msd
Safe, clean waterways

Annual Report · Fiscal Year Ended June 30, 2017

MSD manages wastewater, drainage and flood protection for Louisville Metro —24 hours a day, every day of the year— with more than 630 dedicated employees.

Our Vision

Achieving Safe, Clean Waterways for a Healthy and Vibrant Community

Our Mission

Providing Exceptional Wastewater, Drainage and Flood Protection Services for Our Community

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To Our Community

A Year of Progress, Yet Challenges Remain

Louisville is enjoying dramatic transformation, with new bridges, downtown development and continued progress in strengthening neighborhoods across the community.

James A. Parrott
Executive Director

Cynthia Caudill
Chair, MSD Board

MSD shares the vision of a transformed Louisville and our commitment to the community's wastewater, stormwater and flood-protection systems has never been clearer. As we reflect on the past year, we're proud of our work to maintain clean waterways and protect public health and safety. Our efforts are seen across the city.

- In Shawnee Park, we are constructing an underground storage basin that will capture up to 20 million gallons of untreated wastewater and prevent it from flowing into the Ohio River. The project also provides enhanced recreational opportunities for the community to enjoy, as well as 150 local jobs.

- In Portland, green infrastructure will prevent more than 35 million gallons of rainwater from entering the combined sewer system — equal to about 53 Olympic-sized swimming pools — keeping untreated wastewater out of the Ohio River. Trees and vegetation have been planted in 150 locations along 17th Street.

- In Smoketown, the 17-million-gallon Logan Street Basin went into operation in December 2017. We changed our original plan of an above grade basin to build the basin underground to create greenspace for the community while also keeping untreated wastewater out of local waterways.

- Morris Forman Water Quality Treatment Center, Kentucky's oldest and largest wastewater treatment facility, had $33 million in repairs and improvements to increase operational resiliency. This vital component of our system treats wastewater from 67 percent of Jefferson County.

- Our board approved the Waterway Protection Tunnel also known as the Ohio River Tunnel Project — an innovative approach to help

minimize combined sewer overflows into the Ohio River by 2020. This 2.5-mile tunnel will be 200 feet underground and replace three storage basins that would have been built in various neighborhoods. Boring of the tunnel begins in October 2018.

Despite the many improvements we've already made, there is still much to be done. Louisville's aging wastewater, stormwater and flood-protection systems were built to support a community much smaller than our current metropolitan city. Some, in fact, were built in the 1860s, around the time of the Civil War. Louisville residents and businesses are impacted when sometimes century-old sewers inevitably fail. Such as the recent roadway cave-in resulting from the collapse of a vital sewer line carrying approximately one-third of the community's wastewater at the busy intersection of East Main and Hancock streets. Fortunately, no one was injured, but this cave-in still resulted in more than six weeks' worth of work, street closures and neighborhood disruption.

Also, flooding along the Ohio River as well as in inland neighborhoods continues to be an issue — particularly with the increase in significant rain events in the past decade. Floods have caused millions of dollars in property damage and some like we saw in 2015, required emergency water rescues across the community.

As part of MSD's commitment to public health and safety, we launched a campaign this year to educate the public and gather feedback regarding our Critical Repair and Reinvestment Plan. The plan outlines a number of improvements needed across MSD's facilities, based on an extensive analysis of our infrastructure. You can learn more by visiting LouisvilleMSD.org/CriticalRepairPlan.

Nearly 1,500 residents attended community meetings to learn more about the plan, with hundreds of thousands more reached through MSD bill inserts and social media. The response was clear — now is the time to address these infrastructure risks.

While a rate increase of 6.9 percent was enacted this year, more funding is still needed to embark on these necessary infrastructure projects. The difficult truth is the solutions will require $4.3 billion of investment over the next 20 years.

We are at a critical juncture. The challenges are significant and real. But the people of MSD remain committed to our work for safe, clean waterways, and look forward to continuing the conversation with the community about how we can best meet these challenges.

James A. Parrott
Executive Director

Cynthia Caudill
Chair, MSD Board

Enhancing Quality of Life through Our Core Services

MSD employees serve Louisville Metro by providing these vital services:

- **Wastewater Collection and Treatment**
- **Stormwater and Drainage Management**
- **Flood Protection**

We work to enhance community health and safety by:

- improving water quality in our streams and river
- nurturing a green environment
- promoting a growing community

