

The Metropolitan Government of Nashville and Davidson County, TN – Water and Sewer System

Issuer: The Metropolitan Government of Nashville and Davidson County, TN

Assigned	Rating	Outlook
Water and Sewer Revenue Refunding and Improvement Bonds, Series 2025	AA	Stable

Affirmed	Rating	Outlook
Water and Sewer Revenue Bonds (WIFIA Loan)	AA	Stable

Methodology

[U.S. Municipal Retail Utility Revenue Bond Rating Methodology](#)

[ESG Global Rating Methodology](#)

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Rating Summary: The long-term rating reflects the Water and Sewer System’s (the “System” or “Enterprise”) strong financial performance, competitive retail rates, and the provision of essential services to a large and growing service area that anchors the Nashville metropolitan statistical area (MSA). The service area is characterized by strong per capita income and low unemployment levels relative to the State. Credit challenges center on the System’s substantial capital improvement plan which is primarily debt funded and may pressure leverage higher, and continued maintenance of rates adequate to sustain strong financial coverage and liquidity going forward.

Proceeds of the Series 2025 water and sewer revenue refunding bonds (the “Bonds”) will retire outstanding commercial paper (traditional and extendible commercial paper (CP) notes), refund all or a portion of the System’s outstanding Series 2017A, 2017B, and the federally taxable Series 2021B (pursuant to a bondholder tender process). The Bonds are limited obligations of the Metropolitan Government of Nashville and Davidson County, TN (“Metro Government”), payable and secured by a pledge of and lien on the water and sewer revenues of the System, after payment of operation and maintenance

expenses. The Bonds are on parity with \$1.3 billion in outstanding water and sewer revenue bonds, \$315 million US Environmental Protection Agency Water Infrastructure Finance and Innovation Act Loan (“WIFIA loan”), and \$30.1 million in State Revolving Fund loans – as of March 31, 2025. The Bonds rank senior in payment to subordinate lien obligations, which currently include the \$400 million in outstanding CP notes. The WIFIA loan was entered into in September 2022 to finance capital improvements to the Omohundro and K.R. Harrington Water Treatment Plants. Debt payments on the WIFIA loan begin in 2028 and extend through 2057.

The Metro Government’s water and sewer system provides essential utility services to a population base of approximately 750,000 in central Tennessee¹. The Enterprise system serves 226,600 water and 229,871 sewer accounts in the metro-Nashville service area, which is among the fastest growing metropolitan areas in the U.S. The Nashville MSA is a hub for higher education, a cultural center for the region, and has benefited from an influx of corporate campuses in recent years, including companies such as Amazon and Oracle.

KBRA notes System capital needs are significant. The 2025 through 2029 capital improvement plan totals \$3.2 billion in water & sewer projects. Of this amount approximately \$2.7 billion is for ongoing water and sewer system improvements and replacement of aging infrastructure, and \$560 million is for projects developed under a Consent Decree (CD) with the Tennessee Department of Environmental Control (TDEC) and the United States Environmental Protection Agency (EPA) which specifically address sanitary sewerage (SSO) and combined sewerage overflow (CSO) deficiencies. As of March 31, 2025, the System has spent approximately \$759 million (out of an estimated \$3 billion) on Consent Decree projects since the EPA’s approval of the System’s Corrective Action Plan in 2017. Consent Decree program costs include the upgrade and expansion of biosolids facilities at the KR Harrington and Omohundro Water Treatment Plants, which is being partially funded via the WIFIA loan. As required by the EPA, the Department submitted an updated long-term capital plan (LTCP) in December 2024 with respect to the planned CSO projects and will submit an updated corrective action plan/engineering report (CAL/ER) for its SSO projects by the end of 2025. Combined, the updated LTCP and CAP/ER aim to address remaining requirements of the Consent Decree and timing for completion.

¹ Reflects direct customers in Davidson County service area and wholesale customers in surrounding counties, as per Metropolitan Water Service’s Long-Term Control Plan for 2024.



The System has achieved debt service coverage of senior lien obligations of more than 2.4x in each of the last five years, well above the 1.20x rate covenant for senior lien bonds. System liquidity is strong at 322 days cash on hand (unrestricted fund balance) as of FYE2024, slightly down from 337 days YoY. System leverage remains moderate with outstanding debt equivalent to 56.4% of net fixed assets as of FYE2024, providing added debt capacity.

The System did not adjust rates between 2011 and 2019, but a substantial 26.4% rate increase was implemented in 2020 to rebalance operations and to generate sufficient net revenues to support the System’s extensive capital program. Rates have subsequently been adjusted annually by a more moderate 4% in 2021 and 3% increases in 2022-2024. Rates under the current ordinance will increase by the greater of 2% or CPI inflation annually thereafter. Rates are in-line relative to other large systems in the State and, in KBRA’s view, are affordable with the average combined annual residential water and sewer bill equivalent to 0.9% of median household income in 2023. KBRA anticipates that escalating capital program costs may require rate increases exceeding the level contemplated in the present rate ordinance but believes that rate flexibility is strong given present rate affordability and the strong socioeconomic characteristics of the service area.

The Stable Outlook reflects KBRA’s expectation that the System will continue to achieve balanced operations and strong debt service coverage ratios, and that system leverage and affordability will remain manageable as the System works to address ongoing infrastructure improvements and capex under its TDEC/EPA Consent Decree.

Key Credit Considerations

The rating action reflect the following key credit considerations:

Credit Positives

- Providing essential services with rate setting autonomy. Demonstrated willingness to increase rates on an annual basis since fiscal 2020, to meet operating and capital requirements.
- Strong financial performance supported by fiscally sound financial and rate plans, with ample cash flow, liquidity, and debt service coverage. Rates remain competitive, maintaining rate flexibility going forward.
- Strong service area demographics, encompassing the rapidly growing City of Nashville, with above average income and employment levels.

