February 27, 2019

To: St. Louis Metropolitan Sewer District Rate Commission
From: Pam Lemoine, Black & Veatch Management Consulting, LLC
CC: Lisa Stump, Lashly & Baer. P. C.
Subject: Wastewater Rate Comparisons

Introduction

Black & Veatch Management Consulting, LLC (Black & Veatch) currently serves as consultant to the Metropolitan St. Louis Sewer District's (MSD or District) Rate Commission. During the Rate Commission's January 4, 2019 meeting, several Commission members requested Black & Veatch provide a compilation of current rates and adopted rate increases across the U.S. to provide context and comparison when MSD releases its Wastewater Rate Proposal on March 4, 2019.

This memorandum summarizes information compiled from industry documents including the National Associate of Clean Water Agencies (NACWA*) 2017 Cost of Clean Water Index*, the NACWA *2018 Financial Survey*, and the American Water Works Association (AWWA) / Raftelis *2016 Water and Sewer Rate Survey*, along with research conducted by Black & Veatch. The memo highlights current and adopted rates (as applicable) and typical bill impacts for several utilities across the U.S., along with information on the future anticipated revenue needs, other funding sources, and the utilities' respective rate adoption processes, where available.

The wastewater utilities highlighted herein are presented in Figure 1.

Figure 1 – Highlighted Wastewater Utilities

• Cincinnati Metropolitan Sewer District • Columbus, OH • Northern Kentucky Sanitation District No. 1 • Seattle, WA • Portland, OR • Atlanta, GA • St. Joseph, MO	• Springfield, MO • Kansas City, MO • Northeast Ohio Regional Sewer District (NEORSD) • Indianapolis - Citizens Energy Group (CEG) • Philadelphia Water Department (PWD)

INDUSTRY LANDSCAPE

Historically, water and wastewater services have been undervalued through continuation of rates that were inadequate to recover the true cost of providing service. In the past, federal grant funds were used to build many treatment plants and other infrastructure, and for years, it was possible to defer major capital replacement. The result is that most utilities' rates reflected only operating costs and much more limited capital investment. In the last two decades, grant funding has disappeared, and concurrently, the impacts of lack of reinvestment in aging infrastructure and increased regulations have led to significantly increased costs. At the same time, utilities have been experiencing declining water consumption (and therefore billed wastewater volume) leading to declining revenue under existing rates. The result is that utilities have no longer been able to defer or minimize rate increases, and as a result, across the U.S., wastewater rates have

increased at a pace that far exceeds inflation. Since at least 2004[1], wastewater rates have increased nearly 6 percent, compared to annualized inflationary increases of just over 2 percent. NACWA presents similar findings. In 2017, the average cost of wastewater services rose 3.6 percent, as presented in NACWA's *2017 Cost of Clean Water Index*[2].

The NACWA *2018 Financial Survey*[3] provides an overview of the trends with respect to the costs of wastewater collection and treatment, underlying infrastructure needs, regulatory requirements and resulting customer rates. The Executive Summary provides numerous key highlights that help provide context to the Rate Commission as it embarks on the evaluation of MSD's Wastewater Rate Proposal. Overall, NACWA concludes that the industry continues to face issues related to inflation, aging infrastructure, regulatory requirements/mandates, changing customer demographics and workforce challenges. Key conclusions include:

Customer Rates

- User charges account for approximately 65% of overall funding sources.
- 90% of utilities adjust rates annually or biennially.
- The cost of wastewater service continues to outpace inflation. The average cost of wastewater services increased 3.6% in 2017 while inflation was approximately 2.1%.
- Average sewer service rates have doubled since 2003. The national average annual charge for wastewater service is now over $500. The average annual wastewater charge in EPA Region 7 (which includes Missouri, Iowa, Kansas and Nebraska) is $542.
- Reductions in residential water use are placing further pressure on rates in order to meet overall revenue needs.
- Over the next 5-years, utilities anticipate rates will continue to increase 3 to 4.6% per year.
- Over half of responding utilities report having customer assistance programs.

Utility Costs

- Operation and Maintenance (O&M) Costs
  - Overall O&M expenditures on a per volume basis have increased an average of 6% per year (1998 to 2016).
  - Personnel costs comprise 45% of total O&M Budgets. Wages and Salaries have increased an average of 6% per year while benefits have increased an average of 4% per year (2013 to 2016).
  - Private sector services comprise the second largest O&M expense accounting for an average of 13% of costs.
- Capital Improvement Programs

[1] AWWA/Raftelis 2016 Water & Wastewater Rate Survey.
[2] National Association of Clean Water Agencies, *2017 Cost of Clean Water Index* and *2018 Financial Survey Executive Highlights "Opportunities & Challenges in Clean Water Utility Financing and Management"* http://www.nacwa.org/news-publications/financial-survey-nacwa-index
[3] National Association of Clean Water Agencies, *2017 Cost of Clean Water Index* and *2018 Financial Survey Executive Highlights "Opportunities & Challenges in Clean Water Utility Financing and Management"* http://www.nacwa.org/news-publications/financial-survey-nacwa-index

- Overall capital improvement program budgets have increased roughly 22% in the last 3 years (2014 to 2017).
- Rehabilitation and replacement costs account for 24% of capital program budgets.
- In 2017, Capital Improvements related to Combined Sewer Overflow (CSO) mitigation make up 14% of capital budgets, up from 12% in 2014.

Capital Financing

- Revenue bonds account for 71% of long-term debt, with 15% and 9% sourced from State Revolving Fund (SRF) loans and General Obligation (GO) bonds, respectively.
- In total, overall long-term debt has increased 6% (2014 to 2017).

Utility Profiles

Black & Veatch collected information from publicly available sources for the utilities listed in Figure 1 above. A high-level summary of the findings is presented and discussed in the following sections of this memo. Individual profiles are provided in Appendix A.

IMPORTANT CONSIDERATIONS

While, this memo primarily focuses on wastewater / sanitary sewer rates, it is important to recognize that there are many factors that can influence the overall costs and associated customer rates for a given wastewater system. The following factors should be considered in context of their respective systems and when drawing any comparisons between them:

Population / Demographics

Geography

Overall services provided by the Utility / Municipality

- Wastewater rates may be lower for utilities which provide multiple services to customers due to shared overhead expenses.

Service Area

- The mix of retail (residential, commercial, industrial) and wholesale customers can influence revenue recovery
- Service area size is also a factor, with larger utilities having greater potential for lower rates due to economies of scale.
- System attributes including:
  - The presence of combined sewer systems impacts O&M requirements, regulatory compliance needs and capital improvement needs.
  - Utilities with completely separate sanitary systems may have lower O&M and capital improvement requirements, given the closed nature of the system. Wet weather mitigation strategies and improvements may still be required, particularly for older systems.
- Overall system age – older systems generally have higher rehabilitation and replacement needs.

