continue to be transferred to the extent available from the Revenue Fund to the Junior Lien Bond Fund on a monthly basis prior to payment of Payment Obligations.

WASTEWATER FINANCIAL PLANNING PROCESS AND CAPITAL IMPROVEMENT PROGRAM

The City has a long-standing practice of updating the six-year Wastewater Capital Improvement Program (the “*Wastewater CIP*”) and financial forecast each year for review by the City Council as part of the financial planning process. The Wastewater CIP, financial forecast and associated proposed wastewater rates are updated through a coordinated process between the Water Services Department and the Finance Department. The two departments recommend rates necessary to maintain wastewater revenue bond debt service coverage of 2.0 times or greater, a minimum available fund balance equal to annual total revenue bond debt service and long-term sustainability of the System. The most recent CIP was approved by the City Council per the adopted budget in June 2023, and approved Wastewater rate revenue increases of 6.5% effective October 2023, 6.5% effective March 2024, and 7.0% effective March 2025.

The Wastewater CIP programmed for fiscal years 2024-25 through 2028-29 totals \$1.689 billion. For fiscal year 2024-25, \$680.5 million was programmed. In general, Wastewater CIP includes projects for system studies; modifications at the 91st Avenue and 23rd Avenue WWTPs; improvements to odor control facilities and transmission mains; and rehabilitation and replacement of sewer mains throughout the system. The total Wastewater CIP Summary for fiscal years 2024-25 through 2028-29 is shown on the following page.

**City of Phoenix Wastewater System
Capital Improvement Program Summary**

	<u>2024 - 25</u>	<u>2025 - 26</u>	<u>2026 - 27</u>	<u>2027 - 28</u>	<u>2028 - 29</u>	<u>5-year Total</u>
Uses of Funds						
Treatment:						
91st Avenue WWTP (1).....	\$ 92,901,608	\$ 59,651,000	\$ 81,969,960	\$ 71,343,580	\$ 92,369,580	\$ 398,235,728
23rd Avenue WWTP.....	22,085,000	25,800,000	31,620,000	28,125,000	43,030,000	150,660,000
Tres Rios Wetlands.....	550,000	550,000	600,000	600,000	600,000	2,900,000
Subtotal Treatment.....	<u>115,536,608</u>	<u>86,001,000</u>	<u>114,189,960</u>	<u>100,068,580</u>	<u>135,999,580</u>	<u>551,795,728</u>
Collections:						
Lift Stations.....	50,145,000	11,590,000	15,800,000	12,290,000	12,550,000	102,375,000
North Phoenix Sewers.....	579,491	-	3,730,000	-	-	4,309,491
South Phoenix Sewers.....	7,499,431	-	-	-	-	7,499,431
Main Replacements.....	187,599,036	57,964,000	88,972,000	101,604,438	71,767,000	507,906,474
Multi-City Main Replacements.....	13,755,000	15,440,000	35,035,000	25,955,000	71,210,000	161,395,000
Sewer Other.....	288,455,000	1,250,000	1,250,000	9,085,000	1,600,000	301,640,000
Subtotal Collections.....	<u>548,032,958</u>	<u>86,244,000</u>	<u>144,787,000</u>	<u>148,934,438</u>	<u>157,127,000</u>	<u>1,085,125,396</u>
Other:						
Buildings.....	3,149,000	3,540,000	3,550,000	4,050,000	4,450,000	18,739,000
Automation.....	11,758,282	5,016,675	4,463,200	4,900,000	4,900,000	31,038,157
System Studies.....	1,010,000	5,000	5,000	5,000	5,000	1,030,000
Advanced Prufication.....	980,000	-	-	-	-	980,000
Subtotal Other	<u>16,897,282</u>	<u>8,561,675</u>	<u>8,018,200</u>	<u>8,955,000</u>	<u>9,355,000</u>	<u>51,787,157</u>
Total Uses.....	<u>\$680,466,848</u>	<u>\$180,806,675</u>	<u>\$266,995,160</u>	<u>\$257,958,018</u>	<u>\$302,481,580</u>	<u>\$1,688,708,281</u>
Sources of Funds						
Operating Funds:						
Development Occupation Fees.....	\$ 712,000	\$ 52,000	\$ 52,000	\$ 52,000	\$ 52,000	\$ 920,000
Wastewater Revenue.....	93,571,668	78,928,473	83,635,700	76,245,016	83,744,424	416,125,281
Subtotal Operating Funds.....	<u>94,283,668</u>	<u>78,980,473</u>	<u>83,687,700</u>	<u>76,297,016</u>	<u>83,796,424</u>	<u>417,045,281</u>
Other Financing:						
CIC - Wastewater Future Bonds (2).....	450,837,074	68,191,120	132,437,260	134,562,043	155,186,857	941,214,354
Other Cities (3)	48,695,541	33,635,082	47,955,200	41,451,521	63,498,299	235,235,643
Development Impact Fee (4).....	20,480,565	-	2,915,000	5,647,438	-	29,043,003
Grants/Other (5).....	66,170,000	-	-	-	-	66,170,000
Subtotal Other Financing.....	<u>586,183,180</u>	<u>101,826,202</u>	<u>183,307,460</u>	<u>181,661,002</u>	<u>218,685,156</u>	<u>1,271,663,000</u>
Total Sources.....	<u>\$680,466,848</u>	<u>\$180,806,675</u>	<u>\$266,995,160</u>	<u>\$257,958,018</u>	<u>\$302,481,580</u>	<u>\$1,688,708,281</u>

