Monthly Executive Report

Capital Program and Financial Update September 30, 2020



DISCLAIMER

This monthly report was prepared by Louisville MSD staff using the best available information. Contributions were made from Engineering, Finance, Regulatory Compliance, Procurment, and Project Controls. Additional information will be incorporated into this report as deemed appropriate.

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MONTHLY EXECUTIVE REPORT

September 30, 2020

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Acronyms & Abbreviations

BCE Business Case Evaluation
BMP Best Management Practice

CCWQTC Cedar Creek Water Quality Treatment Center

CD Consent Decree

CIP Capital Improvement Program

CMOM Capacity, Management, Operations, and Maintenance Program

CP Commercial Paper

CRRP Critical Repair and Replacement Plan

CSO Combined Sewer Overflow CSS Combined Sewer System

DRGWQTC Derek Guthrie Water Quality Treatment Center

DRI Drainage Response Initiative
EAC Estimate-at-Completion
EPM Enterprise Program Manager

FEMA Federal Emergency Management Agency

FEPS Final Effluent Pump Station

FFWQTC Floyds Fork Water Quality Treatment Center

FPS Flood Pump Station

FY Fiscal Year

HCWQTC Hite Creek Water Quality Treatment Center IOAP Integrated Overflow Abatement Plan

IT Information Technology
LTCP Long Term Control Plan
LWC Louisville Water Company
MHI Median Household Income

MFWQTC Morris Forman Water Quality Treatment Center MS4 Municipal Separate Storm Sewer System Program

MSD Metropolitan Sewer District
NMC Nine Minimum Controls
NOA Notice of Advisement
NOI Net Operating Income
NTP Notice to Proceed
PM Project Manager

PMIS Project Information Management System

PS Pump Station

RFP Request for Proposals

SRF State Revolving Loan Fund Program

SSDP Sanitary Sewer DP

USACE United States Army Corps of Engineers

USEPA United States Environmental Protection Agency

VFD Variable Frequency Drive

WIFIA Water Infrastructure Finance and Innovation Act

WQTC Water Quality Treatment Center

YTD Year-to-Date

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SECTION 1: EXECUTIVE SUMMARY

The Louisville and Jefferson County Metropolitan Sewer District (MSD) provides wastewater, stormwater and flood protection services to a population of nearly 800,000 throughout the service area. The MSD operating budget supports the day to day operation and maintenance of all infrastructure, while the capital budget supports the infrastructure investments through its Capital Improvement Program (CIP). The organization continues to complete important projects; comply with Consent Decree and regulatory requirements; and repair/replace critical assets. This report provides a summary of the financial position and the progress made through September 30, 2020 with respect to Fiscal Year 2021 (FY21) program health and regulatory compliance.

FINANCIAL POSITION

Overall, MSD's FY21 Statement of Net Position is progressing favorably according to budget. Wastewater Service Charges total \$64.31 million year-to-date compared to a budget of \$63.1 million, which is an increase of \$1.2 million, or 1.9%. When compared to this same period one year ago, Wastewater Service Charges have increased by \$4.7 million, or 8.0%. The year-over-year increase is due to a 5.0% rate increase enacted on August 1, 2020.

Drainage Service Charges total \$19.9 million year-to-date compared to a budget of \$18.9 million, which is an increase of \$1.0 million, or 5.5%. When compared to this same period one year ago, Drainage Service Charges have increased by \$1.9 million, or 10.7%. A 5.0% rate increase enacted on August 1, 2020 is driving the year-over-year increase.

Other Income totals \$0.9 million year-to-date compared to a budget of \$1.0 million, which is a decrease of \$0.1 million, or 6.9%. Other Income has decreased by \$0.4 million, or 29.0%, compared to the same period one year ago.

CAPITAL PROGRAM HEALTH

A high-level summary of the status of key performance criteria is presented in Table 1. More detailed information is presented throughout this report.

Table 1 – Summary of FY21 Capital Program Performance To-date

Key Programs and Initiatives	Status as of September 30, 2020
Consent Decree Compliance	All Consent Decree deadlines have been satisfied through September 30, 2020. MSD drafted the required quarterly report for Q1.
Emergency Repairs & Reactive Equipment Replacements	The emergency projects added in September 2020 (refer to Table 8) include repairing 10" sewer at Preston and Muhammad Ali, slip line segmented tile sewer, grout annular space and all appurtenances at 1118 Ellison, and pipe replacement on Outer Loop at Southern Ditch. These failures continue to demonstrate the age and condition of many collection system assets. Current cost estimates total \$159,200.
Drainage Response Initiative (DRI) Program	MSD continues to advance DRI projects totaling nearly \$1.9 million to address localized stormwater drainage issues. The projects are a combination of storm sewers, culvert replacements, bank repairs, and drainage swales.

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CAPITAL BUDGET HEALTH

FY21 capital expenditures for the Wastewater, Stormwater, and Support Services Programs totaled \$27.5M spent through September 2020. This spend represents approximately 14.1% of the \$194.1M FY21 baseline budget. Current project schedules and estimates forecast FY21 actual will reach \$195.2M which is 0.6% above budget. This level is closely managed so that budget will not be exceeded.

A breakdown of the FY21 Baseline Budget by Service type is presented in Table 2.