Regulatory Compliance Requirements:

- Consent Decree / Long-Term Control Plan (LTCP) Requirements heavily influence capital improvement plans requirements for many utilities.
- Water quality and pollutant loading requirements (such as Total Maximum Daily Loads, or TMDLs) for receiving water bodies can further impact compliance requirements.
- The maturity of a utility's LTCP efforts and level of investment to date can influence rates. For example, utilities which have substantially completed their LTCP will likely have higher debt service costs which are reflected in their rates. Utilities in early stages of LTCP completion may have lower rates currently, but will be facing increases as their program continues.
- Affordability considerations can impact the level of investment, extending the planning period.

Sources of revenue:

- Contributions from local tax revenues (such as sales or real estate tax) can reduce the overall revenue requirements which need to be recovered from wastewater customers (both retail and wholesale). As a result, wastewater rates may not reflect the full cost of service.
- Some utilities recovery an allocated portion of combined sewer costs through an impervious area based charge (either separate from or as part of an overall stormwater charge); therefore, wastewater rates may appear lower when compared to other utilities.

RATE COMPARISONS

The following section provides a high-level summary of residential rate structures, adopted and anticipated rate increases and general commentary. Figure 2 presents a high-level summary of each of the utilities profiled. More detailed information can be found in the Appendix.

Utility information was compiled based upon publicly available data. Long-term rate projections were not available for some utilities; a lack of a publicly available long-term projections should not be interpreted as the utility not anticipated any future cost or revenues increases.

Figure 3 provides a comparison of typical wastewater bills for the average residential customer for each utility based upon MSD's average usage for metered customers. As noted in the chart, this comparison is for wastewater charges only, and therefore, does not reflect costs allocated to stormwater fees for some communities who recover some combined system and related wet weather costs through their stormwater fee. It does, however, include any impervious area based charge separate from the stormwater charge, as noted.

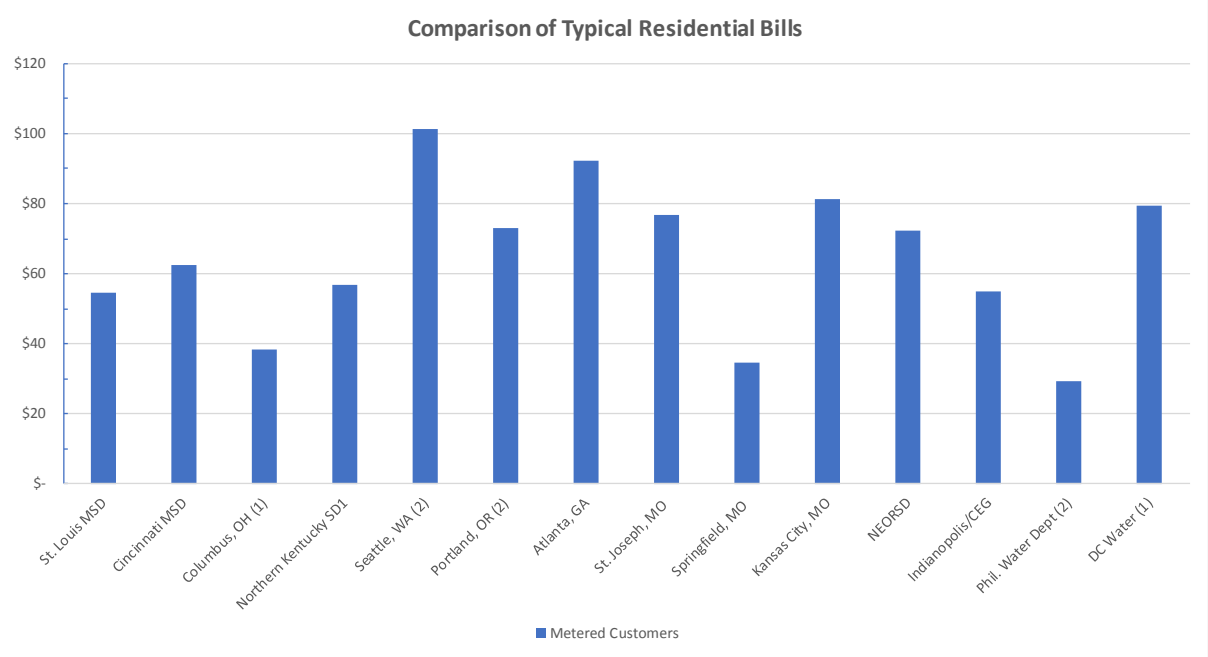
Figure 2 – Wastewater Utility Comparison

#	Utility	Services	Wastewater Residential Rate Structure	Impervious Area Based Fee[4]	Current Rates Effective	Annual or Multi-Year Rate Setting	Scheduled of Rate Increase(s)	Anticipated Rate Increase(s)	Remarks
1	Cincinnati Metropolitan Sewer District (Cincinnati MSD)	Wastewater	Meter Based Service Charge Tiered Volume Charge	N/A	1/1/2018 - reflects move to monthly billing	Annual	N/A	N/A	Last formal rate increase was approved in January 2015. Negotiations underway for Phase 2 WWIP which will drive future rate increases. Affordability issues are a concern. Historical rate increases averaged over 8% annually from 2004 through 2015.
2	Columbus, OH	Water Sewer Drainage Electric	Monthly Fixed Charge Volume Charge	Yes ERU Based Fee	1/1/2019	Annual	N/A	N/A	An IA-based charge recovers a small portion of capital program associated with the utility's consent order. The city also has a separate stormwater charge for MS4 related costs.
3	Northern Kentucky Sanitation District No. 1 (SD1)	Wastewater Stormwater	Volume Charge for metered customers (Minimum bill of 2 HCF/month) Un-Metered Charge based on number of rooms	N/A	7/1/2018	Annual	N/A	N/A	SD1 also has a stormwater fee for MS4 related costs. SD1 increased rates substantially from 2000 (35%) through 2012 (15%), averaging nearly 15% annually. Subsequent rate increases have been generally at 5%/year.
4	Seattle, WA (Collection)	Water Sewer Drainage Solid Waste	Volume Charge (minimum bill of one hundred cubic feet)	Yes Tiered per 1,000 square feet	2019	Annual; have adopted multi-year increases in the past	N/A	7.4% - FY 2020 7.3% - FY 2021	Sanitary rates recover cost of treatment provided by King County. Stormwater rates recover a portion of combined sewer costs in the City as well as MS4 related costs.
5	Portland, OR Bureau of Environmental Services (BES)	Sewer Stormwater	Volume Charge	Yes Per 1,000 square feet of Impervious Area	7/1/2018	Annual	N/A	City develops overall 5-year plan	The majority of CSO issues have been addressed and large-scale CIP are complete. Stormwater rates recover a portion of combined sewer costs in the City as well as MS4 related costs.
6	Atlanta, GA	Water Wastewater Stormwater	Monthly Base Charge Tiered Volume Charges	N/A	7/1/2016	Current rates in place until June 30, 2020	N/A	N/A	Atlanta's wastewater related capital improvement program is supported by a 1% sales tax.
7	St. Joseph, MO	Water Wastewater	Monthly Base Charge Volume Charge	N/A	7/1/2017	Annual	N/A	N/A (study underway)	St. Joseph's LTCP only reflects $75 million of $450 million in identified improvements due to affordability concerns.