Credit Challenges

- Managing the substantial capital plan and the potential for unanticipated capex cost increases through 2029.
- Significant debt requirements to fund the capex (\$1.3 billion) may pressure leverage higher over the five-year horizon.

Rating Sensitivities

- Substantial fulfillment of Consent Decree and ongoing capex requirements accompanied by the maintenance of moderate or reduced leverage and affordable rates. **+**
- Material escalation of the Consent Decree and other capital program costs to a level placing significant pressure on rate affordability and/or leverage. **-**
- Inability to adjust rates as needed and on a timely basis to manage the systems’ operating and capital needs while maintaining moderate leverage. **-**

Key Ratios		
Metro Nashville Population (2023)		712,334
Population Δ 2013-2023		6.7%
Metro Nashville Per Capita Income (2023)		\$50,643
% of State		131.4%
Unemployment Rate (March 2025) ¹		2.8%
% of State		84.8%
	FY2023	FY2024
Top 10 Customers as % Sales, FY2024		
Water	3.8%	3.8%
Sewer	8.3%	8.2%
System Debt and Leverage		
Senior Lien Obligations ²	\$1.368 billion	\$1.334 billion
Subordinate Lien (includes CP)	\$131 million	\$256 million
Debt/Net Fixed Assets	58.1%	56.4%
Debt Service Coverage and Liquidity		
Senior Lien Debt Service Coverage (x)	2.79	2.83
Days Cash on Hand (Unrestricted Cash)	266	252
Days Cash (Unrestricted Fund Balance)	337	322

¹Reflects unemployment data for Davidson County (coterminous with Metro service area).

²Excludes the \$315 million WIFIA loan as the loan has not been drawn upon yet.

Source: Metro Water Services ACFRs, KBRA calculations, US Census and US Bureau of Economic Analysis d



Rating Determinants (RD)	
1. Management, Governance, Regulatory Framework	AA
2. Legal Mechanics and Security Provisions	AAA
3. Service Area and Demand	AA+
4. Operations and Capital	AA-
5. Financial Profile and Debt	AA

RD 1: Management, Governance, Regulatory Framework

The Metropolitan Government of Nashville and Davidson County (the “Metropolitan Government”) owns and operates a water and sewer enterprise, which provides water, sewer collection, sewage treatment and disposal facilities to over 226,000 retail customers within its service area, as well as nine wholesale sewer customers. The Enterprise system is managed by the Department of Water and Sewerage Services (“Department”). Stormwater operations are a standalone department, and while its service fees are itemized on customer water bills, its operations are separate and distinct from the Department. Governance rests with the Metropolitan County Council of the Metropolitan Government (the “Metro Council”), an elected 40-member body which issues rate ordinances, bond resolutions, approves capital programs and annual budgets for the Metropolitan Government and its entities, such as the Department.

The Department’s senior management team is well-credentialed and experienced in the Tennessee utility sector. Director Scott Potter is a licensed Professional Engineer, with over 28 years of experience in the utility space, including 25 years with the Department. Deputy Director (Operations) David Tucker has been with the Department since 1987 and has significant experience in water and wastewater treatment plant operations. The Assistant Director (Business & Finance) Anthony J. Vlasic, is a Certified Public Accountant and has been with the Metro Government since 2007, and he maintains more than 25 years of financial accounting experience.

Rate Setting Authority and Process

The Metropolitan Government has full authority to set the Department’s water and sewer rates and is not subject to the approval from any state or federal regulatory authority. Rate-setting decisions are informed by external rate studies and detailed capital improvement planning. Beginning in 2020, following the completion of a 2019 cost of services study and subsequent 26.4% rate increase, the Metropolitan Council adopted an ordinance implementing a five-year plan for increases in both water and wastewater base rates. The Department implemented rate increases of 4% in calendar year 2021, and 3% annually for calendar years 2022, 2023, and 2024.

Beginning in calendar year 2025 and thereafter, annual increases are based upon the greater of 2% or the Consumer Price index for all Urban Customers. Further, the ordinance mandated that cost of services studies be completed at least every seven years, to realign rates with capital and operating requirements. In addition to charging base rates for consumption, the Department also charges a 10% surcharge on water and sewer usage to fund infrastructure replacement, which is available to pay both operating expenses and debt service. Any changes in service rates must be approved by the Metropolitan Council by ordinance.

Capital Plan Management

The Department maintains a formal, multi-year capital plan approach that revolves around several strategic initiatives, which is informed by population forecasting and hydraulic modeling. The most significant long-term strategic initiatives for the water and sewer system include efforts to address aging infrastructure, accommodate service area growth, and address the compliance requirements necessitated by the EPA consent decree. The combined system’s Capital Improvement Plan for FY 2025 through FY 2029 identifies \$3.2 billion in projects and expects to utilize a combination of funding sources that include commercial paper borrowing, WIFIA loans, long-term debt financing, and fees.

Financial Management Policies and Procedures

KBRA considers the Enterprise’s financial practices to be sound and conservatively based. Financial management policies and practices include: the annual update of a five-year capital improvement program, a multi-year financial plan that projects revenues over at least six years and allows for scenario forecasting; the maintenance of at least 1.2x coverage of senior lien debt service coverage and a long-term target to internally cash fund 50% of the capital plan. The Department has adopted a Debt Management Policy that sets oversight and management responsibility, defines the types of approved debt, outlines criteria for evaluating debt refunding candidates, and provides parameters to minimize the cost of debt.