Wastewater Collection and Treatment

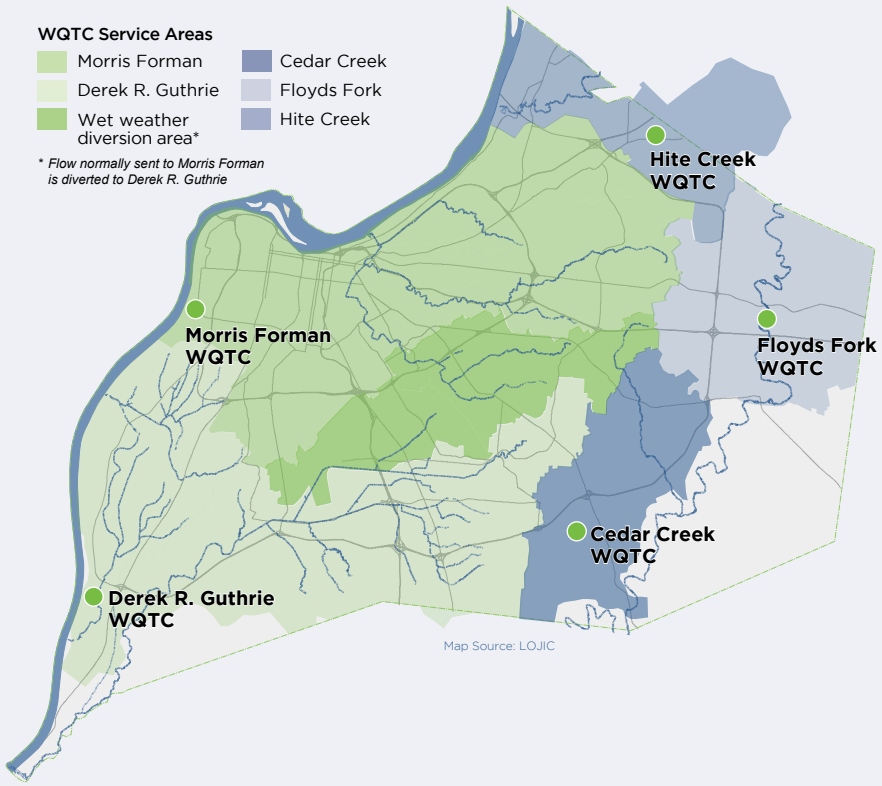
The MSD Collection System operates beneath your feet. The system carries wastewater — and in the older sections of our city, it also carries rainwater — to one of our Water Quality Treatment Centers. Our service area, which includes Jefferson County and Crestwood in Oldham County, generates about 153 million gallons of wastewater daily that MSD treats and returns to our waterways. The Wastewater Collection and Treatment Systems consist of more than 3,300 miles of pipe, 259 pumping stations and five Water Quality Treatment Centers.

Transforming Our Sewer System

MSD continues with work to decrease occurrences of sewage overflows during rain events. We are 12 years into our Consent Decree plan to minimize combined sewer overflows and eliminate sanitary sewer overflows while maintaining our community's aging sewer system.

The Clean Water Act — passed in 1972 — established the framework to improve the water quality of waterways across the U.S. In 2005, MSD entered into a Consent Decree with the Kentucky Division of Water, the U.S. Environmental Protection Agency (EPA)-Region 4 and the U.S. Department of Justice to satisfy Clean Water Act requirements. We are on schedule to meet these water quality goals by 2024. However, the original estimate of $850 million — developed in 2005 — has been revised to $900 million in capital expenses.

Water Quality Treatment Centers



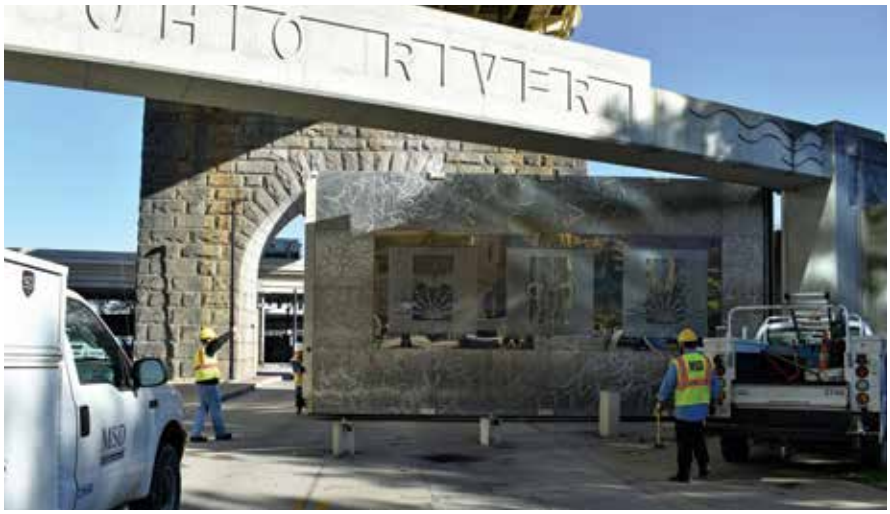
From 1985 to 2003, MSD spent nearly $1 billion on improvements to the wastewater collection and treatment system. The focus during this time was to provide safe, reliable sewer service by eliminating failing treatment facilities and septic tanks that were jeopardizing public health and safety on a daily basis. We built more than 1,000 miles of sewer interceptor and collector lines, which allowed the elimination of more than 300 poorly-performing package treatment plants that had exceeded their useful operation. These package plants were small treatment systems privately built as part of the post-WWII building boom. The new collector sewer lines also allowed for the elimination of more than 40,000 failing septic tanks on private property by providing access to the sanitary sewer system.

Above: The 64.9 acre Melco Basin can capture and store nearly 489,000,000 gallons of rainwater, providing flood protection to the surrounding area.

Stormwater and Drainage Management

MSD crews perform routine and preventive maintenance for the 376-square-mile stormwater drainage system in Louisville* as quickly and as efficiently as possible from neighborhoods and business districts during and after rainstorms. This work includes the maintenance of 67,668 catch basins; mowing of more than 19 miles of stream banks and flood protection levees; removal of obstructions from drainage channels and pipes; repair of cave-ins over storm facilities; and cleaning of earthen and concrete ditches.

* The cities of Anchorage, Jeffersontown, St. Matthews and Shively provide drainage services to residents and businesses in their respective municipalities.



Above: MSD personnel practice closing the floodgate on Second Street near the KFC YUM! Center.

Flood Protection

Louisville Metro's Ohio River Flood Protection System exists to keep the river at bay and out of the city. The system includes 29 miles of floodwall and earthen levee, 150 floodgates, 80 floodwall closures, and 16 flood-pump stations with 163 process gates inside these stations. The flood-pump stations move inland water from creeks and streams to the river when the floodwall and levee are sealed. This system stands ready to safeguard our community every day of the year.

Our staff tests the pump stations monthly to ensure that they function properly. In times of flooding, information collected from our network of rain gauges, customer calls and area monitoring allows resources to be directed to the most severely affected areas.