Table 2 – Analysis of Spending by Service Type

Service Type	FY 2021 Baseline Budget	FY 2021 Actuals	FY 2021 Remaining Forecasted Spend	FY 2021 Projected Excess or (Shortfall)
Wastewater (Consent Decree)	\$49.9M	\$9.1M	\$39.5M	\$1.3M
Wastewater (Non-Consent Decree)	\$116.0M	\$15.4M	\$103.6M	(\$3.0M)
Stormwater & Flood Protection	\$11.4M	\$0.1M	\$12.1M	(\$0.8)
Support Systems	\$16.8M	\$2.9M	\$12.5M	\$1.4M
Total	\$194.1M	\$27.5M	\$167.7M	\$1.1M

Notes:

- This table does include the Oldham County portfolio.
- "Remaining Forecasted Spend" evolves throughout the year as project schedules and estimates change.
- Grants are not included in this table as they were not included in the \$190.5M FY21 Baseline Budget.

CIP PRIORITIES FOR OPERATIONS

The intent of the CIP is to enhance, support, and streamline utility operations by 1) providing capital funding for new equipment, 2) replacing aging infrastructure, 3) reducing sewer overflows, and 4) improving the reliability of facilities. The FY21 CIP was developed in conjunction with MSD Engineering, Finance, and Operations staff. The top CIP priorities from an operational perspective include the following capital needs:

- District-Wide Biosolids Program
- Morris Forman Water Quality Treatment Center (WQTC) Sedimentation Basin Rehabilitation
- Large Diameter Sewer Rehabilitation Program
- Flood Pump Stations (FPS) Emergency Repairs
- Oldham County infrastructure Rehabilitation

FINANCING SOURCE OPPORTUNITIES

MSD is committed to leveraging federal, state, and local partnerships wherever possible in order to maximize benefits to the community. Pursuing non-traditional funding sources like grants and low-interest loans have a positive impact on the CIP overall due to lower cost of capital and favorable repayment schedules.

MSD was successful in garnering Water Infrastructure Finance and Innovation Act (WIFIA) and State Revolving Fund (SRF) low-interest loan financing. MSD is also working closely with the US Army Corps of Engineers (USACE) to determine how the results of the draft *Flood Protection System Feasibility Study* can apply to the projects noted in MSD's *Critical Repair and Reinvestment Plan* (CRRP).

Two additional programs are being considered by the Kentucky Infrastructure Authority (KIA) to support economic development due to the COVID-19 downturn. These programs could provide funding with principal forgiveness focusing on shovel-ready projects. Additional details and information will be reported over the next few months.

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WIFIA Loan Program

During the reporting period, MSD finalized the RFP for advancing a progressive design-build project for the Morris Forman Biosolids Facility. The RFP will be provided to the two firms short-listed by the end of the year. The loan for this project is anticipated to close by the end of the year.

Table 3 – CIP Projects Approved for WIFIA Funding

WIFIA Program	Funding Timing	Total Cost	WIFIA Loan	Other Funding
New Morris Forman Biosolids Facility	FY21 – FY26	\$198,000,000	\$97,020,000	\$100,980,000

SRF Program

MSD is an active participant in the SRF loan program which provides low interest loans and favorable repayment schedules. On July 20, 2020 MSD was invited by KIA to submit a loan application for the 2021 Clean Water State Revolving Fund for the projects listed in Table 4. Project selection is based upon established SRF criteria that emphasizes median household income (MHI) along project routes. MSD accepted the invitation and submitted the application for the FY21 SRF funding projects.

Table 4 - CIP Projects for FY21 SRF Program Funding

Budget ID	Project	Estimate at Completion (EAC)
E21070	Rosa Terrace Pump Station Elimination	\$4,405,319
E21091	Sanders Lane Pump Station Rehabilitation	\$1,559,526
E21090	Sonne Avenue Pump Station Elimination	\$2,938,753
E21071	Wathen Lane Pump Station Rehabilitation	\$1,559,526

MSD completed the preliminary scoring evaluations for project candidates for the FY22 SRF Program. Projects were grouped by type (large sewer, pump station elimination, pump station upgrade) and the preliminary list was submitted to KIA on September 15th. MSD anticipates uploading project profiles to KIA's portal no later than December 3rd.

USACE Flood Protection System Federal Appropriation

A federally funded flood protection system feasibility study was drafted by the USACE and MSD expects the final report in October 2020. The report is needed to enable USACE to request federal appropriations. USACE indicated the scope of this effort will fund reliability improvements and exclude capacity improvements. The CRRP identified the need for both reliability and capacity improvements at the FPSs. The timing for the reliability improvements will be dictated by the USACE and preliminary talks have suggested design would start in FY21 with construction occurring in FY22-FY23. MSD's legal and planning groups continue to work out the details of the Credit Agreement and Memorandum of Understanding (MOUs) with USACE staff. These agreements must be in place before work can begin for the Paddy's Run FPS and Canal Street Floodwall projects. A summary of participation levels by USACE and MSD for the Reliability Improvements Program is provided in the following table. The additional investments needed throughout the flood protection system as documented in the CRRP are presented in Table 5. Updated information will continue to be provided with the Monthly Executive Report.

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Table 5 – CIP Projects Eligible for USACE Funding