RD 2: Legal Mechanics and Security Provisions

The Bonds’ security provisions are pursuant to the Initial Resolution, adopted by the Metro Council Nov. 16, 2010 and supplemental Resolutions, up to and including the most recently adopted Ninth Supplemental Resolution, dated April 15, 2025, which authorized issuance of the 2025 Bonds.



Rate Covenant

The rate covenant for the Bonds requires the Metro Government set and maintain water and sewer rates sufficient to generate net revenues equal to the greater of (a) 120% of annual debt service requirements on senior lien water and sewer revenue bonds; or (b) 100% of total debt service (senior and subordinate lien) plus all revenue requirements under the Bond Resolution. Revenues as defined under the Bond Resolution includes transfers (to) or from the Rate Stabilization Fund.

Additional Bonds Test (ABT)

The ABT adequately limits overleveraging, providing for the issuance of additional parity bonds if Net Revenue for any 12 of the last 24 consecutive months immediately preceding the proposed issuance of senior lien bonds is at least 1.20x the Maximum Annual Debt Service (MADS) on outstanding and proposed senior lien bonds.

Debt Service Reserve Fund (DSRF)

The Bond Resolution establishes a debt service reserve fund but does not require a DSRF for every series of Bonds or prescribe a manner in which such reserve is to be funded in the event of such an election. Metro Government has elected not to establish a DSRF for the currently offered Bonds. In contrast, the System’s 2022 WIFIA Loan, which is otherwise a parity obligation, is additionally secured by a dedicated DSRF – as per the typical three-pronged funding test.

Flow of Funds

The Enterprise’s gross revenues are deposited into the Revenue Fund upon receipt. Revenues are then applied in the following priority: (i) to pay all operation and maintenance expenses as they become due and payable, (ii) to pay debt service on senior obligations, (iii) to fund debt service reserve accounts, (iv) to pay debt service on subordinate indebtedness, (v) to make payments in lieu of taxes (“PILOT”) required of the system, and transfers to the Rate Stabilization Fund as available. The remaining balances are deposited into the System’s Surplus Fund.

RD 3: Service Area and Demand

For FYE 2024 (ended June 30th), the Department provided service to 226,600 water and 229,871 sewer accounts in its service area -- which is conterminous with Davidson County – and includes small portions of surrounding counties. The Metro Government’s Water and Sewer service area (“Metro”) has an estimated population of 712,334 for 2023, 0.7% increase YoY (US Bureau of Economic Analysis data). Metro is home to Nashville, the State capital, and it is located at the center of the Nashville-Davidson-Murfreesboro-Franklin (TN) Metropolitan Statistical Area (Nashville MSA, 2023 population 2.1 million), one of the fastest growing metro areas in the country.

Customer Base and Concentration

The customer base is fairly diverse for both the water and sewer systems. For fiscal year 2024, commercial and industrial customers accounted for 62% of water deliveries, with the remaining 38% delivered to residential customers. The number of water customers has steadily grown, up 18.9% over the past decade. For the wastewater system, customer growth over the same period was approximately 16.0%. Individual customer concentration is low, with the ten largest users of the water and sewer systems comprising 3.8% and 8.2%, respectively, of revenues in FY 2024. The Department provides sewer service to nine wholesale customers, in the surrounding counties, which accounted for 14% of treated flows and a modest 3.5% of FY 2024 revenue.

Figure 1

Top Ten Water and Sewer System Customers by % of Revenues in FY 2024					
FYE June 30 (\$000s)					
Water ¹	\$000s		Sewer ²	\$000s	
RHP Operations OH, LLC	858	0.6%	Hendersonville Utility District	3,288	1.4%
Metro District Energy System	663	0.5%	Brentwood Lift Station	3,286	1.4%
Wometco Coca Cola	600	0.5%	City of Mt. Juliet	3,350	1.4%
Metro WS - Central Wastewater	570	0.4%	City of Goodlettsville	2,613	1.1%
City of Brentwood	535	0.4%	City of Lavergne	2,083	0.9%
Cargill Meat Solutions Inc	512	0.4%	RHP Operations, OH , LLC	1,832	0.8%
Bridgestone Tire & RC	389	0.3%	Cargill Meat Solutions	987	0.4%
David Lipscomb University	353	0.3%	Urban Housing Solutions	772	0.3%
Purity Dairies, Inc.	344	0.3%	Whispering Oaks/ TWG Management	713	0.3%
Urban Housing Solutions	262	0.2%	White House Utility	450	0.2%
Total Top 10 Water	\$ 5,086	3.8%	Total Top 10 Sewer	\$ 19,374	8.2%

¹ Calculated as % of water system revenues only. ² Calculated as % of sewer system revenues only.

Source: Metro Water Services and KBRA calculations.

Demographic and Economic Characteristics

Metro Government’s population has historically grown at a faster pace than that of the State of Tennessee (the “State”). Although for the most recent ten-year period ended 2023, the Metro Government’s population increased at a 0.81% compound annual growth rate (CAGR), which is slower than State CAGR (0.93%) but ahead of the US (0.58%).



As shown in Figures 2 and 3 below, educational attainment in Metro is very high (50.9%) compared to the State and nation, given the service area is a hub for higher education. The incidence of poverty in the Metro service area (11.9%) is also more favorable than the State (14%) and US levels (12.5%) for 2023.