[4] Impervious Area (IA) based fee intended to recover a portion of wastewater costs, most commonly in combined systems where stormwater is combined with sanitary wastewater flow. The costs recovered through the IA-based fee range from debt associated with specific LTCP capital costs to a full cost of service allocation of operating and capital costs to the IA-based charge.

#	Utility	Services	Wastewater Residential Rate Structure	Impervious Area Based Fee[4]	Current Rates Effective	Annual or Multi-Year Rate Setting	Scheduled of Rate Increase(s)	Anticipated Rate Increase(s)	Remarks
8	Springfield, MO	Wastewater	Monthly Base Charge Volume Charge	N/A	7/1/2018	3-year	5% - FY 2018 6% - FY 2019 6% - FY 2020	N/A	Integrated plan under consent decree with MDNR. Overflow Control Plan (OCP) costs to address separate sewer overflows estimated at $200 million over 20 years.
9	Kansas City, MO	Water Wastewater Stormwater	Monthly Base Charge Volume Charge	Yes Per 500 Square Feet of "Runoff Unit"	5/1/2018	Annual	10% - FY 2019	N/A	Stormwater rates recover costs associated with the MS4 stormwater system only.
10	Northeast Ohio Regional Sewer District (NEORSD)	Wastewater	Monthly Base Charge Volume Charge	Yes Tiered per 2,000 Square Feet of Impervious Area	2019	5-year	Current Rate Schedule (FY 2016 to FY 2021). Average annual increase of 8.4%	N/A	Stormwater rates recover costs associated with the MS4 stormwater system only.
11	Indianapolis – Citizens Energy Group (CEG)	Water Wastewater Natural Gas	Metered Customers: Monthly Base Charge & Tiered Volume Charge Unmetered Customers: Number of Occupants	N/A	1/1/2019	3-year	NA	NA	CEG is a regulated utility, with rate tariffs approved by the Indiana Utility Regulatory Commission (IURC). CEG is currently engaged in a rate case before the IURC.
12	Philadelphia Water Department (PWD)	Water Wastewater Stormwater	Meter Based Service Charge Tiered Volume Charge	Yes Flat Residential Fee	9/1/2018 (FY 2019)	2 to 3 years	1.33% - FY 2019 1.20% - FY 2020	NA	Stormwater rates recover a portion of combined sewer costs as well as MS4 costs.
14	DC Water	Water Wastewater Stormwater	Volume Charge	Yes ERU based fee (Clean Rivers Impervious Area Charge)	10/1/2018	2-year	5.9% - FY 2019 5.7% - FY 2020	N/A	Clean Rivers Impervious Area Charges recover a portion of LTCP costs via an impervious area based fee. A separate stormwater fee is also imposed by the District of Columbia's Department of Energy & Environment to recover costs of MS4 related services.

Figure 3 – Typical Bill Comparison



(1) Includes separate impervious area based rate for recovery of wastewater costs.
(2) Wastewater charge only; stormwater fee recovers wet weather-related costs that are recovered in St. Louis MSD's wastewater rates.
Metered Usage = 7 Hundred Cubic Feet (CCF)

SUMMARY

As stated previously, the wastewater industry is expected to continue to experience rate increases that exceed inflation, primarily driven by capital investment to address aging infrastructure and regulatory needs. The level of rate increases a utility experiences will be influenced by the current level of rates (i.e., utilities with higher rates require lower increases to generate additional increments of revenue compared to utilities with lower rates), as well as the magnitude of current and future capital requirements.

Care should be taken to not draw direct comparisons between the average typical bills from utility to utility shown in the peer utility comparison presented herein, given the many factors that drive current rates and rate increases. However, the information provided in this memorandum is intended to help provide context within the wastewater utility industry as the Rate Commission begins its review and deliberations of the MSD Wastewater Rate Proposal. A few items for consideration as the information in this memorandum is reviewed:

- Adoption of multi-year rate increases are fairly common amongst the utilities surveyed.
- The majority of utility residential rate structures consist of a fixed base charge and a separate volume charge.

- Future anticipated rate increases range from 1% to 7% with the majority of indicated future increases exceeding 5% per year.
- Typical bills for utilities who recover a portion of wastewater utility costs through other funding sources (e.g., Atlanta) or conduct a comprehensive allocation of all wet weather costs to a stormwater fee (e.g., Philadelphia, Seattle, Portland) may appear lower, but will not reflect the total cost to customers.
- Wastewater rates for utilities with substantially complete LTCPs (e.g., Seattle, Portland, Atlanta) are generally higher than those utilities which are still in the early years of their programs.
- Utilities which are just in the beginning of their LTCPs may face larger overall rate increases in the future, while the current rates and charges will appear low, reflecting the infancy of their programs.

APPENDIX A – UTILITY PROFILES

Metropolitan Sewer District of Greater Cincinnati (Cincinnati MSD)

UTILITY PROFILE

The Metropolitan Sewer District of Greater Cincinnati (Cincinnati MSD, or MSDGC) provides wastewater collection and treatment services to the majority of Hamilton County, Ohio, including the City of Cincinnati. MSDGC is responsible for the operation and maintenance of the system; while the Board of County Commissioners of Hamilton County is responsible for establishing service charges, adopting rules and regulations, and budget approval (operating and capital).

Service Area: >290 Square Miles

Population: >850,000

System Description: MSDGC operates over 3,000 miles of sanitary and combined sewer systems, 7 treatment plants, 100+ pump stations, 2 package treatment plants and several high-rate treatment facilities. MSDGC treats about 160 million gallons of wastewater per day.

Annual Revenues: $275 Million

Consent Decree Information

Cincinnati MSD is responsible for the achieving compliance with two federal consent decrees and the implementation of the associated Wet Weather Improvement Plan (WWIP). The consent decrees address the elimination of separate sewer overflows (SSOs) and the reduction of combined sewer overflows (CSOs). The WWIP, referred to as Project Groundwork, consists of two phases: Phase 1 (2009-2018) and Phase 2 (after 2018, schedule currently under negotiation).