Above: Underground pipes at Churchill Downs will capture and infiltrate rainwater from the parking lot preventing this water from overwhelming the combined sewer system in this area. In a typical rainfall year, the pipes will capture 60 million gallons of rainwater.

Reducing Stormwater Runoff Improves Our Waterways

Green infrastructure focuses on the preservation and restoration of landscape elements — rainwater storage and infiltration — by implementing features that mimic natural conditions. Green infrastructure installations can reduce rain flow to the sewer, thus decreasing sewer overflows.

MSD utilizes green infrastructure when possible to minimize impacts on traditional sewer infrastructure. Green infrastructure solutions include downspout disconnections from the sewer system, infiltration trenches, permeable pavers, rain barrels, rain gardens and vegetative roofs.

2017 Activity

Continuing Progress on Underground Storage

Underground storage basins and the Waterway Protection Tunnel are part of MSD's larger endeavor to prevent sewage overflows into our waterways. The basins and tunnel are designed to capture rainwater and sewage, which otherwise can overwhelm the sewer system during rain events and flow untreated into local streams and the Ohio River. These underground storage areas retain the mixture of rainwater and sewage until the rain subsides and capacity is available, and then gradually release it back into the sewer system. At that point, the water is conveyed to a water quality treatment center, treated and returned to our local streams or the Ohio River.

By 2020, MSD will capture and treat 98 percent of the combined sewer overflow volume in a typical year of rain. Instead of the 2 billion to nearly 6 billion gallons in combined sewer overflows per year that MSD has reported in recent years, the number would drop to 343 million gallons during a typical year.

Underground storage basin Under construction
Stormwater equalization basin and high-rate treatment facility
Storage tunnel
Completed storage basin

Waterway Protection Tunnel to Replace Three Basin Projects

Three basins planned for the areas of Lexington Road and Payne Street; Story Avenue and Main Street; and, 13th and Rowan streets will be replaced with one 2.5-mile tunnel. The Waterway Protection Tunnel — also known as the Ohio River Tunnel — will be 20-feet in diameter and located approximately 200-feet below the surface. That is more than 18 stories below ground.

MSD is replacing these three basins with the tunnel due to advances in technology, and reductions in boring costs that were not available when the plans for these basins were set a decade ago. The tunnel offers the storage capacity of the three proposed basins for approximately the same cost — but construction will be far less disruptive to Louisville's Main Street arts and business district, Butchertown's business district and area traffic during the two-to-three year construction period.

Construction is set to begin in January 2018, and the tunnel will be operational by the end of 2020. Total project completion will wrap up by the end of 2021.

The dirt flies at the MSD Shawnee Park Basin Project groundbreaking event. Shown left to right: Eric Browne (Browne E&C Services), Matthew Ulliman (Ulliman Schutte Construction), Sadiqa Reynolds (Louisville Urban League), Tony Parrott (MSD Executive Director), Joyce Horton Mott (MSD Board), Cheri Bryant Hamilton (Louisville Metro Councilwoman, District 5) and Marty Storch (Metro Parks Deputy Director).

Breaking Ground for Shawnee Park Basin Project

MSD broke ground on the $60 million Shawnee Park Basin Project on December 6, 2016. The basin is required by our federal Consent Decree to reduce sewer overflows into the Ohio River. It has also created local job opportunities, including positions for carpenters, ironworkers, electricians, masons, pipefitters, heavy equipment operators and more.

An agreement with Louisville Metro Parks to locate the Basin within the Great Lawn of Shawnee Park, includes monies for use by Metro Parks to preserve and restore the historic nature of Shawnee Park. When the underground basin is complete in 2019, the Great Lawn will be restored for recreational use.

MSD Executive Director Tony Parrott speaks at the dedication of the newly remodeled basketball courts in Shawnee Park.

The project will also feature new park amenities including an open-air pavilion, enhanced green space, premium landscaping, a new paved parking area for the spray pad, a resurfaced loop road, renovation of the lily pond, and restoration of the Ball House.

In June 2017, the 48th annual Dirt Bowl tournament was held on newly remodeled basketball courts in the park. The upgrades — including new backboards, two rubber-coated courts, fresh paint, bleachers, scoreboard and a new sound system — are all part of MSD's agreement with Louisville Metro Parks.

Collapsed Sewer Halts Traffic — MSD Experiences about Nine Sewer Collapses per Month

Many of the sewers in downtown Louisville are more than 100 years old, and they are vulnerable to erosion caused by groundwater from heavy rains.

On March 10, a portion of Clay Street at Muhammad Ali Boulevard caved-in due to a sewer line collapse. This 30-inch sewer line was built in 1900. The resulting void was 18 to 20 feet deep.

Crews work to repair a sewer collapse at Clay Street and Muhammad Ali Boulevard.

In May 2017, MSD Crews worked to clear debris from a cave-in on 25th Street.

Morris Forman WQTC Undergoes Upgrades

Equipment to replace the damaged high-voltage yard at MSD's Morris Forman Water Quality Treatment Center (WQTC) began arriving in February 2017. A new high-yard switch house was set into place by two cranes on February 24, 2017. The building was transported 1,200 miles from South Dakota and weighs 76,000 pounds. Work on the new high-yard will be completed in Spring 2018.

Morris Forman WQTC experienced a power outage due to a surge in the high-voltage yard on April 8, 2015. While the power was out, approximately 40 percent of the treatment processes and equipment were flooded with diluted wastewater. Electrical, mechanical and treatment equipment in various portions of the facility were significantly damaged and relied on generator-supplied power until the high-yard was replaced.

New oxygen generation equipment and a new generator for the effluent pump were also operational in Summer 2017. The new equipment increases resiliency to the overall operation of this facility.