Project	Estimated USACE Participation for Reliability Improvements	Estimated MSD Participation for Reliability Improvements	Additional CRRP FPS Improvements Not Included in Reliability Program
Paddy's Run FPS Improvements	\$12,194,300	\$6,566,000	\$44,260,000
10 th Street FPS Improvements	\$2,131,200	\$1,147,600	\$750,000
17 th Street FPS Improvements	\$1,368,400	\$736,800	\$4,313,200
27 th Street FPS Improvements	\$3,701,300	\$1,993,000	\$10,027,000
34 th Street FPS Improvements	\$1,827,700	\$984,200	\$1,020,000
4 th Street FPS Improvements	\$0	\$0	\$12,920,000
5 th Street FPS Improvements	\$1,403,800	\$755,900	\$700,000
Beargrass Creek FPS Improvements	\$16,009,000	\$8,620,200	\$88,259,800
Bingham Way FPS Improvements	\$0	\$0	\$6,590,000
Lower Mill Creek FPS Improvements	\$3,481,000	\$1,874,400	\$11,575,700
Pond Creek FPS Improvements	\$15,434,200	\$8,310,700	\$9,750,000
Riverport FPS Improvements	\$1,358,200	\$731,300	\$5,378,700
Shawnee Park FPS Improvements	\$7,832,600	\$4,217,500	\$38,512,500
Starkey FPS Improvements	\$3,500,00	\$1,885,100	\$4,360,000
Upper Middle Creek FPS Improvements	\$7,647,400	\$4,117,900	\$44,922,200
Western Parkway FPS Improvements	\$1,183,300	\$637,200	\$21,832,900
Levees, Floodwalls, Gates & Closures	\$19,846,400	\$8,201,500	\$1,049,700
Cultural Mitigation & Engineering	\$13,529,200	\$7,885,000	\$0
TOTAL	\$108,948,000	\$58,664,300	\$306,221,700

KIA Funding Assistance Program

In April 2020, MSD submitted a list of project candidates for KIA's Phase 4 Coronavirus Economic Stimulus Funding. The details regarding this program and potential funding source continue to be vetted by KIA. In total, MSD provided thirty-one (31) projects valued at \$121.3M for consideration.

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FINANCIAL STATEMENT OVERVIEW

MSD completed its acquisition of the Oldham County Environmental Authority (OCEA) on June 30, 2020. This acquisition added approximately 6,200 customers to the service area. Revenue and expenses for the former OCEA service area are combined with all other revenues and expenses of the MSD service area in the results reported below. This will drive variances to prior year results.

Revenues

Total Operating Revenue is \$85.2 million year-to-date compared to a budget of \$83.1 million, which is an increase of \$2.1 million, or 2.6%. When compared to this same period one year ago, Total Operating Revenue has increased by \$6.3 million, or 7.9%.

Wastewater Service Charges total \$64.3 million year-to-date compared to a budget of \$63.1 million, which is an increase of \$1.2 million, or 1.9%. When compared to this same period one year ago, Wastewater Service Charges have increased by \$4.7 million, or 8.0%. The year-over-year increase is due to a 5.0% rate increase enacted on August 1, 2020.

Drainage Service Charges total \$19.9 million year-to-date compared to a budget of \$18.9 million, which is an increase of \$1.0 million, or 5.5%. When compared to this same period one year ago, Drainage Service Charges have increased by \$1.9 million, or 10.7%. A 5.0% rate increase enacted on August 1, 20 is driving the year-over-year increase.

Other Income totals \$0.9 million year-to-date compared to a budget of \$1.0 million, which is a decrease of \$0.1 million, or 6.9%. Other Income has decreased by \$0.4 million, or 29.0%, compared to the same period one year ago.

Operating Expenses

Service & Administrative costs total \$35.8 million year-to date compared to a budget of \$39.2 million, which is a decrease of \$3.4 million, or 8.6%. Salaries, Utilities, Materials & Supplies, Contractual Services, Chemicals, Fuel and Other Operating expenses are trending below budget (\$4.0 million combined). Service and Administrative costs have increased \$1.5 million, or 4.5%, compared to the same period one year ago.

Depreciation and Amortization expenses total \$24.2 million year-to date compared to a budget of \$24.2 million, which is equal to budget. Depreciation and Amortization expenses have increased \$0.3 million, or 1.4%, compared to the same period one year ago.

Total Operating Expenses are \$51.6 million year-to date compared to a budget of \$54.0 million, which is an increase of \$2.4 million, or 4.5%, due to the increased Depreciation expense described above. When compared to this same period one year ago, Total Operating Expenses have increased by \$1.2 million, or 2.6%.

Net Income

Net Operating Income (NOI) is \$33.6 million year-to date compared to a budget of \$29.1 million, which is an increase of \$4.5 million, or 15.6%. NOI has increased \$5.0 million, or 17.3%, compared to the same period one year ago.

Investment Income is \$2.7 million year-to date compared to a budget of \$4.1 million, which is a decrease of \$1.4 million, or 34.3%. Investment income has increased \$0.1 million, or 5.0%, compared to the same period one year ago.

Interest expense is \$23.1 million year-to date compared to a budget of \$22.8 million, which is a increase of \$0.3 million, or 1.2%. Interest expense has increased \$1.8 million, or 8.5%, compared to the same period one year ago.

Change in Net Position before Swaps totals \$13.5 million year-to date compared to a budget of \$10.5 million, which is an increase \$3.0 million, or 29.1%. Change in Net Position before Swaps has increased \$3.5 million, or 35.3%, compared to the same period one year ago. Change in Net Position including the mark-to-market change on swaps totals \$15.3 million year-to-date compared to (\$3.6) million one year ago, a difference of \$11.8 million. The negative value of MSD's swap portfolio has decreased \$1.8 million year-to-date.

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MBE/WBE Expenditure Report

MSD is committed to promoting and maximizing utilization of minority and women-owned businesses. The Finance Department tracks monthly utilization as reflected in the following figure.