Figure 2

Bachelor Degree or Higher

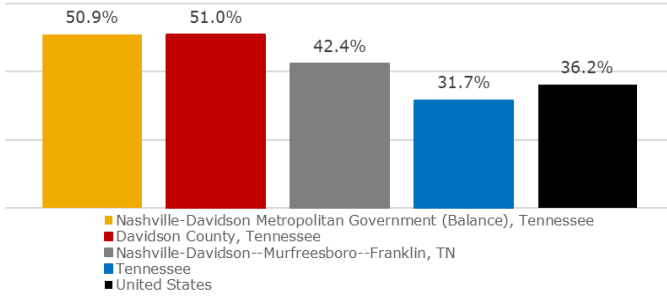
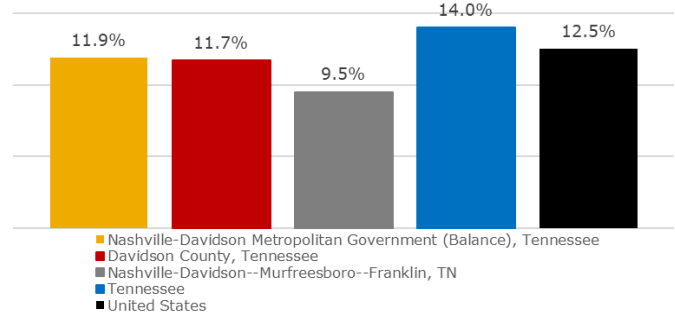


Figure 3

Poverty Level



Source: US Census Bureau 2023 poverty and education level data.

Personal Income

Since 2015, income per capita for the Metro Government area and the broader Davidson County have consistently exceeded the State and the national level, as per the U.S. Census data. For the Metro Government area, income per capita as estimated at \$50,643 in 2023, was 131.4% and 116.9% of that of the State and the U.S., respectively. Similarly for Davidson County, its 2023 income per capita (\$51,804) exceeded that of the State (\$38,538) and nation (\$43,313), reflecting the area’s sound economic base with comparatively strong income levels.

Employment

Employment concentration is relatively low with the ten largest employers accounting for 15.1% of total employment in 2024. Vanderbilt University remains the largest employer (39,171 employees) at 3.5% of total jobs in Davidson County. HCA Healthcare Inc., is the largest for-profit employer at 2.5% of total employment, followed by Nissan North America at 1.0%. Other large corporations in the Nashville area include Amazon, Oracle, and the Kroger Company.

According to the U.S Bureau of Labor Statistics, the Davidson County unemployment rate was 2.8% (March 2025), which is consistently below the State (3.3%) and national (4.2%) level for the past 20 years, excluding 2020 in which COVID-19 business curtailments affected unemployment. County employment growth (CAGR of 1.8%) over the last ten years has also outpaced the State (1.5%) and the nation (1.0%) through 2024 .

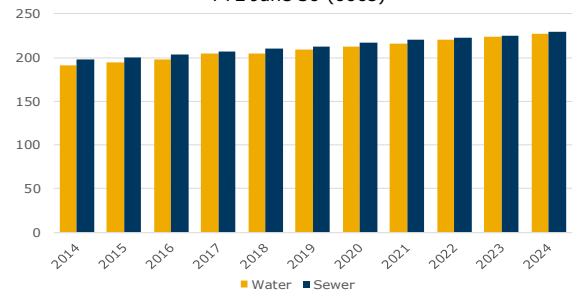
Utilization Trends

Water and sewer accounts have steadily grown (Figure 4), with CAGRs of 1.8% and 1.3%, respectively, over the last decade. The volume of water sales has risen 10.4% since 2014, to 24.4 billion gallons for FY 2024.

Treated wastewater, which peaked at 66.6 billion gallons in FY 2022, has fallen 16.7% to 55.3 billion gallons in FY 2024. The decline in treated wastewater primarily reflects treatment plant efficiencies and the redirection of stormwater more directly to the river, a consequence of Consent Decree and other projects the Department has completed thus far.

Figure 4

Water and Sewer Accounts
FYE June 30 (000s)



Source: Continuing Disclosure Statements

System Rates

The water and wastewater systems are operating under a five-year rate plan, effective as of Jan. 1, 2020. Water and sewer rates had been unadjusted between 2011 and 2019. Based upon a cost-of-service study, the City implemented a new billing structure which resulted in water and sewer rate increases of 26.4% in 2020, followed by more moderate rate increases thereafter to support system operations and fund a portion of the system’s large capital program. Beginning in 2025, water and sewer rates increases are based upon the greater of 2% or the Consumer Price Index for All Urban Consumers each year.



Figure 5

Historic and Projected Rate Increases		
Calendar Year	Water	Sewer
2011 - 2019	0.0%	0.0%
2020	26.4%	26.4%
2021	4.0%	4.0%
2022	3.0%	3.0%
2023	3.0%	3.0%
2024	3.0%	3.0%
2025 and Beyond	Greater of 2% or CPI	Greater of 2% or CPI

Source: Metro Water Services.

Given the Department’s large capital plan, the water and sewer systems may require rate increases exceeding the level contemplated in the present rate ordinance. The Enterprise can request additional rate recovery if needed, with the approval of the Metropolitan Council.

KBRA views the Department’s water and sewer rates as providing strong rate flexibility given rate competitiveness and affordability, and the strong socioeconomic characteristics of the service area. As of January 2025, the average monthly residential bill, which reflects combined water and sewer charges, was approximately \$59. On an annualized basis, the average residential bill represents a modest 0.9% of the City of Nashville’s median household income (\$75,197; US Census data as of July 1, 2023). The bills for water and sewer service are prepared and included on a combined billing statement, with a strong billing collection rate of more than 99% for the last five years.