Consent Decree Effective: 2004

Last Amended: 2010

Anticipated End Date: No defined end date. Phase 1 to be completed by 12/31/2018. Phase 2 currently under negotiation.

LTCP Costs: $3.2 Billion (2006 $)

LTCP Investment to date: Approximately $1.2B

Rate Information

Rate Structure: Cincinnati MSD customers are billed monthly. All customers are billed a minimum base charge and a commodity charge consisting of:

- Minimum Base Charge based on Meter Size (Inches). The base charge includes the first 3 ccf of usage.
- Two-tiered volume charge structure based on winter quarter average (Single Family Residential, including duplexes) and actual water usage for all other customers. Volume charge is determined based on a uniform cost for all usage, with an additional $/ccf component added to the first tier to recovery customer-related infiltration/inflow (I/I) allocated costs not recovered in the minimum charge.

Industrial Customers may also be charged:

- Surcharges rates (per ccf) for high strength waste discharge for Suspended Solids (SSS), Biochemical Oxygen Demand (BOD) and Nitrogenous Oxygen Demand (NOD) when actual pollutant concentration exceeds specified limits.

- Industrial Pretreatment fees including an annual fees and monitoring charges (per event).

Current Rates: Cincinnati MSD's current went into effect on 1/1/2018 with the move from quarterly to monthly billing. Overall rate structure/level effective 1/1/2015.

Adopted Rates: Revenue needs are reviewed on an annual basis. The last formal rate increase was approved in January 2015.

Projected Rates: Cincinnati MSD conducts an annual long-term financial planning analysis. Projected rate increases are dependent upon the impact of the Phase 2 WWIP, currently under negotiation.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Cincinnati MSD's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Cincinnati MSD	$ 62.64

Commentary

Cincinnati MSD is not responsible for stormwater management. Stormwater is the responsibility of separate stormwater utilities / local jurisdictions.

At this time, Cincinnati MSD does not have a customer assistance program. A program is currently under evaluation to assist with affordability concerns.

Columbus Department of Public Utilities

UTILITY PROFILE

The City of Columbus, Ohio Department of Utilities – Division of Sewerage and Drainage is responsible for the collection and treatment of wastewater; maintenance of the City's storm, sanitary and combined sewer collections system and related industrial pre-treatment and regulatory compliance programs to protect surface water quality. The Department of Utilities operates within the City structure. Proposed rates and charges are reviewed by the Sewer and Water Advisory Board (SWAB), which forwards their recommendations to Columbus City Council, who then reviews and votes on any proposed rate or policy changes.

Service Area: 228 square miles (Columbus) plus surrounding suburban communities

Population: 1.2 million

System Description: The Division of Sewerage and Drainage operates over 2949 miles of sanitary sewer (2,782 miles of separate and 167 miles of combined) and 2,537 miles of storm sewers. The Division treats approximately 208 million gallons of wastewater per day for the City of Columbus and 22 contracting suburban communities at its two treatment plants.

Annual Revenues: Approx. $280 million

Consent Decree Information

The City of Columbus is under a consent order with the Ohio Environmental Protection Agency (Ohio EPA) to mitigate SSOs and basement back-ups (water in basements) and minimize CSO discharges. The initial Wet Weather Management Plan developed in 2005, identified an estimated $2.5 billion in capital improvement. With the Columbus' updated Integrated Wet Weather Management Plan (knowns as Blueprint Columbus), the City has adopted an approach which includes both grey and green infrastructure solutions and reduces long-term costs to $1.8 billion over the next 20 years.

Consent Decree Dates: August 1, 2002 (SSOs) and September 17, 2004 (CSOs)

Wet Weather Management Plan: July 1, 2005

Updated/Integrated Plan (Blueprint Columbus): Approval from Ohio EPA on September 15, 2015

Estimated End Date: 2035

LTCP Costs: $1.8 Billion

LTCP Investment to date: $1 billion spent in first 10 years (2005-2015)

Rate Information

Rate Structure: All customers sewer customers pay sewer service charge and a volume charge (per ccf). Service charges vary based upon customer location (Inside City, Franklin County or Subdivision). Commodity based charges vary based upon location and customer type (i.e. Residential/Consecutive/Commercial or Industrial). All sewer customers with a sewer account are billed the Clean Rivers Charges, which is an impervious area based fee.

Current Rates: Effective 1/1/2019

Adopted Rates: Rates reviewed on an annual basis.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Columbus's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Columbus*	$ 38.37

**Includes Columbus' dedicated Clean Rivers charge which recovers a portion of LTCP costs.*

Commentary

The City offers discounts of 20% water and sewer charges to qualifying low income customers.

Northern Kentucky Sanitation District No. 1 (SD1)

UTILITY PROFILE

SD1 is responsible for the collection and treatment of Northern Kentucky's wastewater and serves residents throughout Boone, Campbell and Kenton Counties. SD1 is also responsible for regional stormwater management. SD1 operates as a regional wastewater/stormwater utility and is governed by a citizen Board of Directors.

Service Area: 190 square miles

Population: 290,000 residents / 115,000 customer accounts

System Description: SD1's wastewater system consists of approximately 1,600 miles of sanitary sewers (including separate sanitary, force mains and combined sewers), 135 wastewater pump stations, six package plants, 3 major treatment plants, and 6 package treatment plants. SD1 treats approximately 37 million gallons of wastewater per day. SD1 also operates and maintains 416 miles of storm sewer pipe, 15 flood pump stations and 31,106 storm sewer structures.

Annual Revenues: $103.3 Million in Total Annual Operating Revenues (2018) consisting of $84.3 Million in sewer revenues and $13.1 Million in stormwater revenues with the remainder of revenues consisting of permitting, tap-in fees, hauling and other revenues.

Consent Decree Information

SD1's consent decree is intended to reduce combined and separate sewer overflows and water pollution in Northern Kentucky's creeks and streams.

Consent Decree Date: 2007

Anticipated End Date: 2040 (In February 2019, SD1 announced it had reached agreement with state and federal regulators to extend the deadline for completion from2025 to 2040, based on affordability concerns.

LTCP Costs: $1.3 Billion (2016 $)

LTCP Investment to date: not readily available

Rate Information

Rate Structure: SD1 customers are billed as follows:

- Metered Residential Customers are billed monthly per HCF of usage (single volume charge) with a minimum bill of 2 HCF.
- Un-metered Residential Customers are billed a monthly fee based upon the number of rooms within their household
- Non-Residential Customers are billed either monthly or quarterly for actual water usage based on a declining block rate schedule.

High-strength customers may also be charged surcharges rates (per ccf) for high strength waste discharge for Suspended Solids (SSS), Biochemical Oxygen Demand (BOD), Total Kjeldahl Nitrogen and Phosphorous when actual pollutant concentration exceeds specified limits.