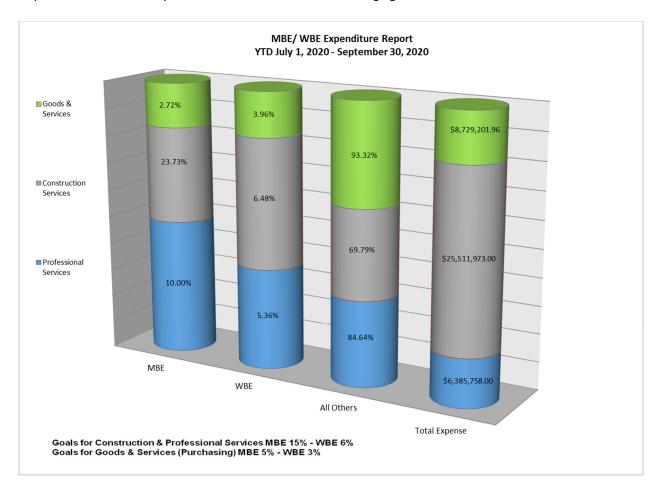


Figure 1 – MBE/WBE Expenditure Chart

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SECTION 2: CIP MONTHLY ACTIVITY REPORT

The CIP Monthly Executive Report is prepared to provide MSD's Executive Director and the MSD Board with a high-level understanding of progress made with implementing the FY21 CIP, including Consent Decree, regulatory compliance commitments, CRRP implementation, and high priority asset management needs. The following information is presented in this report:

- Overall performance related to FY21 CIP
- Comparison of FY spending to the approved FY21 budget
- Discussion of change management activities occurring during the reporting period
- Forecast of upcoming procurement activities
- Summary of progress made for each of MSD's 25 capital program areas

FY21 capital expenditures for the Wastewater, Stormwater, and Support Services Programs totaled \$27.5M through September 2020. This spend represents approximately 14.1% of the \$194.1M FY21 budget. The total expenditures for FY21 are currently projected to be \$195.2M, which is 0.6% above the baseline spending budget. This level is closely managed so that budget will not be exceeded.

FY21 CAPITAL BUDGET BASIS

The FY21 CIP budget of \$190.5M for Jefferson County projects was approved by the Board in May 2020. Additional budget of \$3.6 for Oldham County projects was also approved at this time. The approved budget was based upon total expenditures forecasted at that time for the projects scheduled to be active during the Fiscal Year July 1, 2020 through June 30, 2021. Therefore, the amounts included in the FY budget for discrete capital projects may not represent each project's total estimated cost. Rather it represents a level of anticipated spending for the project during the FY.

It is important to recognize many projects span across multiple fiscal years and construction spending is dependent upon the Contractor's actual progress with the work contracted. Complex construction projects, such as tunnels, are difficult to predict exactly how spending will occur each month. Variations in starting project activities, equipment deliveries, weather delays, subsurface conditions, etc. can affect the speed of monthly and annual spending. For large capital projects MSD reviews the Contractor's anticipated rate of spending and compares it with MSD's cashflow forecast on a monthly basis.

MSD staff are charged with balancing the spend forecast for all active projects and developing recovery strategies, as needed.

MONTHLY CIP MANAGEMENT TEAM MEETING

A monthly meeting is held with MSD's Chiefs to discuss topics of relevance related to the capital program. A standing agenda for this meeting includes project changes; approval/rejection of construction start for projects; regulatory coordination; and emergency projects. The CIP Management Team and support staff met on September 22, 2020 to discuss the current status of the capital program. The following people participated in the virtual meeting.

- Voting Members: Tony Parrott, Brian Bingham, David Johnson, Angela Akridge, Brad Good
- <u>Technical Support Staff</u>: John Loechle, Stephanie Laughlin, Wolffie Miller, Dan French, Jacquelyn Quarles, Latoya English, Erin Wagoner, Wes Sydnor, Yajaira Morphonios, Dolly Smith
- Consultants: Leisha Pica, Sharma Young

The following information was discussed at the meeting. Many participated remotely due to the current restrictions. The notes reflected herein summarize discussions held during the meeting.

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Regulatory Discussion

Ms. Pica led a discussion on the following regulatory topics:

- Consent Decree Activities
- Morris Forman Corrective Action Plan
- Oldham County
- Morris Forman Permit Compliance

CIP Management Activities

Ms. Morphonios presented NOAs and Construction Advancement Requests for consideration by the CIP Management Team.

Notice of Advisements (NOAs)

- 1. DRGWQTC Substation U-13 Modifications Approved. Transfer budget to Management Reserve.
- 2. 4th St Pump Station Mural Approved. Proceed with project.
- 3. FY21 Construction Inspection Not Approved. Needs revisions and will be approved by Mr. Loechle.
- 4. Brown Forman GI Approved. Perform other Green Infrastructure projects with this budget.

Construction Advancement Requests

None

FY21 CIP Performance

Ms. Pica reported that the forecast for Jefferson County projects remains at budget.

USACE Update: Mr. Miller provided an update of progress made with the FPS Reliability Improvements Program. The USACE Chief is expected to sign the final report next week. Mr. Johnson noted that he will participate in a call with USACE on September 29th.

FY22 SRF Program: Ms. Laughlin provided an update regarding the FY22 program submittals. They also looked at future projects to determine what aligns well with the SRF criteria. She noted that applications need to be submitted about 18 months ahead of the project. Staff is developing project profiles for the following projects:

- Large diameter sewer program
- Several pump station elimination projects
- Northern Ditch PS replacement
- Fishpool Interceptor Capacity Assessment

Floyds Fork Interceptor and Paddy's Run FPS projects also may blend well with other funding programs. Additionally, the team is looking at the Oldham County Mockingbird Valley WWTP to see if it is a potential future candidate.

An upcoming call with KIA will determine borrowing ceiling.

Construction Change Orders: Ms. Pica noted staff have been looking to provide more detail regarding the nature/cause of construction change orders:

- Logistics of reporting change orders and reason codes
- Developing tracking tool to report % change orders to total active construction contracts
- Addressing % change throughout the year based on project closeout

Emergency Projects

Ms. Pica noted two new emergencies in August totaling \$325k for sewer repairs – Zorn Avenue (complete) and 7th & Main repair (active). Additionally, the failure near Southern Ditch was also repaired (\$47k).