- (1) Represents total costs for all SROG cities for the 91st Avenue WWTP.
- (2) Consists of existing and future City Council bond authorizations.
- (3) Represents contributions from the other SROG cities for the 91st Avenue WWTP and other cities for non-SROG CIP.
- (4) Development Impact Fees are used as a source only when accumulated funds are available.
- (5) Federal & State Grants/Loans (other funding)

City of Phoenix Wastewater System
Comparative Statement of Revenues, Expenditures, Encumbrances, Debt Service,
Debt Service Coverage and Changes in Fund Balance (Non-GAAP Budgetary Basis)

	<u>2019-20</u>	<u>2020-21</u>	<u>2021-22</u>	<u>2022-23</u>	<u>2023-24</u>
Revenues:					
Sewer Service Charges.....	\$ 170,072,070	\$ 170,683,821	\$ 175,296,803	\$ 169,305,862	\$ 185,719,922
Environmental Charges	35,291,695	35,775,034	36,863,929	35,794,907	46,465,110
Development Occupational Fees.....	5,151,900	5,722,710	6,086,070	6,612,390	5,545,500
Interest.....	6,047,194	2,673,964	2,042,585	9,091,832	18,989,734
Industrial Pretreatment Fee.....	965,829	1,040,341	1,303,879	1,000,055	1,423,380
Other (1).....	9,187,975	11,974,499	21,243,838	20,062,124	8,041,887
Total Revenues	226,716,663	227,870,370	242,837,104	241,867,170	266,185,532
Operation & Maintenance Expenditures and Encumbrances:					
Administration	20,295,668	19,622,120	20,928,226	21,190,960	23,450,172
23rd Avenue WWTP.....	10,677,545	13,894,891	13,745,532	14,626,586	16,043,506
Reclamation Plants	817,619	805,496	777,244	864,026	1,047,453
Transfer to SROG Fund.....	23,320,624	23,143,503	23,829,474	24,940,842	28,281,727
Pollution Control.....	4,201,530	4,953,992	5,487,577	6,028,009	5,870,858
Sewer Maintenance and Collection	19,439,701	18,814,190	20,849,743	23,709,400	26,480,437
Total O&M Expenditures and Encumbrances.....	78,752,687	81,234,193	85,617,796	91,359,823	101,174,154
Net Operating Revenues Available for Senior Lien					
Revenue Bond Debt Service (Net Operating Revenues)....	147,963,976	146,636,177	157,219,308	150,507,347	165,011,378
Senior Lien Revenue Bond Debt Service.....	14,834,000	14,786,750	14,739,000	20,884,500	20,837,250
Senior Lien Revenue Bond Debt Service Coverage.....	9.97	9.92	10.67	7.21	7.92
Net Operating Revenues Available for Junior Lien					
Bond Debt Service (Designated Revenues).....	133,129,976	131,849,427	142,480,308	129,622,847	144,174,128
Junior Lien Revenue Bond Debt Service.....	56,540,581	56,586,581	56,630,231	50,490,381	62,586,150
Junior Lien Revenue Bond Debt Service Coverage.....	2.35	2.33	2.52	2.57	2.30
Revenues Available After Junior Lien					
Revenue Bond Debt Service.....	76,589,395	75,262,845	85,850,077	79,132,465	81,587,979
Other Expenditures, Encumbrances and Transfers:					
Bond Anticipation Note Interest (Revolver Loan).....	-	-	-	5,370,278	5,375,864
G.O. Bond Debt Service.....	1,412,150	390,000	-	-	-
Capital Outlay	2,161,329	2,263,884	1,877,135	3,038,464	1,765,441
Plant Additions and Improvements	20,635,790	27,773,423	61,004,464	39,451,446	79,675,372
Transfer from Other Funds:					
Wastewater Capital Project Funds.....	(5,710,019)	-	(46,000,000)	(15,332,680)	(22,216,273)
Transfer to Other Funds:					
Staff and Administrative Charges.....	3,901,195	4,586,579	4,936,178	5,783,220	6,509,842
In-Lieu Property Tax Payments	9,579,045	9,833,881	9,916,320	10,267,538	10,365,112
Other.....	-	59,500	70,000	141,400	274,230
Total Other Expenditures	31,979,490	44,907,267	31,804,097	48,719,667	81,749,588
Net Increase (Decrease) in Fund Balance.....	44,609,905	30,355,579	54,045,980	30,412,799	(161,609)
Fund Balance, Beginning of Year (2).....	80,000,668	124,610,573	154,966,151	209,012,131	239,424,930
Fund Balance, End of Year.....	124,610,573	154,966,151	209,012,131	239,424,930	239,263,321
Reserved for:					
Development Occupational Fees.....	32,596,041	38,685,384	16,959,306	23,970,317	29,243,157
Reserved Fund Balance, End of Year.....	32,596,041	38,685,384	16,959,306	23,970,317	29,243,157
Unreserved Fund Balance, End of Year.....	92,014,532	116,280,767	192,052,825	215,454,613	210,020,164
Wastewater Reserve Fund.....	53,000,000	53,000,000	53,000,000	53,000,000	53,000,000
Available Fund Balance, End of Year.....	\$ 145,014,532	\$ 169,280,767	\$ 245,052,825	\$ 268,454,613	\$ 263,020,164

- (1) Other includes revenue from sources such as sales of by-products, penalties, test fees, recoveries and other miscellaneous revenues.
(2) Beginning fund balance includes wastewater operating grants.