Current Rates: Effective 7/1/2018

Adopted Rates: Rates are adopted annually. SD1 Board recommends rates for upcoming year. Rate increases are approved by the Fiscal Courts of the 3 counties served.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the SD1's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
SD1	$ 56.77

Commentary

Rate increases are approved by the 3 counties served, through their Fiscal Courts. For increases less than 5%, approval must be obtained from the Judge Executive of 2 of the 3 counties. For rate increases greater than 5%, approval goes to the full Fiscal Courts in each county. Requests for rate increases can only go to the counties once per year, and SD1 traditionally submits recommended rate increases as part of the budget process.

Seattle Public Utilities (Seattle, Washington)

UTILITY PROFILE

The Seattle Public Utilities - Drainage and Wastewater Utility provides wastewater and stormwater management services to City of Seattle residences and businesses, and to a small number of wastewater customers outside city limits. The Drainage and Wastewater Utility collects and disposes or discharges storm runoff and wastewater from residences, businesses, institutions and public properties within the City. In addition to handling sewage and storm water runoff, Drainage and Wastewater works with other government agencies and private parties to address Federal EPA-mandated sediment cleanup projects where contamination is linked to storm water or sewage, such as Gas Works Park and the Lower Duwamish Waterway. King County Wastewater Treatment provides wastewater treatment services to the City.

Service Area: 142.5 square miles

Population: 1.3 Million

System Description: Seattle's drainage and wastewater system includes approximately 448 miles of separated sanitary sewers, 968 miles of combined sewers, 477 miles of storm drains, 68 pump stations, 90 permitted combined sewer overflow outfalls, 295 storm drain outfalls, 189 stormwater quality treatment facilities, 145 flow control facilities, and 38 combined sewer overflow control detention tanks and pipes.

Annual Revenues: $537 Million in Total Annual Operating Revenues (2018) with $273 Million in wastewater utility service revenues and $127 Million in drainage utility service revenues. The remainder of revenues consisting of grants, interest income, CIP financing (including revenues from bonds and loans), permitting, tap-in fees, hauling and other revenues.

Consent Decree Information

The City of Seattle (City) owns and operates a Wastewater Collection System that collects residential and industrial wastewaters, and conveys the collected wastewater to regional conveyance systems and wastewater treatment plants owned and operated by King County. About two-thirds of the City is served by a combined sewer system (CSS) that carries a combination of untreated sewage and stormwater to local water bodies. Seattle entered into a Consent Decree in United States District Court for Western District of Washington on July 3, 2013. Under the Consent Decree the City is required to reduce the occurrence of CSOs and contribution of pollutants on surrounding water bodies as well as associated impacts such as street flooding and backups into homes and businesses. The City has developed a long-term control plan (LTCP) to address the attain water quality standards in accordance with state, federal, and the City's Consent Decree requirements. Each CSO will be addressed and the City is required to document that the associated CSO outfall "has been "controlled" to no more than one untreated discharge (overflow) per year based on a 20-year moving average."

Consent Decree Effective Date: July 3, 2013

Long-Term Control Plan Approved: May 30, 2015

Anticipated End Date: December 31, 2025

LTCP Costs: Seattle has invested more than $700 million over the last four decades with an additional $240 million (2016 $) anticipated to be spent between 2016 and 2021.

Rate Information

Rate Structure: All sewer customers pay based upon their actual water usage (per Ccf). There are no meter based/fixed charges. There is a minimum charge based on one Ccf per premise per month. The sewer charge includes pass-through costs associated with wastewater treatment provided by King County.

Customers all receive a stormwater charge, which recovers an allocated portion of CSO related costs. Stormwater charges based upon a tiered rate structure per 1,000 square feet with separate tiers for small residential properties and all other properties (based upon the level of development). Stormwater charges are charged via the King County tax collection system.

Current Rates: 2019

Anticipated Rates: Projected rate increases are estimated to be 7.3-7.4% per year over the next two years. Seattle Public Utilities routinely updates their strategic plan which includes a 6-year projection of estimated revenue needs.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Seattle's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Seattle	$ 101.36

Commentary

Wastewater rates do not include all costs of the O&M and capital associated with the combined system, as such costs are recovered through the impervious area-based stormwater fee.

Bureau of Environmental Services (Portland, Oregon)

UTILITY PROFILE

The City of Portland Oregon's Bureau of Environmental Services provides wastewater and stormwater infrastructure.

Service Area: 147 square miles (44 square miles combined sewer / 103 square miles separate sewer)

Population: 600,000 (customers)

System Description: Portland's wastewater and stormwater system drainage and wastewater system includes approximately 2,500 miles of pipe of sanitary and stormwater sewers, 100 sewer pump stations, and 2 wastewater treatment plants, treating an average flow of 77 million gallons per day. This includes the two large scale pipes (1 – 3.5-mile x 14-foot diameter and 1 – 6-mile x 22-foot diameter) designed to collect and convey combined sewerage and associated COS pump stations.

Annual Revenues: $386 Million in Total Annual Operating Revenues (FY 2019 projected) with most revenues (approximately $347 Million) derived from sewer and stormwater charges. The remainder of revenues consisting of connection fees, wholesale revenues, inspection and permitting fees and other revenues.

CSO Control Program

The Oregon Department of Environmental Quality approved that option in accepting the city's 1994 CSO management plan. From 1990 to 2011, Portland built projects to keep stormwater from flowing to the combined sewer system, large tunnels to capture combined sewage during wet weather, and pumps to send it to the treatment plant. The city also added treatment plant facilities to handle all the extra water. It significantly improved water quality in the Willamette River and Columbia Slough, making them safe for people and healthier for fish and wildlife. Investments in the program reduced CSOs to the Columbia Slough by 99% and to the Willamette River by 94%.

End Date: 2011

CSO Control Program (as of 2011): $1.4 Billion

Rate Information

Rate Structure: Residential sewer customers pay based upon their water consumption (per ccf). Eligible low income single family customers are assessed for a flat monthly fee based upon income level. Non-residential customers (including commercial, industrial and institutional users) are billed based on their water consumption (per Ccf); they may also be billed for special meter charges (per bill) and for clean water discharged to storm sewers (per Ccf).

Industrial Users may be charged surcharges rates (per pound) for extra strength discharges for Biochemical Oxygen Demand (BOD) and Suspended Solids (SSS) when actual pollutant concentration exceeds specified limits.

Customers also receive a stormwater charge, based upon property type and per 1,000 square feet of impervious area.

Current Rates: Effective July 1, 2018

Adopted Rates: The City develops a 5-year financial plan and adopts rates annually.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Portland's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Portland	$ 73.08

Commentary

Qualifying low-income customers may be eligible for a fixed fee per account per month.