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<u>Pending or Potential Emergencies</u>: Mr. Johnson reported another leak in the Beckley Woods FM that is being investigated. David said the civil unrest is causing some prices to increase. Contractors have to pull off equipment on a daily basis and some projects require security.

Mr. Parrott asked about the sewer that was washed out in Jeffersontown. Mr. Johnson reported that they are working with MSD staff to make sure that others do not damage MSD's sewers as they make the repair.

Follow Up Action Items:

- a. <u>Oldham County Capital Projects</u>: Ms. Pica to confirm scope, project description, and justification for the projects with Mr. Loechle. Ms. Smith to work with PMs to confirm schedule and FY21 spend forecast. Project Controls to incorporate the OC projects into the cashflow tool. Finance to revise the AFR to support importing into the cashflow tool.
- b. <u>USACE Coordination</u>: Planning to continue working with USACE staff and MSD legal to get the Credit Agreement and list of MOUs finalized.
- c. <u>FY22 SRF Program</u>: Planning to continue working with KIA regarding scoring of MSD's preliminary list of projects.
- d. <u>Construction Change Orders</u>: Project Controls to continue working with Engineering regarding tracking and reporting of change orders at the program level.

FY21 CIP OVERALL PERFORMANCE

The FY21 CIP approved \$194.1M of total spending to address critical asset management needs, regulatory compliance requirements, and to maintain MSD's bond ratings (Moody's Aa3 and Standard & Poor's AA). Through September 30, 2020, MSD has spent approximately 14.1% of the approved FY 2021 budget (excluding grants). The remaining work necessary to be completed during FY 2021 is forecasting a spend of \$195.2M, approximately 0.6% above the approved budget.

Table 6 - Capital Budget Performance Summary

Financial Category	Value	Comments		
FY 2021 Budget	\$194.1M	Approved by MSD board		
FY 2021 Actuals	\$27.5M	14.1% of budget		
FY 2021 Remaining Forecasted Spend	\$167.7M	Forecasted remaining spend in FY 2021		
Current Forecast for Total FY 2021 Spend	\$195.2M	Actuals plus forecasted remaining spend total		
Difference from Approved Budget	(\$1.1M)	0.6% above approved FY 2021 budget		

Note: The forecast will continue to evolve throughout the FY based on changes to the program including project schedules and estimates.

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CAPITAL PROGRAM FINANCIALS

The performance of the capital program is summarized in this section. The following topics are noted.

- Overview of monthly project activities
- Comparison of FY spending to the approved FY21 budget
- Discussion of change management activities
- Forecast of upcoming procurement activities for CIP projects

MONTHLY PROJECT ACTIVITIES

MSD's working definitions for each project's schedule activity are as follows:

- <u>Initiation/ Procurement Activity</u>: The time when a project in the approved CIP is waiting for planning to be completed; a design Project Manager (PM) assignment; or a consulting Professional Services Agreement Notice-to-Proceed (NTP).
- <u>Design Activity:</u> The time from when a project is transitioned from planning to preliminary design through final design, through bidding, until the NTP is issued for construction.
- <u>Construction Activity</u>: The time from when a project is issued a NTP through achievement of Substantial Completion of the contracted scope of work.
- <u>Closeout/Warranty Phase Project</u>: The time when contracted work has been Substantially Completed and the Project Manager is waiting to receive the final pay application and/or finalize the warranty walkthrough inspection.

A summary of status of projects active during the reporting period is provided in Table 7.

Table 7 – Summary of Active Non-Appropriation Projects During Reporting Month

Current Project Activity	Number of Projects	FY21 Actuals		Lifetime Actuals	
Initiation & Procurement	26	\$	1,303,955	\$	2,935,906
Design	35	\$	842,591	\$	2,049,125
Construction	36	\$	22,374,850	\$	290,865,000
Closeout/Warranty	17	\$	(143,042)	\$	47,916,509
TOTAL	114	\$	24,378,354	\$	343,766,541

Emergency Contracts to Repair Infrastructure Damage

When emergencies become larger than internal resources can handle and/or present immediate public safety dangers, emergency contracts are executed. MSD has issued several emergency contracts under the Chief Engineer's and Executive Director's authority. These emergencies are primarily due to the condition and age of MSD's assets. Some of the emergencies are due to heavy rain events and saturated soils undermining of pipe infrastructure and drainage runoff has washing away and/or eroding drainage systems. For the past decade MSD had to defer spending for asset management in order to comply with construction of new assets mandated in the Consent Decree to mitigate unauthorized discharges.

Details of the emergency contract work for FY21 through the current reporting period are included in Table 8. The amount presented typically reflects the construction contract only. The Budget ID assigned to each project is listed. Projects that are routine in nature and repaired relatively quickly are performed under the annual appropriation FY21 Renewal and Replacement - Budget ID G21001. Projects more complex or requiring more time for completion are assigned a new budget ID.