Protecting Our City's Waterways is Our Mission

Morris Forman is Kentucky's oldest and largest wastewater treatment facility, beginning operation in 1958. It treats wastewater from 67 percent of Jefferson County and is a vital component in the health and safety of our community.

The new high-yard switch house is lifted from the transport truck bed.

A 115-foot truck delivers the new high-yard switch house from South Dakota.

The new oxygen generation equipment is delivered to the site.

Green Infrastructure in Portland Beautifies While Decreasing Sewer Overflows

Phase 2 of a green infrastructure project in the Portland area — located along 15th, 16th, 17th and 18th streets between West Market and Bank streets, and Portland Avenue—will capture rainwater runoff from 32.6-acres of hard surfaces. Curb inlets at the intersections and new pipes capture rooftop rainfall and direct the rainwater to planting areas and underground trenches. This allows absorption of the rainwater deep into the ground.

When all three phases are complete, this initiative will prevent more than 32 million gallons of rainwater mixed with untreated sewage from flowing into the Ohio River, west of downtown. Additionally, it will aid in reducing surface flooding for the area. This project is substantially complete as of December 29, 2017.

Right: Phase 1 of the green infrastructure project in the Portland area was completed in June 2016.

Removing Homes from the Floodplain

In August 2009, Louisville experienced widespread flash flooding, receiving about 7.5 inches of rain in 75 minutes, resulting in a Presidential declaration of disaster. The worst flooding occurred in West Louisville, particularly the Maple Street area. MSD pursued FEMA grants to provide residents the opportunity to relocate away from areas of highest risk.

A flood-damaged home on West Market Street awaits demolition.

After the voluntary acquisition of 114 of the 128 eligible properties, the grant funding terminated in 2017. A planning strategy was implemented to determine a beneficial use for the acquired land, and MSD established the Community of the Future Advisory Committee to assist with the planning. The Advisory Committee provided the opportunity to foster public engagement and community partnerships with the ultimate goal of creating a community asset.

The Committee includes property owners, elected officials, and agency and neighborhood representatives. Recommendations were discerned from public meetings and surveys, resulting in more than 400 responses. Plans are moving forward to engage community partners to utilize and oversee the property.

Financials

MSD is committed to providing financial information to the public that is transparent, accurate and reflects management's pledge to operate in a financially efficient manner. All financial information is completed under the requirements of the Governmental Finance Officers Association (GFOA) rules and regulations. The MSD Comprehensive Annual Financial Report (CAFR) is available on our website — LouisvilleMSD.org — along with detailed monthly Financial Reports. The financial information contained in this Annual Report represents a high-level summary of the income statement and balance sheet data contained in the CAFR.

The accuracy of MSD's financial information is verified by multiple internal and external personnel. Our financial staff operates with the highest levels of ethical responsibility, and all reported results are reviewed and analyzed by various levels of management. MSD employs an independent Internal Audit Department that routinely audits both financial information and processes. The results of these audits are shared with our Board and — whenever issues are identified — are accompanied by management's plan for improvement. MSD's CAFR is annually audited by an external CPA firm; for 2017 that firm was Crowe Horwath LLP. This audit was conducted under auditing standards accepted in the U.S. and Crowe's opinion was that the financial statements presented fairly, in all material respects, the financial position of MSD. This opinion is often referred to as a "clean opinion" since no changes were required.

The 2017 CAFR was once again awarded the Certificate of Achievement for Excellence in Financial Reporting from the GFOA. This Certificate is the highest form of recognition in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by MSD and its management. The CAFR was judged by an impartial panel to meet the high standards of the GFOA including demonstrating a constructive "spirit of full disclosure" to communicate its financial story and motivate potential users to read the CAFR. This is the 27th year in a row that MSD has achieved this award.

Every year that MSD issues a Revenue Bond; our financials are reviewed and analyzed by nationally recognized rating agencies. During 2017, MSD's bonds received the following ratings:

AGENCY	RATING	OUTLOOK
S&P	AA	Stable
Moody's	Aa3	Stable
Fitch	AA-	Stable

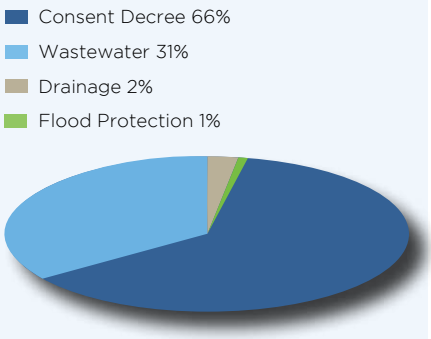
Maintaining or improving these ratings is critical to sustaining MSD's ability to fund the $4.3 billion Critical Repair and Reinvestment Plan (CRRP) during the next 20 years. The higher our credit ratings, the lower the interest expense on future bond issues allowing more funds for the CRRP. Chart 2, on page 10, shows our active debt management practices together with a low-interest rate environment has already resulted in significant interest savings. Another focus is controlling operating expenses, which not only provides additional funding for the CRRP but also positively impacts the financial ratios that drive our credit rating scores. Our success in controlling operating expenses, discussed with Chart 1, has resulted in an 11 percent improvement in our Operating Ratio from 2012 to 2017.

As a not-for-profit, governmental entity, every revenue dollar received after paying for debt service and operating expenses is directed back to the community through our capital program. The "Capital Spending" chart on this page shows the make-up of this year's capital program along with a description the funding sources. Since 2013, MSD has produced increasing levels of funding for the capital program from operations. In 2017, 8 cents of every dollar received, or $22 million, went to the capital program and our budget for 2018 shows an increase to 10 cents, or $28 million.

MSD's ongoing challenge is to maintain an increased level of operating funding available for the CRRP requiring a rigorous focus on improving financial efficiency through continued expense and debt management activities.