RD 4: Operations and Capital

System Characteristics and Condition

The water system draws raw water from the nearby Cumberland River, which provides ample water supply for the System without any water draw limitations. Raw water is processed at two treatment plants, the Robert L. Lawrence, Jr. Filtration Plant (Omohundro) and K.R. Harrington Water Treatment Plant, each rated to treat 90 million gallons per day (MGD) and 112 MGD, respectively. Treated water is delivered through six major transmission mains into a distribution system containing over 3,000 miles of water mains and reservoirs (with a capacity of 37.3 million gallons). The water system’s projected average daily flow is 115 MGD, with a peak water demand of 138.6 MGD (August 2024), both of which are considerably below the maximum treated drinking water capacity of 202 MGD.

The Sewer System is comprised of approximately 3,085 miles of gravity sewers and four treatment plants including the Central Wastewater Treatment Plant (treatment capacity of 250 MGD), the Dry Creek Wastewater Treatment Plan (24 MGD secondary treatment only) and Whites Creek Wastewater Treatment Plan (37.5 MGD secondary treatment only). The system also includes a biosolids facility which processes biosolids into marketable pellets, which reduces the need to landfill residuals.

The water system is operating well although the infrastructure is aging, with more than 65% of the water facilities at least 40 years old. Additionally, the water system needs added treatment capacity as the Metro service area continues to steadily grow. The sewer system continues to operate under a CD to reduce its sanitary sewer and combined sewer overflows. The Department has steadily reduced sewer system overflows over the past ten years, as evidenced by the decline in treated sewage of 10% (2014-2024), despite an increase in sewer customers of 16% for that same period.

Capital Improvement Plan (CIP)

The Department’s capital plan for FY 2025 through FY 2029 is sizeable at approximately \$3.2 billion (Figure 6) and incorporates the \$2.7 billion in ongoing water and sewer improvements (not related to Consent Decree projects). The Department anticipates debt funding 57% of the 5-year capital plan, with the rest (43%) internally cash-funded. The water system capex totals \$1.6 billion (50% of the CIP). The capex encompasses approximately \$650 million for capacity and modernization projects that will enhance water quality and increase treatment capacity at Omohundro treatment plant. The Department plans to use the \$315 million U.S Environmental Protection Agency’s WIFIA loan (herein rated AA by KBRA) to fund up to 49% of this water project.

Metro Government’s sewer system capital plan is estimated at \$1.4 billion through 2029, and it includes the Consent Decree (CD) requirements as per TDEC and the EPA. According to the CD, the Department developed a Corrective Action Plan/Engineering Report (CAP/ER) for its sanitary sewer system and a Long-Term Control Plan (LTCP) for its combined sewer system improvements. The EPA approved the CAP/ER in August 2017. With respect to the LTCP, the EPA issued conditional approval of the plan in December 2020, and it required the Department provide a revised LTCP, which the Department submitted in December 2024. The Department anticipates submitting an updated CAP/ER by December 2025, which will finalize remaining projects and completion timing as needed. The CD projects are required to be completed within 11 years following EPA’s approval, or 2028 for the CAP/ER and 2035 for the LTCP. In the FY 2024 annual disclosure, the Department notes that the sewer system had spent \$759 million on CD projects thus far and it remained compliant with CD requirements. KBRA will monitor evolving estimates of the CD program costs, which total roughly \$3 billion through 2035, with an eye toward rate affordability and the system’s plans to integrate those costs into the rate base.

Figure 6

Capital Improvement Plan for FY 2025 to FY 2030							
FYE June 30 (\$000s)							
	2025	2026	2027	2028	2029	5YR Capex Total	% Total
Water							
Water Distribution System Improvements	\$ 134,690	\$ 87,500	\$ 126,000	\$ 69,000	127,000	544,190	
Water Pump Station Improvements	1,200	1,525	825	875	900	5,325	
Water Plant Improvements	349,000	32,100	15,050	615,700	14,350	1,026,200	
Water Reservoir Improvements	5,480	4,500	12,650	4,650	650	27,930	
Total Water	490,370	125,625	154,525	690,225	142,900	1,603,645	49.6%
Wastewater							
Wastewater Collection System Improvements	20,100	20,100	35,050	35,050	35,000	145,300	
Wastewater Plant Improvements	245,743	48,875	100,806	134,897	132,065	662,386	
Wastewater Pump Station Improvements	30,170	3,530	3,680	3,825	3,910	45,115	
Total Wastewater	296,013	72,505	139,536	173,772	170,975	852,801	26.4%
Consent Decree Program Projects							
Program Management & Water Quality	14,000	12,500	14,000	16,000	24,500	81,000	
Sanitary Sewer Rehabilitation	59,000	17,000	15,000	79,000	109,000	279,000	
Combined Sewer Improvements	21,000	42,000	86,000	53,000	-	202,000	
Total Consent Decree	94,000	71,500	115,000	148,000	133,500	562,000	17.4%
Other							
Engineering/Planning/Design	8,050	7,625	7,110	8,000	7,980	38,765	
Customer Services/Information Services	11,450	7,550	8,200	11,350	7,650	46,200	
Vehicles and Equipment	20,250	21,330	22,500	23,000	23,500	110,580	
Other	3,500	3,500	3,500	3,500	3,500	17,500	
Total Other	43,250	40,005	41,310	45,850	42,630	213,045	6.6%
Grand Total	923,633	309,635	450,371	1,057,847	490,005	3,231,491	
Funding Sources							
Utilization of Extension & Replacement Fund	150,000	175,000	185,000	200,000	200,000	910,000	39.6%
Long-Term Debt	250,000	130,000	200,000	-	200,000	780,000	33.9%
Commercial Paper	100,000	125,000	100,000	100,000	100,000	525,000	22.8%
Short-term Financing	2,000	2,000	2,000	2,000	1,000	9,000	0.4%
Water Impact Fees	5,000	5,000	5,000	5,000	5,000	25,000	1.1%
Sewer Impact Fees	10,000	10,000	10,000	10,000	10,000	50,000	2.2%
Total Funds	517,000	447,000	502,000	317,000	516,000	2,299,000	

Source: Metro Water Services, FY 2024 Annual Financial Information.