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Table 8 – Year-to-Date Emergency Contract Work

Emergency	Funding Source	Date Began	Status	Contractor	Amount
Harrods Creek FM Repair	A20280	11/25/2019	Active	MAC Construction	\$ 8,000,000
DRGWQTC Dewatering*	D20284	12/2/2019	Active	Ulliman Schutte	\$ 27,000,000
MFWQTC LG Dryer Replacements	D20285	1/2/2020	Active	Judy Construction	\$ 49,305,173
Pond Creek FPS Repairs	F19267	9/17/2018	Active	HDR Construction	\$ 2,600,000
4th St Flood Pump Repairs	F20305	1/26/2020	Complete	Pace Contracting	\$ 50,000
Upper Mill Creek FPS, Pump #1 Repair	F20342	4/6/2020	Active	JCI	\$ 450,000
10 th Street FPS MCC Replacement	F21123	7/23/2020	Active	CE Power	\$ 250,000
5 th and Chestnut Sewer Repair		6/23/2020	Active	Flynn Brothers	\$ 150,000
MFWQTC FEPS Soft Starters		12/2/2019	Active	Advanced Electric Systems	\$ 250,000
DRG RAS PS Spool Replacement		6/15/2020	Active	MAC Construction	\$ 236,750
4 th and Main Sewer Repair		7/16/2020	Complete	Temple and Temple	\$ 250,000
Beckley Station FM Repair	G21001	7/17/2020	Complete	Basham Construction and Rental Company Inc.	\$ 30,889
7 th and Main Sewer Repair		8/10/2020	Active	MAC Construction	\$ 250,000
Zorn Ave Sewer Repair		8/24/2020	Complete	Basham Construction and Rental Company Inc.	\$ 46,702
Shelby and Witherspoon		5/18/20	Active	MAC Construction	\$ 163,574
1102 Outer Loop Pipe Replacement Project		9/16/2020	Active	B & R Contracting, LLC	\$ 47,000
Preston and Muhammad Ali Sewer Repair	G21001	9/29/2020	Active	Basham Construction and Rental Company Inc.	\$ 75,000
1118 Ellison Sewer Repair		9/30/2020	Active	Temple and Temple	\$ 37,200

^{*}This project is part of the overall project that was included in the emergency certification.

The emergency projects added in September 2020 include repairing 10" sewer at Preston and Muhammad Ali, slip line segmented tile sewer, grout annular space and all appurtenances at 1118 Ellison, and pipe replacement on Outer Loop at Southern Ditch. (Refer to Table 8). These failures continue to demonstrate the age and condition of many collection system assets. Current cost estimates total \$159,200.

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CASHFLOW PERFORMANCE

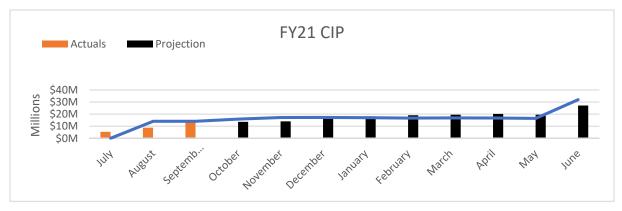
A breakdown of the monthly spend forecast through July, as compared to actual spending, is presented in Table 9 and Figure 2. Capital expense reflects total capital invoices received against a purchase order in the month.

Table 9 -	FY21	Fvolvina	Spend	Forecast	and Actuals

FY21	Monthly Baseline Forecast	Monthly Actuals
July 2020	\$0	\$5.3M
August 2020	\$14.0M	\$8.8M
September 2020	\$14.0M	\$13.4M
October 2020	\$15.9M	
November 2020	\$17.2M	
December 2020	\$17.3M	
January 2021	\$17.0M	
February 2021	\$16.7M	
March 2021	\$16.8M	
April 2021	\$16.8M	
May 2021	\$16.5M	
June 2021	\$31.9M	
FY Total	\$194.1 M	\$27.5M

Note: The cashflow forecast and actuals exclude grant projects. Most invoices paid in July are for work in June, and therefore were charged against the FY20 budget. July is estimated at \$0 and the following June baseline includes the funds to be accrued for FY21.

The cash forecast graph presents the monthly actual spending along with the current projected spending for the FY. The baseline compares the forecast to the projection used to develop the FY21 CIP. The total FY21 spending projection is \$195.2M or 0.6% above the budget. This level is closely managed so that budget will not be exceeded.



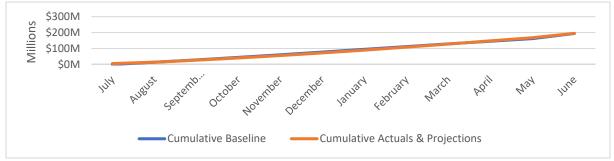


Figure 2 – FY21 Cashflow Forecast

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Projects Removed from Cashflow

The FY21 CIP represents a list of projects forecasted to have spending during the fiscal year. However, from time to time, some projects must be removed from the cashflow forecast for a variety of reasons. Projects tend to be removed from the cashflow for the following reasons:

- <u>Cancelled</u>: The project has been determined to no longer be a priority for the CIP or has been integrated into a different CIP project.
- <u>Interrupted</u>: The project requires additional coordination or evaluation in order to proceed with spending during the FY21 CIP. The interruption time is anticipated to be short and spending is expected to reoccur during the FY.
- <u>On-Hold</u>: The project requires more consideration and spending may or may not reoccur during the FY.
- <u>Future</u>: The project has been reprioritized to a different FY.

When projects are removed from the cashflow forecast, they cause a negative impact – meaning spending will not occur as forecasted. A summary of the projects removed from the cashflow forecast during the year and the corresponding impact to the FY21 baseline cashflow forecast is provided in Table 10.

Project Status	Number of FY21 Projects	FY21 Actuals	FY21 Projected Excess or (Shortfall)
Canceled Projects	3		\$1.7M
Interrupted Projects	0		
On Hold Projects	0		
Future	0		
TOTAL	3		\$1.7M

The specific projects referenced as the "Number of FY21 Projects" in the above table are provided in Table 11 along with the reason for the change to the project status.