CAPITAL SPENDING BY CATEGORY

For FY 2017, MSD's total capital expenditures were $193,000,000.



The graph above shows the total capital expenditures for FY 2017 of $193 million divided into four categories. Funding comes from a combination of a new $150 million bond, $22 million from operations and $21 million from retained earnings. During the past four years, MSD has generated more than $77 million from operations that are now available for our capital program, which lowers the amount of funding needed from new bonds.

The MSD capital program is crucial to maintain, operate and improve Louisville's aging sewer and flood protection systems to achieve clean, safe waterways for a healthy and vibrant community.

SERVICE & ADMINISTRATIVE EXPENSE / OPERATING RATIO PERFORMANCE (CHART 1)

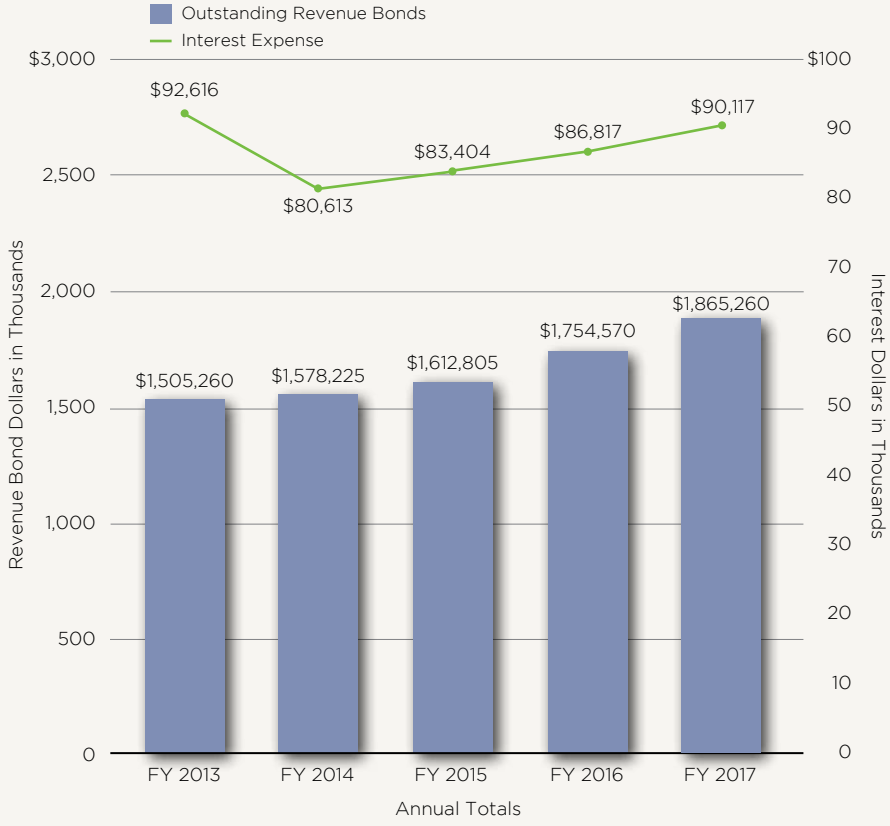
Chart 1 illustrates the impact that combining stricter expense management with revenue growth has on the Operating Ratio. A decreasing Operating Ratio is indicative of an efficient operating environment in which operating expenses are increasingly a smaller percentage of operating revenue. In 2012, with an operating ratio of 56 percent, MSD established a more rigorous budgeting process that together with results-oriented goals, held administrative expenses virtually flat for four years. The operating ratio of 45 percent in FY 2017—representing an 11 percent improvement over the past five years—is verification that MSD is becoming more financially efficient.

Since MSD is a not-for-profit public entity, a lower Operating Ratio allows more operating revenue to be invested in the capital program reducing the number of future revenue bonds.

REVENUE BONDS/INTEREST EXPENSE (CHART 2)

Chart 2 shows the annual Interest Expense for the past five years along with the amount of Revenue Bonds outstanding at the end of each year. In total, the Interest Expense for FY 2017 is lower than the amount incurred for FY 2013. This decrease is even more impressive considering that MSD has issued four new Revenue Bonds since 2013, increasing the total outstanding amount by $505 million.

MSD's lower Interest Expense is the result of an active debt management focus and a favorable interest rate environment allowing for refinancing and termination of outstanding debt that was originally issued with rates of more than 5 percent. In total, debt management activity during the past five years will result in interest savings of more than $170 million throughout the next 20+ years.



CONDENSED STATEMENT OF NET POSITION (IN THOUSANDS)

	FY 2017	FY 2016	Variance	Percent Change	FY 2015
Unrestricted Current Assets	$ 83,085	$ 103,529	$ (20,444)	-19.7%	$ 93,761
Restricted Current Assets	42,129	20,378	21,751	106.7%	16,342
Capital Assets	2,742,037	2,573,262	168,775	6.6%	2,392,466
Restricted Noncurrent Assets	124,192	149,447	(25,255)	-16.9%	138,780
Other Noncurrent Assets	32,768	29,457	3,311	11.2%	30,807
Total Assets	**$ 3,024,211**	**$ 2,876,073**	**$ 148,138**	**5.2%**	**$ 2,672,156**
Deferred Outflow of Resources	$ 35,911	$ 23,708	$ 12,203	51.5%	$ 20,407
Total Assets and Deferred Outflows	**$ 3,060,122**	**$ 2,899,781**	**$ 160,341**	**5.5%**	**$ 2,692,563**
Current Liabilities	$ 16,550	$ 17,420	$ (870)	-5.0%	$ 14,936
Current Liabilities from Restricted Assets	82,654	85,186	(2,532)	-3.0%	74,697
Noncurrent Liabilities	2,208,378	2,087,962	120,416	5.8%	1,925,627
Total Liabilities	**$ 2,307,582**	**$ 2,190,568**	**$ 117,014**	**5.3%**	**$ 2,015,260**
Deferred Inflow of Resources	$ 84,052	$ 108,633	$ (24,581)	-22.6%	$ 92,233
Total Liabilities and Deferred Inflows	**$ 2,391,634**	**$ 2,299,201**	**$ 92,433**	**4.0%**	**$ 2,107,493**
Invested in Capital Assets, Net	$ 562,784	$ 501,675	$ 61,109	12.2%	$ 506,187
Restricted, Net	83,667	84,639	(972)	-1.1%	80,424
Unrestricted	22,037	14,266	7,771	54.5%	(1,541)
Total Net Position	**$ 668,488**	**$ 600,580**	**$ 67,908**	**11.3%**	**$ 585,070**
Total Liabilities, Deferred Inflows and Net Position	**$ 3,060,122**	**$ 2,899,781**	**$ 160,341**	**5.5%**	**$ 2,692,563**