¹ Reflects the remaining and available balance in the Extension & Replacement Fund, excluding the 205-2029 water and sewer impact fees.

RD 5: Financial Profile and Debt

Revenue and Expense Management

Operating revenues increased at a 10.3% CAGR between 2019 and 2024 largely due to increased water and sewer rates and moderate customer growth. As previously noted, rates were not adjusted between 2011 and 2019, then a sizeable rate adjustment occurred in 2020 (26.4%), followed by more moderate, but consistent annual increases since then. Operating expenditures over the same period increased at a slower pace, or 7.3% (5-year CAGR) through FY2024. The rapid growth of revenues reflects the System’s need to generate added operating cashflow to support the Department’s sizable capital program. The Department is projecting approximately 43% internal funding of its capital plan through 2029.

Liquidity

Given the consistent rate adjustments in recent years, liquidity has strengthened from 188 days cash on hand for FY 2019 up to 322 days cash for FY 2024 (based upon the System’s Unrestricted Fund Balance). The System also maintains CP notes with maximum capacity of up to \$400 million (traditional and extendible municipal CP), of which \$400 million is currently outstanding, but will be fully refunded via the Series 2025 Bond proceeds.

Additionally, the Department maintains the Extension and Replacement Reserve Fund (E&R reserve), which is a Metro Council restricted fund that serves as the Department’s source of cash-funded capital. The E&R reserve fund, with a FYE balance of \$379.5 million, is targeted to maintain the equivalent of 500 days cash on hand plus 30% of annual capital spending. This reserve was equivalent to more than 770 days cash at FYE 20234 -- albeit restricted for capex.

Figure 7

Summary Statement of Revenues and Expenses					
FYE June 30 (Audited, GAAP Basis) (dollars in thousands)					
	2020	2021	2022	2023	2024
Operating Revenues					
Charges for Service	\$ 265,887	\$ 309,957	\$ 335,440	\$ 365,067	\$ 375,895
Other	-	-	-	52	-
Total Operating Revenues	265,887	309,957	335,440	365,119	375,895
Operating Expenses					
Personal Services	59,633	49,711	57,751	66,512	76,635
Contractual Services	44,730	38,097	57,070	67,499	74,802
Supplies and Materials	14,718	15,770	19,167	20,998	22,860
Depreciation	86,869	87,628	98,881	102,430	107,998
Other	13,529	5,246	4,162	4,486	4,926
Total Operating Expenses	219,480	196,453	237,032	261,925	287,221
Operating Income	46,408	113,504	98,409	103,195	88,674
Non-Operating Income (Expenses)					
Interest Income	1,279	596	2	19,669	31,165
Interest Expense	(32,365)	(37,082)	(20,365)	(43,600)	(48,112)
Other	(707)	896	(2,676)	508	815
Total Non-Operating Revenues (Expenses)	(31,793)	(35,590)	(23,039)	(23,423)	(16,131)
Income (Loss) Before Capital Contributions	14,615	77,914	75,370	79,771	72,543
Capital Grants and Contributions	26,568	46,909	52,788	52,052	46,077
Transfers	(14,016)	(13,558)	(10,475)	(2,787)	(2,480)
Change in Net Position	27,167	111,265	117,682	129,036	116,139
Net Position, Beginning of Year, as Restated	1,307,096	1,334,273	1,459,931	1,577,613	1,706,649
Net Position, End of Year	1,334,263	1,445,538	1,577,613	1,706,649	1,822,789

Source: The Department of Water and Sewerage Services audited financial statements.

Debt Service Coverage

Senior lien debt service coverage, which is before the payment-in-lieu-of taxes [PILOT] as per the Bond Resolution, is strong, above 2.40x in each of the last five years, and at 2.83x for FY2024. Including the PILOT payment, KBRA calculates senior lien debt service coverage of 2.66 in FY2024 – still strong for the rating level. Pursuant to the Department’s FY2025 Annual Budget Review (as prepared by an independent consultant), senior lien DSC is projected to remain in excess of 2.5x through FY2026. Total debt service coverage, which includes coverage of subordinate obligations, was above the Department’s 1.5x internal target for the past five fiscal years and is projected to remain above 2.0x through FYE2026. The Department’s financial plan to cash-fund 43% of the capital plan should provide adequate cash flow to support strong DSC prospectively.

Figure 8

Metropolitan Government of Nashville and Davidson County - Department of Water and Sewerage Services						
Debt Service Coverage						
FYE June 30 (\$'000s)						
	2020	2021	2022	2023	2024	
Revenues						
Water System	\$ 85,545	\$ 110,949	\$ 117,185	\$ 135,346	\$ 133,322	
Sewer System	171,826	199,008	218,255	232,385	237,332	
Non-Operating Revenues	9,099	1,492	(2,674)	17,566	37,221	
Total Revenues ¹	266,470	311,449	332,766	385,296	407,876	
Expenses						
Operating Expenses (Exclude Depreciation & Amort.) ²	132,611	108,824	138,150	159,495	179,223	
Net Revenues Available for Debt Service	a 133,859	202,624	194,616	225,801	228,652	
Debt Service						
Senior Lien Obligations	b 47,121	56,257	80,835	80,826	80,827	
Subordinate Lien Obligations	c 19,844	18,261	-	-	-	
Total Debt Service	66,965	74,517	80,835	80,826	80,827	
Debt Service Coverage (DSC) ³						
Senior Lien Bonds DSC (1.2x rate covenant)	a / b	2.84x	3.60x	2.41x	2.79x	2.83x
Total Debt Service Coverage (1.0x rate covenant)	a / (b + c)	2.00x	2.72x	2.41x	2.79x	2.83x

¹ Total Revenues are defined as per the Bond Resolution.