While flooding and water quality issues remain, Portland's has addressed the majority of their CSO issues and large-scale investments into CSO management are essentially complete.

Wastewater charges for Portland do not include all of the costs recovered by St. Louis MSD. Based on an established cost allocation methodology, wet weather-related costs are allocated to the City's stormwater fee.

City of Atlanta – Department of Watershed Management

UTILITY PROFILE

The City of Atlanta's Bureau of Wastewater Services (Department of Watershed Management) operates the wastewater collection, conveyance and treatment system. The City operates as a Department within the City of Atlanta and supported by the Water and Wastewater Fund.

Population: 400,000 (City Population) / 1.5 million (including residents and commuters)

System Description: Atlanta's wastewater system consists of approximately 2,200 miles of sanitary and combined sewers, four combined sewer control facilities, two water quality control facilities, four water reclamation centers (WRCs), which serve the separate sewer area, and sixteen pump stations. The WRCs treat more than 170 million gallons of wastewater per day.

Annual Revenues: Total Water and Wastewater fund revenues are approximately $567 million with approximately $452 million are derived from water and sewer service revenues with the majority of additional revenues coming from the Municipal Option Sales Tax (MOST), a 1% dedicated sales tax which supports the implementation of the Clean Water Atlanta Program.

Consent Decree Information

The City is currently operating under two consent decrees which resulted from lawsuits against the City filed by the Upper Chattahoochee Riverkeeper and later joined by the U.S. EPA and Georgia Environmental Protection Department (EPD). The CSO Consent Decree, signed in 1998 addresses combined sewer overflows and the First Amended (SSO) Consent Decree signed in 1999 addresses sanitary sewer overflows. All construction associated with meeting the terms of the CSO Consent Decree and the First Amended Consent Decrees (FACD) must be completed by November 2007 and July 2014, respectively.

Clean Water Atlanta is the City's multi-program initiative to improve water quality in Atlanta through capital construction programs and enhanced operation of the City's drinking and wastewater systems.

Consent Decree Effective Dates: 1998 (CSO) and 1998 (SSO), amended 2012

Targeted Completion Dates: CSO – November 2007 / SSO – July 2014, extended to July 2027.

Clean Water Atlanta Costs: Approximately $2 Billion

Rate Information

Rate Structure: All customers are charged a monthly base charge along with tiered usage charge. The sewer rate structure is currently proposed to remain in place from July 1, 2016 through June 30, 2020.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Atlanta's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Atlanta	$ 92.39

Commentary

City of St. Joseph, Missouri - Water Protection Division

UTILITY PROFILE

The City of St. Joseph, Missouri – Water Protection Division is responsible for the operation and maintenance of the City's wastewater system. The City operates and maintains the Sewer Utility as a self-supporting enterprise.

Service Area: 45 square miles

Population: ~80,000

System Description: St. Joseph's wastewater system consists of approximately 425 miles of separate sanitary and combined sewer pipe, four large pump stations and 20 minor pumping stations. Wastewater is collected and conveyed to the City's treatment plant, which treats approximately 17 million gallons of wastewater per day.

Annual Revenues: Approximately $31.6 million.

Long Term Control Plan Information

In February 2008, the City of St. Joseph, submitted a long-term control plan to reduce sewer overflows to the Missouri Department of Natural Resources (MDNR). In 2010, the City completed an updated CSO Facilities Plan that provides the basis for implementation. The facilities plan details the city's approach to controlling the amount of sewer overflows and reducing the frequency of overflows that discharge into the Missouri River.

LTCP: February 2008, updated 2010

LTCP Costs: The City's LTCP is estimated at approximately $464 million (2009 $). Phase 1A is estimated at a total cost of $152 million (2009 $), with $100 million (inflated $) completed to date.

Rate Information

Rate Structure: All customers are charged a monthly base charge and monthly volume charges based upon water use (per CCF). Rates vary for inside city and outside city customers.

Industrial Users may be charged surcharges rates (per pound) for extra strength discharges for Biochemical Oxygen Demand (BOD), Suspended Solids (SSS), Ammonia, and Fats, Oils, & Grease when actual pollutant concentration exceeds specified limits. Rates vary for inside city and outside city customers.

Current Rates: Effective through June 30, 2019 (FY 2019)

Projected Rates: City undertakes an annual financial planning process and establishes rates for the coming year. A full cost of service analysis is conducted every 5 years.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the St. Joseph's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
St. Joseph	$ 76.68

Commentary

Environmental Services Wastewater Management Division - Springfield, Missouri

UTILITY PROFILE

The City of Springfield, Missouri's Environmental Services Wastewater Management Division provides sanitary sewer collection, wastewater treatment and industrial pretreatment services to the residents and businesses of Springfield.

Service Area: 82.6 square miles

Population: ~160,000

System Description: The Sanitary Sewer Collection System includes over 1,176 miles of sanitary sewer pipe which carries wastewater to two treatment facilities, which on average treat a combined flow of 50 million gallons of wastewater per day.

Annual Revenues: Total sanitary sewer systems revenues are approximately $43.2 million (FY 2018) with approximately 99% of revenues derived from sanitary sewer service revenues. The remaining revenue is derived from sewer connections fees.

Long Term Control Plan

Springfield has an amended consent judgement with Missouri Department of Natural Resources (MDNR). The City's is on schedule for compliance with a requirement to complete a $200 million plan over 10 years through their Overflow Control Plan (OCP). The City has completed early action program in 2018 for $50M in addition to projects under the OCP. The OCP outlines investments in the sanitary sewer system and is part of a region-wide integrated planning effort. The OCP includes continued rehabilitation of aging pipes; expansion of the private sewer repair program to address I/I from private sources; upgrades on treatment facilities, including energy efficiency; targeted projects to reduce sanitary sewer overflows; increase sewer maintenance staffing; continued monitoring of system performance; and continued public outreach and education.

OCP Costs: Approximately $200 million (2015 $) by 2025

Rate Information

Rate Structure: All sewer customers are charged a monthly customer charge (per account) and monthly volume charges based upon water use (per ccf). Users may be charged surcharges rates (per pound) for extra strength discharges for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) when actual pollutant concentration exceeds specified limits.

Current Rates: Effective July 1, 2018

Adopted Rates: 6% rate increase effective July 1, 2019. On November 28, 2016, City council adopted 3-years of rate increases, covering rates from July 1, 2017 (FY 2018) to July 1, 2019 (FY 2020).

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the Springfield's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
Springfield	$ 34.57

Commentary

The City of Springfield and Green County collaborated to develop an integrated plan for the region that will address all necessary requirements and improvements to meet environmental regulations over the planning horizon. The City's wastewater OCP is a part of that integrated plan.