Table 11 - Project Status Explanations

Project Status	Budget ID	Project Name	FY21 Forecast	Reason for Change
	D19043	MFWQTC OGA PTO AND CHLORINE RAIL CAR FACILITY DEMOLITION	\$1,458,741	Scope to be included with the Morris Forman New Biosolids Facility project
Canceled Projects	E21076	WASTEWATER PUMP STATIONS FACILITY ASSET MANAGEMENT PLAN	\$230,769	Scope to be included in Asset Management Plan Development
	N21072	TRANSACTIONAL ANALYSYS	\$35,000	Scope completed in FY20 under a different budget ID

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Trending Top Projects

Forecasting spending for large capital projects is challenging, particularly for construction projects spanning multiple fiscal years. MSD does not have control over the rate of spending or progress of the Contractor and subcontractors performing the contracted work. Additionally, there is a lag between the time invoices are submitted by the contractor and when the invoices are paid. A brief lag is normal given the rigorous review MSD Finance and Engineering teams perform including evaluation of work invoiced, retainage, and contract terms.

Table 12 presents data for the largest FY21 CIP projects. The spending for these large CIP projects represents 54.8% of the FY21 total spending.

Table 12 – Evaluation of Actuals for Largest CIP Projects

Budget ID	Project	FY21 Baseline Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Budget Projected Excess or (Shortfall)
H09133	OHIO RIVER TUNNEL	\$35M	\$5.1M	\$29.9M	\$0**
D20284	DRGWQTC DEWATERING EMERGENCY	\$17.8M	\$2.7M	\$12.3M	\$2.8M*
D20285	MFWQTC LG DRYER REPLACEMENTS	\$17.4M	\$1.0M	\$16.2M	\$0.2M
H14126	HCWQTC EXPANSION	\$16.5M	\$4.8M	\$9.8M	\$1.9M*
D21106	DRGWQTC DEWATERING EMERGENCY – PHASE 2	\$8.3M	\$0.1M	\$8.2M	\$0
A20244	LARGE DIAMETER SEWER REHABILITATION	\$6.0M	\$0.1M	\$8.3M	(\$2.4M)**
H19247	I-64 AND GRINSTEAD CSO INTERCEPTOR	\$5.3M	\$1.4M	\$1.9M	\$2.0M

^{*}Budget excess due to accelerated spending in FY20.

CHANGE MANAGEMENT ACTIVITIES

Notice of Advisement (NOA)

NOAs are intended to document any change to a project scope, schedule, and budget. A standardized electronic form has been created by the MSD Project Controls Team. Table 13 lists NOA's processed during the month of August. In general requests by staff were for the following:

- 4 new projects added to the FY21 CIP
- 6 projects with schedule adjustments
- 6 projects with EAC increases
- 6 changes in project status

New projects were not known at the time the FY21 CIP was under development and subsequently approved by MSD's Board. These projects are vetted by staff. Projects are only added to the FY21 CIP if funding is available from the CIP Management Reserve. The CIP Management Reserve represents a reconciliation account for baseline cashflow forecast against actuals and updated forecasts for the projects advanced in FY21. As of September 30st, the FY21 CIP includes \$4.2M of available management reserve under Project G21018.

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^{**}Spending projection will be validated.

This amount is available to provide MSD with the flexibility necessary to manage a CIP of this size and complexity. The forecasted spend is a calculation based upon assumptions and geometric spending curves. Actual spending may not follow the curve on a monthly basis.

Table 13 – Notice of Advisement Log for Reporting Month

NOA ID	Project Name	Advisement Category	Status
117	IPS Employee Interface Modification	New Project	Approved
118	DRG WWPS Vibration FEA	Scope	Approved
119	DRGWQTC RAS Electrical Modifications	EAC increase	Approved
120	CMF Roof A Replacement	New Project	Approved
121	CMF Roof C Replacement	New Project	Approved
122	DRGWQTC Pumping Package	Scope, EAC increase	Approved
123	FY20 Asset Management	Schedule	Approved
124	FY20 IOAP Post Const Compliance Assessment	EAC increase	Approved
125	Asset Management Plan Development	Schedule	Approved
126	HCWQTC Asset Management Plan	Project Status	Approved
127	DRGWQTC Asset Management Plan	Project Status	Approved
128	FFWQTC Asset Management Plan	Project Status	Approved
129	Bells Lane Asset Management Plan	Project Status	Approved
130	CCWQTC Asset Management Plan	Project Status	Approved
131	Wastewater PS Facility Asset Management Plan	Project Status	Approved
132	MFWQTC Groundwater Wells Study	Schedule	Approved
133	DRGWQTC Elevator Repairs	EAC increase	Approved
134	Districtwide Facility Security Upgrades	EAC Increase, schedule	Approved
135	MFWQTC Chiller Replacement	Schedule	Approved
136	MFWQTC Elevator Repairs	EAC decrease, schedule	Approved
137	MFWQTC FEPS Loadcenter & MCC Replacement	Scope	Approved
138	4 th St FPS Mural	New project	Approved
139	Brown Forman GI	Scope	Approved
140	DRGWQTC Substation U-13 Modifications	Budget	Approved

Approved Change Orders

The Change Orders processed by MSD during the reporting period are listed in the following table. This information is provided for informational purposes. In future reports, a programmatic evaluation of construction change orders during the FY will be provided.

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Table 14 – Construction Change Orders Processed during Reporting Month

Budget ID	Project	Original Contract Amount	Change Order Amount (this month)	Revised Contract Amount
H09141	Lexington & Payne CSO Interc.	\$ 23,135,011	\$209,330.12	\$23,868,019

PROCUREMENT ACTIVITIES

A forecast of the upcoming procurement activities for the next 90 days is presented in Table 15. The bid dates represent anticipated times and may be adjusted depending upon project conditions.