² Operating expenditures do not include the Payment in Lieu of Taxes to the Metro Government (\$14 million for FY2024).

³ DSC calculation excludes the PILOT payment (as per the Bond Resolution) and includes interest earnings for DSC ratio.

Source: Metropolitan Government, Department of Water and Sewerage Services audited financial statements, Annual Disclosure for FY 2024.

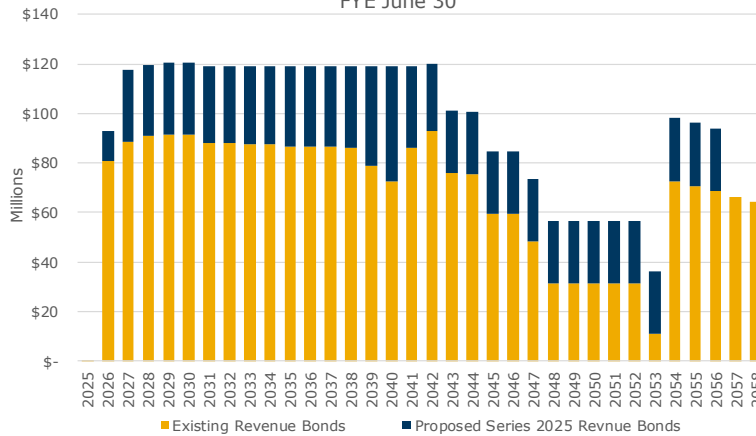
Debt Structure and Leverage

As of FYE 2024 the System had \$1.4 billion in outstanding senior debt obligations (revenue bonds and SRF loans). The long-term debt is conservatively fixed rate with a final maturity in 2058. The WIFIA Loan is expected to be drawn in 2025. Additional debt currently outstanding includes commercial paper totaling \$400 million.



Figure 9

Proforma Debt Service
FYE June 30



Source: Hilltop Securities, preliminary and subject to change.

The proforma annual debt service for long-term debt peaks in 2029 at \$120.6 million, roughly a 49% increase in annual debt service compared to FYE 2024 (\$80.8 million). As shown in Figure 9, annual debt service levels off at approximately \$120 million per annum through 2042 and then declines through 2053, with a temporary spike in 2054-2056. Positively, system leverage is currently moderate with total outstanding debt equivalent to 56.4% of net fixed assets for FYE 2024, which provides capacity for additional borrowing to support the sizable capital program.

Bankruptcy Assessment

KBRA has consulted outside counsel and the following represents our understanding of the material bankruptcy issues relevant to the Bonds, WIFIA Loan and the Metro Government.

Eligibility to be a Debtor

To be a debtor under the municipal bankruptcy provisions of the U.S. Bankruptcy Code (Chapter 9), a local governmental entity must, among other things, (i) qualify under the definition of a “municipality” in the Bankruptcy Code, and (ii) must also be specifically authorized to file a bankruptcy petition by the State of its formation.

Here, the Metro Government is a metropolitan government, a type of local governmental entity created under the laws of the State of Tennessee. As such an entity, it meets the definition of a municipality under Chapter 9 of the U.S. Bankruptcy Code. As to authorization, Tennessee state law does not specifically authorize its local government entities to file a Chapter 9 proceeding. That said, if the Government were to become financially distressed, the State could, at any time, enact specific legislation permitting the Government to commence a Chapter 9 case.

Liens and Pledges that Survive a Chapter 9 Filing

Chapter 9 provides for post-petition recognition of (i) a security interest represented by a pledge of specific special tax revenues or of enterprise revenues (referred to as a lien on “special revenues”) as well as (ii) a statutory lien (one imposed by statute) on revenues pledged for government obligations. Such special revenues and statutory liens should continue to apply to pledged revenues acquired by a local government entity during a Chapter 9 case and survive the conclusion of the Chapter 9 proceeding. However, other consensual pledges and liens arising by indenture, resolution or similar document (except to the extent they cover proceeds of collateral pledged prior to bankruptcy) are generally cut off by Section 552 of the Bankruptcy Code as of the bankruptcy filing date.

KBRA has consulted outside counsel and is advised that Tennessee law provides for a statutory lien on property pledged by a public entity in connection with the issuance of public obligations. Therefore, if the Metro Government was to become a debtor in a bankruptcy proceeding, the WIFIA Lender should be treated as a secured creditor as to the Pledged Collateral in the bankruptcy proceeding of the Metro Government independently of whether there is a special revenues lien on the Pledged Collateral (discussed below). However, the relevant Tennessee lien statute has not been interpreted by any reported bankruptcy court decision, and, therefore, whether a bankruptcy court will confirm the existence of a statutory lien is uncertain.

Because the pledged Revenues are generated by the Metro Government’s water and sewer system (the “System”), and the Loan will be issued, among other sources of funds, to refinance the System (and Loan proceeds are not to be used for general purposes of the Metro Government), KBRA understands that the Revenues should qualify as “special revenues” as that term is defined in Chapter 9 of the Bankruptcy Code.