KC Water - Kansas City, Missouri

UTILITY PROFILE

KC Water is responsible for the operation and maintenance of Kansas City, Missouri's wastewater collection and treatment systems as well as the stormwater management systems for customers in Kansas City and for 32 wholesale customers in the Kansas City region. KC water's operations are primarily funded via wastewater and stormwater utility system service revenues.

Service Area: 350 Square Miles (Separate Area – 294 square miles / Combined Area – 56 square miles)

Population: 450,000

System Description: Kansas City's wastewater infrastructure consist of over 2,800 miles (2,200 miles of separate and 600 miles of combined sewers), 40 wastewater pumping stations, 18 flood pumping stations and 6 wastewater treatment plants which conveys sewage to six wastewater treatment plants.

Annual Revenues: Total Sewer and Stormwater fund revenues are approximately $225 million with approximately $172 million derived sewer service revenues and $13.4 million stormwater service revenues. Remaining revenues consist of approximately $33.5 million in intermunicipal (i.e. wholesale) revenues and $6.4 million in other operating revenues.

Consent Decree Information

KC Water is in the process of implementing a 25-year federally-mandated Overflow Control Program (OCP). Planned Combined Sewer System (CSS) improvements include sewer separation, the addition of 310 million gallons per day of wet weather treatment capacity, sewer rehabilitation, 25 million gallons of in-line stormwater, pump station and treatment plant modifications as well as green infrastructure. The Separate Sewer Service (SSS) portion of the OCP improvements include: inflow and infiltration reduction, pump station rehabilitation and upgrades, construction of 50-million gallon per day high rate treatment facility, 112 million gallons of storage and the construction of new 24-inch force mains.

Consent Decree Date: September 2010

Last Amended: January 2015

Anticipated End Date: December 2035

LTCP Costs: $4.5 Billion (2015 Dollars)

LTCP Investment to date: not readily available

Rate Information

Rate Structure: All "resident" customers are charged a monthly base charge and monthly volume charges based upon water use (per CCF).

Non-residents are charged based upon connection type (unmetered, no consumption) Rates vary for inside city and outside city customers.

Industrial Users may be charged surcharges rates (per pound) for extra strength discharges for Biochemical Oxygen Demand (BOD), Suspended Solids (SSS), Ammonia, and Fats, Oils, & Grease when actual pollutant concentration exceeds specified limits. Rates vary for inside city and outside city customers.

Current Rates: Effective May 1, 2018

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the KC Water's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
KC Water	$ 81.50

Commentary

Northeast Ohio Regional Sewer District (NEORSD)

UTILITY PROFILE

The North East Regional Ohio Sewer District (NEORSD) is an independent political subdivision of and organized under the laws of the State of Ohio. NEORSD (previously known as Cleveland Regional Sewer District) was Created in 1972 as Cleveland Regional Sewer District), assuming the operation and management of certain wastewater collection, treatment and disposal facilities serving the Cleveland metropolitan area and previously owned and operated by the City of Cleveland, as well as addressing intercommunity drainage problems, both storm and sanitary. The District encompasses nearly all of the City of Cleveland and all or portions of 61 suburban communities in Cuyahoga, Lake, Lorain and Summit Counties.

Service Area: 350 square miles

Population: Approximately 1,000,000 (residential service)

System Description: Local sewers transport wastewater to NEORSD's interceptors, which lead directly to the wastewater treatment plants. NEORSD's wastewater infrastructure consist of over 330 miles of sewers and 420 miles of a regional stormwater system, and three treatment plants located throughout the service area treating over 200 million gallons per day. *Note - Smaller local sewers (combined sewers, and separate sanitary and storm sewers) are owned and maintained by the local municipalities.*

Annual Revenues: NEORSD's revenues are approximately $313 million with approximately $287 million derived wastewater service revenues and $26 million stormwater service revenues.

Consent Decree Information

In 2010, NEORSD entered into a Consent Decree to address water quality issues related to combined sewer overflows. NEORSD's Long-Term Control Plan, known as Project Clean Lake, which outlines their compliance strategy, is a $3 billion, 25-year program that will reduce the total volume of raw sewage discharges from 4.5 billion gallons to 494 million gallons annually. Over 98% of wet weather flows in the District's combined sewer system will be receiving treatment in 25 years. The plan includes the construction of large-scale storage tunnels and treatment plant enhancements (including seven tunnels, ranging from two to five miles in length, up to 300 feet underground and up to 24 feet in diameter) as well as a minimum of $42 million in green infrastructure projects.

Consent Decree Date: June 2010

Anticipated End Date: 2035

LTCP Costs: $3 Billion (2010 Dollars)

LTCP Investment to date: not readily available

Rate Information

Rate Structure: All customers are charged a monthly base charge and monthly volume charges based upon water use (per MCF). Volume charges vary based upon service area (City of Cleveland or Suburbs). In addition, reduced rates are available via customer assistance program for qualifying seniors (under the Homestead rate program) and qualifying low-income customers (under the Affordability Program).

Customers also receive a separate stormwater fee based upon their parcels impervious area. Residential fees are based upon a three-tiered rate structure. Non-residentials customers are billed per 3,000 square feet of impervious area.

Current Rates: January 1, 2019

Adopted Rates: NEORSD adopted multi-year sewer rate increases covering the period of 2017 to 2021.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the NEORSD's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
NEORSD	$ 72.26

Commentary

Citizens Energy Group (CEG) – Indianapolis, Indiana

UTILITY PROFILE

Citizens Energy Group (CEG) is responsible for the collection and treatment of wastewater within the Indianapolis/Marion County Boundaries and provides wastewater treatment for seven surrounding communities (as wholesale customers). CEG's wastewater operations are as a Public Charitable Trust (CWA Authority, Inc.).

Service Area: 277.5 square miles (222 square miles of combined and 55.5 square miles of separate system)

Population: Approximately 850,000 (Indianapolis) plus several Satellite communities

System Description: CEG's wastewater collection system consists of approximately 3,000 miles of sewers, 110,000 manholes, 50,000 basin/inlet structures and more than 250 wastewater lift stations. 80 percent of the system is a combined sewer system with the remaining portion separate. Wastewater is conveyed to two advanced treatment plants, which treat and average flow of 120 million gallons per day.

Annual Revenues: Approximately $320 million

Consent Decree Information

Indianapolis negotiated a Combined Sewer Overflow Consent Decree and Long-Term Control Plan (LTCP) to reduce sewer overflows into local waterways. The Consent Decrees outlines a 20-year plan to curb the overflow of raw sewage from combined sewers into waterways and requires capture and treatment of 95-97% of the sewage overflows (varying by watershed).

Consent Decree Date: September 2006

Last Amended: July 2013

Targeted completion date: 2025

LTCP Costs: $2 Billion (2013 Dollars)

Rate Information

Rate Structure: Metered non-industrial customers are charged a monthly base charge along with treatment charges based upon a two-tiered rate schedule.