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (IN THOUSANDS)

	FY 2017	FY 2016	Variance	Percent Change	FY 2015
Service Charges	$ 253,943	$ 238,480	$ 15,463	6.5%	$ 225,462
Other Operating Income	5,691	4,810	881	18.3%	4,407
Total Operating Revenues	**$ 259,634**	**$ 243,290**	**$ 16,344**	**6.7%**	**$ 229,869**
Investment Income	$ 14,273	$ 17,891	$ (3,618)	-20.2%	$ 17,623
Total Revenues	**$ 273,907**	**$ 261,181**	**$ 12,726**	**4.9%**	**$ 247,492**
Depreciation and Amortization Expenses	$ 77,156	$ 62,820	$ 14,336	22.8%	$ 63,321
Service and Administrative Expenses	87,637	87,155	482	0.6%	76,245
GASB 68 Pension Expense	2,512	4,003	(1,491)	-37.2%	(127)
Nonoperating Expenses	77,655	73,779	3,876	5.3%	71,334
Change in Fair Value—Swaps	(26,072)	22,951	(49,023)	-213.6%	5,240
Total Expenses	**$ 218,888**	**$ 250,708**	**$ (31,820)**	**-12.7%**	**$ 216,013**
Net Income (Loss) before Contributions	**$ 55,019**	**$ 10,473**	**$ 44,546**	**425.3%**	**$ 31,479**
Contributions	12,889	5,037	7,852	155.9%	4,605
Change in Net Position	**67,908**	**15,510**	**52,398**	**337.8%**	**36,084**
Beginning Net Position	600,580	585,070	15,510	2.7%	548,986
Ending Net Position	**$ 668,488**	**$ 600,580**	**$ 67,908**	**11.3%**	**$ 585,070**

SERVICE AND ADMINISTRATION COSTS (IN THOUSANDS)

	FY 2017	FY 2016	Variance	Percent Change	FY 2015
Labor	$ 59,183	$ 55,229	$ 3,954	7.16%	$ 54,378
Utilities	14,427	18,256	(3,829)	-20.97%	13,817
Materials and Supplies	7,976	4,183	3,793	90.69%	9,706
Contractual Services	25,899	28,376	(2,477)	-8.73%	20,943
Chemicals	5,298	4,372	926	21.18%	3,681
Fuel	1,077	1,326	(249)	-18.78%	1,616
Insurance Premiums and Recovery	791	388	403	103.87%	(960)
Bad Debt	3,495	2,603	892	34.27%	2,068
Other Operating Expenses	1,440	2,939	(1,499)	-51.00%	1,052
Gross Service and Administrative Costs	**$ 119,586**	**$ 117,671**	**$ 1,915**	**1.63%**	**$ 106,301**
Capitalized Overhead	**$ (31,949)**	**$ (30,516)**	**$ (1,433)**	**4.70%**	**$ (30,056)**
Net Service and Administrative Costs	**$ 87,637**	**$ 87,155**	**$ 482**	**0.55%**	**$ 76,245**

MSD issued $150 million in revenue bonds in FY 2017. These bonds were to fund our mandated Consent Decree requirements and to improve our aging infrastructure.

MSD follows sound financial practices that have allowed us to maintain strong AA credit ratings, which minimizes interest rates on borrowing. In FY 2017, MSD took advantage of lower rates and the opportunity to refinance $103 million of our Series 2008A, 2009 A and B revenue bonds at lower interest rates.

MSD's increase in operating revenues in FY 2017 were primarily driven by a rate increase of 6.9 percent on wastewater and stormwater service charges effective, August 1, 2016.

We strive to maintain competitive rates with comparable cities in our region, which can be seen in Chart 3.