There are separate bankruptcy protections for revenue-supported debt that fall within those special revenues definitions. Notably, the recent decision issued by the First Circuit Court of Appeals in *Puerto Rico Electric Power Authority* (“PREPA”) affirmed the protections afforded to WIFIA Lender and bondholders’ liens with respect to pledged special revenues.

Assuming that the Loan is in fact secured by a pledge of special revenues, it is KBRA’s understanding that, if the Metro Government were permitted to file for protection under Chapter 9, it should generally be expected that such filing should have little to no effect on the payment of the Loan during the bankruptcy case – assuming there is no shortfall of funds to make debt service and depending on the individual priority of Loan payments among the total System obligations payable from System Revenues.

Notwithstanding the foregoing, there are several additional issues that arise. If the Metro Government were to become a debtor in a proceeding under Chapter 9 of the Bankruptcy Code, the bankruptcy court could decide that (i) post-bankruptcy revenue debt obligation payments by the Metro Government are merely optional and not mandatory under the special revenues provisions of the Bankruptcy Code, and/or (ii) the automatic stay exception for special revenues in those provisions does not apply (including the possible enforcement by the WIFIA Lender) or is limited to amounts then on hand with the WIFIA Lender or the Metro Government. If the Metro Government were to refuse to make Loan payments voluntarily and the bankruptcy court were to interpret the Bankruptcy Code in that (or a similar) fashion, the parties to the proceedings may be prohibited for an unpredictable amount of time from taking any action to collect any amount from the Metro Government, or from enforcing any obligation of the Metro Government, without the bankruptcy court’s permission. However, it is KBRA’s understanding that such a ruling would be contrary to existing precedent, and the clear intent of Congress regarding the continued payment of government revenue debt obligations post-bankruptcy, as expressed in the legislative history for the special revenues amendments to Chapter 9 and as interpreted in properly reasoned existing (albeit limited) case precedent under Chapter 9.

It is also KBRA’s understanding that, assuming the pledged Revenues are in fact determined to be “special revenues,” the Bankruptcy Code provides that, to keep revenue-generating government assets operating, special revenues can be applied to necessary operating expenses of the relevant project or system ahead of all other obligations – including payments to holders of revenue debt obligations. This rule applies regardless of contrary provisions of the transaction documents, if such governing documents do not adequately provide for payment of necessary operating expenses. In determining necessary operating expenses for the System, in a Chapter 9 case the bankruptcy court may not be limited by the provisions governing the flow of funds or that define Operation and Maintenance Expenses, in the Loan and Bond issuance documents.

Additionally, while there is no case law from which to make a definitive judgment, it is possible that, in the context of confirming a Plan of adjustment in a Chapter 9 case of the Government where the plan has not received the requisite consent of the WIFIA Lender or bondholders (as applicable), a bankruptcy court may confirm a plan that adjusts the timing of payments on the Loan or Bonds or the interest rate or other terms of the Loan or Bonds provided that (if either or both liens are determined to exist) (i) the WIFIA Lender or bondholders (as applicable) retain their statutory lien and/or special revenues lien, and (ii) the payment stream has a present value equal to the value of the revenues subject to the statutory lien and/or special revenues lien.

ESG Management

KBRA typically analyzes Environmental, Social, and Governance (ESG) factors through the lens of how issuers plan for and manage relevant ESG risks and opportunities. More information on KBRA’s approach to ESG risk management in public finance ratings can be found [here](#). Over the medium-term, public finance issuers will likely need to prioritize ESG risk management and disclosure with the likelihood of expansions in ESG-related regulation and rising investor focus on ESG issues.

KBRA analyzes many sector- and issuer-specific ESG issues but our analysis is often anchored around three core topics: climate change, with particular focus on greenhouse gas emissions; stakeholder preferences; and cybersecurity. Under environmental, as the effects of climate change evolve and become more severe, issuers are increasingly facing an emerging array of challenges and potential opportunities that can influence financial assets, operations, and capital planning. Under social, the effects of stakeholder preferences on ESG issues can impact the demand for an issuer’s product and services, the strength of its global reputation and branding, its relationship with employees, consumers, regulators, and lawmakers, and, importantly, its cost of and access to capital. Under governance, as issuers continue to become more reliant on technology, cybersecurity planning and information management are necessary for most issuers, regardless of size and industry.

Environmental Factors

The Department remains in compliance with all state and federal drinking water and wastewater discharge requirements, through the ongoing extensive capital rehabilitation program. Additionally, the Enterprise is addressing the US EPA’s Consent Decree capital improvements, largely designed to improve management of sanitary and combined sewer



systems overflows, particularly during wet weather. To date, the Department remains compliant with the deadlines established in the Consent Decree, with final completion anticipated in 2031.

The broader Metro government further maintains a target of 80% reduction in annual greenhouse gas emissions from 2014 levels by 2050. The water and sewer service area is susceptible to climate change risks, such as excessive heat and flooding, as it is located near the Cumberland River. In 2023, the Metro Government established a Climate Action and Resilience Plan which lays out a strategic plan to reduce climate change vulnerability and lower risk exposure.



Social Factors

The Metro Government aims to provide an equitable workplace, with leadership, guidance, and oversight of the equity, inclusion and anti-racism framework, equitable opportunities for promotion and training internally, as well as fair selection practices for procurement and contracting services.



Governance Factors

The Metropolitan Government has identified the safeguarding of sensitive and confidential information as a key component of its information security management program, and has instituted several policies and procedures to protect its information technology infrastructure from cyberattacks via system testing and training for employees. Further, the government utilizes the Center for Internet Security's Nationwide Cybersecurity Review (NCSR) self-assessment [tool](#) to monitor and benchmark its cybersecurity performance relative to their local government peers, which the Metro Government tends to outperform.

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