Unmetered non-industrial customers are charge monthly based upon the number of occupants (for residential customers) or a flat fee based upon estimated usage (other than residential customers).

Industrial sewage disposal services rates consist of a tiered base charge, a treatment charge and an industrial surveillance charge.

Separate rates are established for septic and grease haulers and self-reporting sewage disposal service. Wholesale sewage disposal customers may be subject to surcharges for wastewater that exceeds specified concentrations for BOD, SS and NH3-N.

Current Rates: Effective January 1, 2019

Adopted Rates: CEG is a regulated utility, and establishes rates via a formal rate case proceeding process with the Indiana Utility Regulatory Commission (IURC). The current rates are the final year in series of five years of adopted rates. CEG filed a wastewater rate case in the fall of 2018, with the process underway.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the CEG's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
CEG	$ 57.78

Commentary

Philadelphia Water Department

UTILITY PROFILE

The Philadelphia Water Department (PWD) is responsible for providing water, wastewater and stormwater for the City of Philadelphia and wholesale service customers (outside the City) within the greater Philadelphia area. While PWD operates as a Department within the City of Philadelphia, PWD operates under a dedicated Water Fund and funded via user rates and charges revenues from PWD customers.

Service Area: 134 Square Miles (in City) / 364 Square Miles (including Wholesale Customers)

Population: 1.6 million (in City) / 2.3 million (including wholesale customer service area population)

System Description: PWD's wastewater collection system consists of approximately 3,714 miles of total collector system piping, 19 pumping stations, 94,293 manholes, 25 storm relief structures, and 71,926 stormwater inlets. There are approximately 763 miles, 740 miles, and 1,852 miles of sanitary, stormwater, and combined sanitary/stormwater mains. Wastewater is treated at three wastewater treatment plants, which treat an average of 397 million gallons per day.

Annual Revenues: $444 Million (FY 2019) includes sewer and stormwater related revenues.

Consent Order Agreement Information

PWD entered into a Consent Order Agreement (COA) with Pennsylvania Department of Environmental Protection (PADEP) on June 1, 2011. The COA formalized PWD's Long-Term Control Plan (LTCP), which is an integral part of the City's Green City, Clean Waters program. The goal of the program and the LTCP is to mitigate CSOs to achieve compliance per the COA. The COA requires the capture of 85% of combined sewage flows, on an annual average basis. Under the COA, the PWD has committed to a 4-pronged program that consists of greened acres, treatment plant upgrades, interceptor lining and overflow volume reduction, and equivalent mass capture of pollutants.

Consent Order Agreement Effective Date: June 1, 2011

Anticipated End Date: June 1, 2036

LTCP Costs: $3.5 - 4.5 Billion (2018 Dollars / Current Estimate)

LTCP Investment to date: Not Available at this time.

Rate Information

Rate Structure: PWD customers are billed monthly. All retail sewer customers are billed a minimum base charge and a commodity charge consisting of:

- Monthly Meter Based Service Charge (based upon meter size in inches).
- Quantity charge for all billable water usage (per MCF). The usage rate includes a surcharge designed to recover the cost of PWD's Tiered Assistance Program (TAP), which is available to qualifying low income customers.

In addition to sewer charges, PWD also has a stormwater charge that recovers all MS4 related stormwater costs, a portion of the combined sewer system costs, and a portion of the general and administrative costs. Stormwater rates consist of a gross area charge and an impervious area charge, which are billed per 500 square feet of gross and impervious area respectively ($/500 square feet) and a billing & collection charge (billed per account).

Current Rates: Effective September 1, 2018 (FY 2019)

Adopted Rates: Approved increase of 1.33% (FY 2019) and 1.20% (FY 2020). Note - PWD adopts rate via a formal rate proceeding process where the Water, Wastewater and Storm Water Rate Board conducts the rate case and issues binding rate decisions for adoption.

Anticipated Rates: Projected rate increases for FY 2021 to FY 2023 average approximately 6% per year.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the PWD's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
PWD	$ 29.27

Commentary

DC Water – Washington, District of Columbia

UTILITY PROFILE

DC Water is an independent authority of the District of Columbia, providing wastewater treatment and collection services to retail customers in the District of Columbia and wholesale customers in Virginia and Maryland.

Service Area: The service area for DC Water's Blue Plains treatment plant includes Washington, D.C., parts of Fairfax and Loudoun Counties and the Town of Vienna in Virginia, part of Prince George's and Montgomery Counties in Maryland, Washington Dulles International Airport as well as U.S. Government facilities located in Virginia and Maryland.

Population: 2.2 million (640,000 – D.C. / 1.6 million - surrounding jurisdictions)

System Description: DC Water's wastewater collection system consists of approximately 1,800 miles of separate sanitary and combined sewers, 16 stormwater stations, 75,000 catch basins, 22 flow-metering stations and 9 wastewater pumping stations, which collect and convey runoff to the Blue Plains Advanced Wastewater Treatment plant. On average, 300 million gallons of wastewater are treated each day.

Annual Revenues: $650 million (water and wastewater)

Consent Decree Information

DC Water is subject to a federal consent decree requiring the reduction of combined sewer overflows (CSOs) into the District's waterways. DC Water's Long-Term Control Plan (LTCP), referred to as the Clean Rivers Project, will create 17 miles of tunnels with a combined storage with a capacity of 187 million gallons, five new tunnels, a dewatering pump stations as well as diversion structure sand sewer to collect CSO overflows. The plan is further augmented by green infrastructure intended to help control selected CSO area.

Consent Decree Date: March 2005

Anticipated End Date: 2030

LTCP Costs: $2.6 Billion (2005 $)

Rate Information

Rate Structure: All customers are billed a quantity charge per CCF of water consumption. DC Water also recovers a portion of combined sewer costs via an Equivalent Residential Unit (ERU) based stormwater fee, referred to as the Clean Rivers Impervious Area Charge (CRIAC).

Current Rates: Effective October 1, 2018

Adopted Rates: DC Water approved a 2-year rate increase in 2018, for FY2 019 and FY 2020.

Customer Information

The following is a comparison of typical residential customer bills under St. Louis MSD's current rates and the DC Water's current rates (using the same average consumption).

	Metered (Average Consumption 7 ccf)
St. Louis MSD	$ 54.63
DC Water*	$ 79.43

**DC Water's customer cost included the CRIAC charge which is dedicated for the recovery of long-term control plan related costs associated with DC Water's Clean Rivers project.*

Commentary

Rates approved for FY 2019 reflected no change to fixed charges and 13% increase to volumetric charges. The DC Water IA-based charge, called the Clean River Impervious Area Charge (CRIAC) was reduced 8.7%. FY 2020 rates will reflect an increase in volumetric charge only.