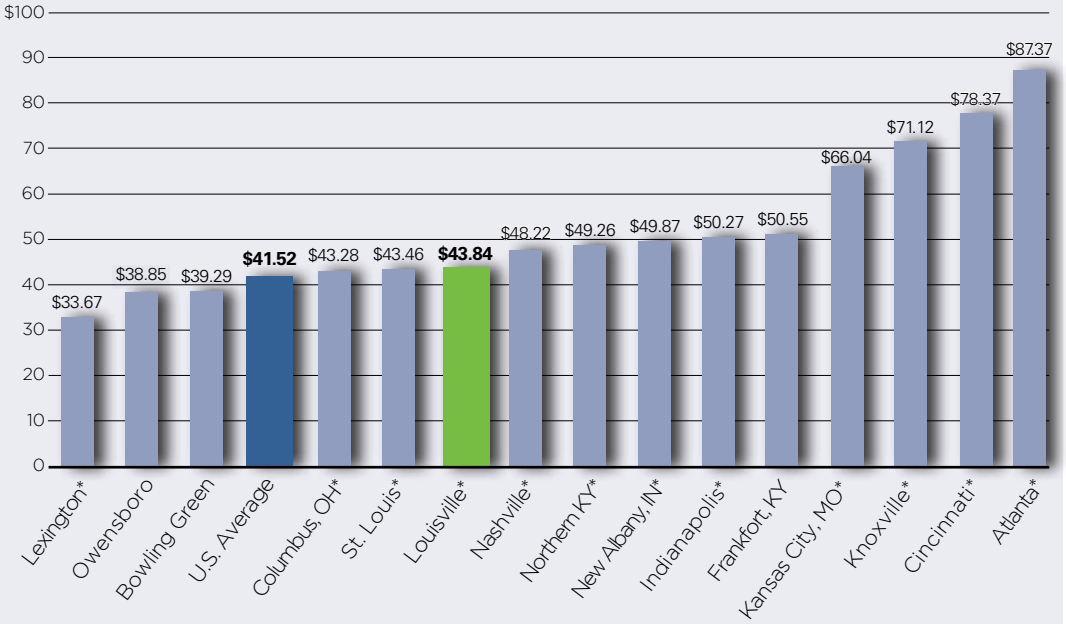
Service and administrative costs increased $1.9 million or 1.6 percent in FY 2017. This increase was primarily driven by labor-related expenses, which make up almost 50 percent of our total operating expenses.

What services do our customers receive for their money?
There is a perception that wastewater and flood protection services are inexpensive. Unfortunately, that is not the case as the ongoing costs to cover daily operating and maintenance expenses, and to fund long-term capital investments on these systems either directly or through paying the interest on outstanding Revenue Bonds, is extremely expensive. MSD's ability to cover these costs and to continuously repair and replace our aging infrastructure, outlined in our Critical Repair & Reinvestment Plan, will require a combination of increased funding from operations, issuing new Revenue Bonds and annual rate increases.

The average residential customer uses about 5,000 gallons of water every month. Of that amount, about 140 gallons per day are disposed of as wastewater through a collection system covering more than 3,300 miles within Jefferson County and treated at one of MSD's five Water Quality Treatment Centers before safe water is released back into our community's waterways. For this service, MSD charges our customers about $1.46 per day.

Since 1987, MSD also provides inland flooding and drainage services throughout the county using our collection system and maintaining hundreds of miles of channels, streams, creeks and ditches. MSD has also been responsible for the maintenance and repair of the Ohio River Flood Protection System that protects Louisville Metro from the Ohio River. The flood protection system includes 29 miles of floodwall and earthen levee, 150 floodgates, 80 floodwall closures, and 16 flood-pump stations with 163 process gates inside these stations. MSD charges each household about 29 cents per day for these services.

Projected 2017 NACWA Average Monthly Residential Wastewater Bill (CHART 3)
Based on 5,000 Gallons as of January 1, 2017



Senior citizens who are age 65 or older, have a gross annual household income of $35,000 or less and are both Louisville Water Company and MSD customers may request an application for a 30 percent discount on wastewater charges and the EPA surcharge through MSD's website, LouisvilleMSD.org, or by calling Customer Relations at 502.587.0603.

* Cities with consent decrees

Based on information collected as of January 1, 2017, by the National Association of Clean Water Agencies (NACWA); while MSD's wastewater bill of $43.84 is $2.32 higher than the national average, it is also $7.40 lower than the Region 4 average (the southeastern states including Kentucky). Nationally, the average wastewater bill has increased by more than the inflation rate for sixteen years in a row.

The U.S. Environmental Protection Agency (EPA) has established affordability guidelines for the cost of sewer services based on the Medium Household Income (MHI) of the service area. According to the EPA, a wastewater rate of 1 percent of MHI is considered low, while a rate of 2 percent is considered high. Based on the MHI within Jefferson County, MSD's rate of 1.08 percent remains in the low category.

As a percentage of household income, U.S. households pay far less for wastewater services than any other developed country.

Looking to the Future

As the end is in sight for our Consent Decree, we shift our gaze to a broader focus—of service to our community. Our transformation is far from complete, but we are on the path to reaching a national standard for best practices in offering vital services that benefit the community and the environment.

A Plan for the Future

MSD revenue—which is tied to the amount of customer water consumption—is not keeping pace with our growing community. Over the past three decades, our customer base has increased by almost 50 percent while total community water consumption has remained flat. As a result of these funding limitations, we have used a "band-aid" approach to system repairs rather than permanent fixes.

To better address this situation, MSD has developed a data-driven comprehensive "Critical Repair & Reinvestment Plan," which assesses the condition of our vital infrastructure and the cost to fund necessary repairs. Meeting the critical public health and safety needs identified by the plan is estimated at $4.3 billion during the next two decades.

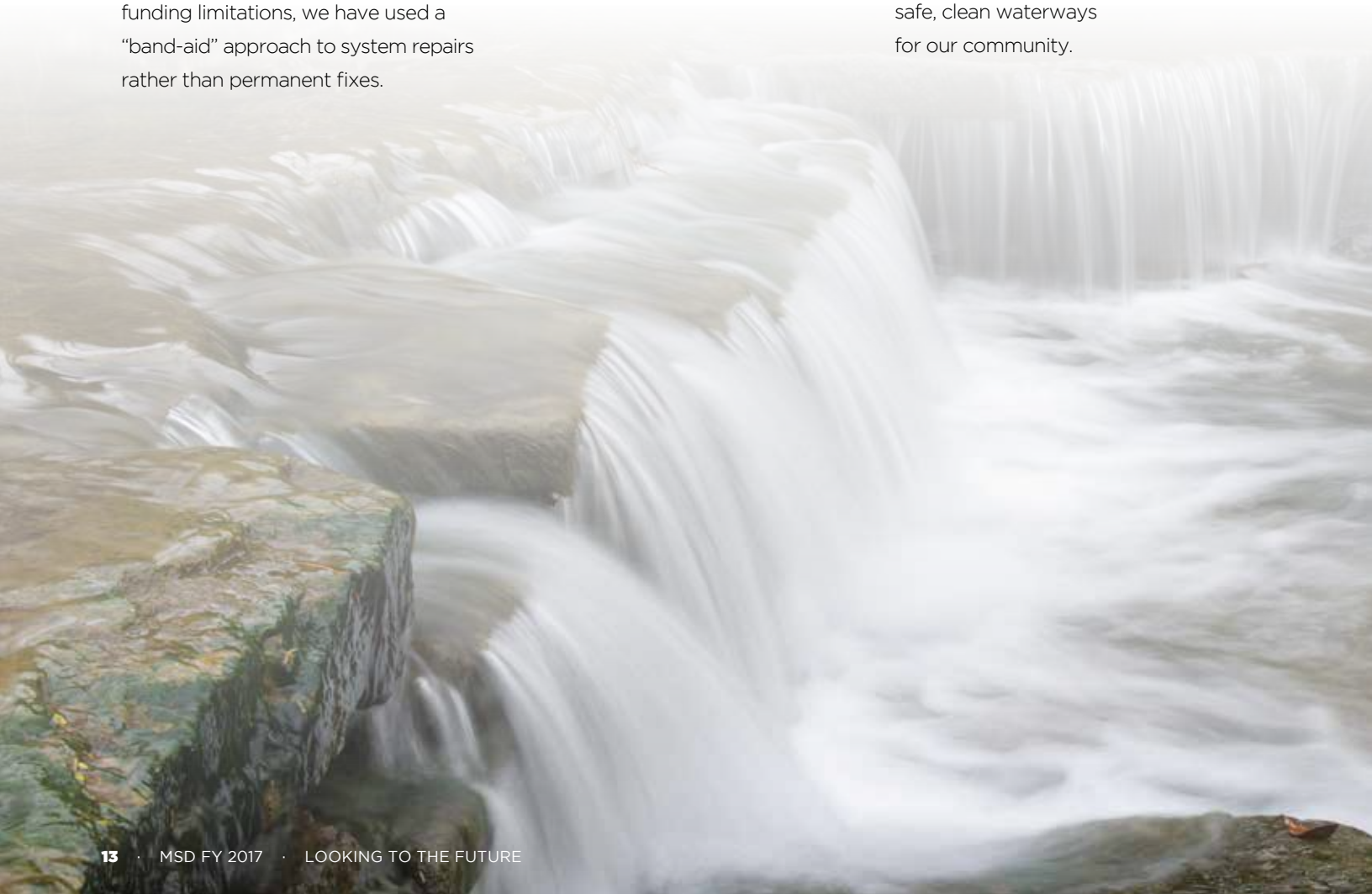
Now is the time to rebuild

An investment must be made in the aging floodwalls and levees that hold back the Ohio River, the wastewater facilities that keep sewage out of local waterways, and the drainage system that controls inland flooding.

In the past year, MSD engaged the community in conversations to balance the risks along with a financially achievable plan to address the needs of these vital services. We continue to press these urgent conversations with elected officials, business and community leaders and the public.
As a community, we must decide how important the risks are to the health and safety of our community, and how fast we want to address the problems.

Our Vision

What began as an agency with a singular focus, on wastewater treatment, is transforming to a broader vision of achieving safe, clean waterways for our community.



MSD Board

An eight-member citizen Board, which is appointed by the Louisville Metro Mayor, governs MSD's budget, rates, policies and initiatives. These members—who serve three-year overlapping terms—are eligible for reappointment. Each member represents a different state senatorial district in Louisville Metro. The Board holds one regular meeting the fourth Monday of each month, and committees meet as necessary.

Daniel Arbough
Vice Chair
19th Senatorial District
Independent

Andrew Bailey
24th Senatorial District
Democrat

Cynthia Caudill
Chair
38th Senatorial District
Democrat

Joyce Horton Mott
33rd Senatorial District
Democrat

John Phelps
35th Senatorial District
Democrat

JT Sims
36th Senatorial District
Republican

Jason C. Williams
26th Senatorial District
Democrat

Yvonne Wells-Hatfield
37th Senatorial District
Republican

Executive Leadership Team

James A. "Tony" Parrott serves as the Executive Director of Louisville MSD providing executive leadership, strategic direction, and management ensuring implementation of MSD's core values and mission—Safe, clean waterways. Parrott leads and manages executive staff to deliver wastewater, stormwater and flood protection services to the community. He provides leadership for One Water Partnership with Louisville Water Company. The Executive Director reports to the Board of the Metropolitan Sewer District and is appointed by the Louisville Metro Mayor, as is the Secretary/Treasurer and the Chief Engineer.

James A. Parrott
Executive Director

W. Brian Bingham
Chief of Operations

J. Chad Collier
Chief Financial Officer and Secretary/Treasurer

Angela L. Akridge
Chief Engineer

Lynne A. Fleming
Human Resources Director

Paula Middleton Purifoy
General Counsel and Legal Director

Mark Thomas Luckett
One Water Chief Information Officer

Louisville and Jefferson County Metropolitan Sewer District
Annual Financial Report FY 2017

Prepared by MSD Finance Department
J. Chad Collier, Chief Financial Officer and Secretary/Treasurer
Bradley S. Good, Controller

msd
Safe, clean waterways

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LouisvilleMSD.org
24/7 Customer Relations 502.587.0603

LouisvilleMSD

(500/03-2018)