Table 15 – Potential Upcoming Procurement Projects

Budget ID	Project Name	Anticipated Advertising Date
G20028	MFWQTC Elevator Repair	10/3/2020
D21129	DRGWQTC Elevator Repairs	10/18/2020
D20314	MFWQTC Sewer and Manhole Condition Assessment and Repair	10/20/2020
G18417	MFWQTC Admin Building Roof Replacement	11/15/2020
G20018	SWPS Site Security	11/15/2020
D19286	SWPS Gas Monitoring and SP1 Odor Control	12/29/2020
D21077	DRGWQTC PAA System	12/29/2020
E21074	CSO 190 PCCM	12/29/2020
G21103	Main Office New Offices and Conference Rooms	12/31/2020

Bid Openings

Bids opened during the reporting month are shown in Table 16.

Table 16 – Bids opened during Reporting Month

Budget ID	Project Name	Bid Opening	Engineer's Estimate	Bid Award
n/a				

Construction - Notice to Proceeds (NTP) Issued

Table 17 – NTP's Issued during Reporting Month

Budget ID	Project Name	NTP Date
n/a		

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PROJECT INFORMATION BY PROGRAM

An overview of the FY21 CIP budget and the current forecasted annual spending is presented in Table 18. A detailed listing of the projects included in the FY21 CIP for each CIP Program is provided in this section.

Table 18 – FY21 Comparison of Budget to Projected Spending

Service Type	Program Type	Baseline Budget	FY21 Forecast	FY21 Spending Variance (Shortfall)
	CMOM	\$67.9M	\$64.8M	\$3.1M
	Consent Decree (IOAP)	\$49.9M	\$48.6M	\$1.3M
Wastewater Service	Development Infrastructure	\$6.9M	\$7.7M	(\$0.8M)
Type Programs	NMC	\$37.5M	\$42.1M	(\$4.6M)
	Asset Management	\$3.7M	\$4.4M	(\$0.7M)
	Wastewater Total	\$165.9M	\$167.6M	(\$1.7M)
	Drainage Management	\$2.4M	\$2.5M	(\$0.1M)
	Floodplain Management	\$0.3M	\$0.6M	(\$0.3M)
Stormwater & Flood	Ohio River Flood Protection	\$5.6M	\$5.6M	
Protection Service	Stormwater Quality (MS4)	\$2.0M	\$2.4M	(\$0.4M)
Type Programs	Consent Decree (IOAP)	\$0.1M	\$0.1M	
	СМОМ	\$1.0M	\$1.0M	
	Stormwater Total	\$11.4M	\$12.2M	(\$0.8M)
	Capital Equipment	\$2.3M	\$2.6M	(\$0.3M)
Support Sorvices	CMOM	\$0.2M	\$0.2M	
Support Services Type Programs	Facilities	\$9.3M	\$7.1M	\$2.2M
Type i Tograms	IT & LOJIC	\$5.0M	\$5.5M	(\$0.5M)
	Support Systems Total	\$16.8M	\$15.4M	\$1.4M
Grand Total		\$194.1M	\$195.2M	(1.1M)

IOAP AND CONSENT DECREE

All schedule milestones on IOAP projects to mitigate sewer overflows across the service area have been met. MSD will spend nearly \$1.1B implementing the project identified in the Consent Decree. Local waterways are safer and cleaner today as a result of these expenditures. This regulatory-required work has consumed the majority of MSD's capital expenditures; however, these projects have only addressed a fraction of the wastewater, stormwater and flood protection assets under MSD's purview. An unintended consequence of compliance with this Federal Order has been deferred asset management on the remaining infrastructure. The deterioration compounds over time, leading to increased risks to public health and safety as these assets begin to fail. The result has been more frequent failures requiring larger and larger emergency repairs.

MSD must make tough decisions and prioritize the limited capital dollars on those assets that pose the greatest risks to public health and safety. At this time, MSD is recommended a few SSO abatement projects be deferred to allow focus on necessary work at the Morris Forman Water Quality Treatment Center and the Paddy's Run Flood Pump Station. In the meantime, MSD continues construction of the Waterway Protection Tunnel and is collecting data on overflow abatement projects implemented to date along with overflow activity in the remaining project areas. Preliminary analysis suggests that some of the remaining SSO abatement projects may not be necessary.

MSD maintains regular coordination and communications with the EPA and Kentucky Division of Water on Consent Decree progress. Those communications have focused on the increasing risks to public health and safety requiring the reprioritization of capital expenditures.

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Table 19 - Schedule Float for Remaining LTCP Projects

Budget ID	LTCP Project	Amended Consent Decree Deadline	Schedule Float to CD Deadline (days)
Waterway Prot	ection Tunnel Bundle		
H09127	ROWAN PUMP STATION	06/30/2022	651
H09133	OHIO RIVER TUNNEL	06/30/2022	334
H09141	LEXINGTON & PAYNE CSO INTERCEPTOR	06/30/2022	608
H18176	DOWNTOWN CSO INTERCEPTOR	06/30/2022	651
H19247	I-64 & GRINSTEAD CSO INTERCEPTOR	06/30/2022	546

Note: MSD has requested the Consent Decree Regulators extend the completion date for the Waterway Protection Tunnel to June 30, 2022. This time extension request is to address site conditions affecting construction progress and to provide sufficient float for additional issues that may arise as construction progresses.

Sanitary Sewer Discharge Plan Progress

The suite of projects selected for the Final SSDP component of the IOAP will eliminate capacity-related SSOs up to site-specific levels of protection. The projects listed in Table 20 remain to fulfill SSDP project requirements of the Consent Decree. MSD is currently negotiating with the federal and state Regulators regarding the timing for completing the remaining IOAP projects. MSD is committed to completing projects in accordance with the outcomes of the on-going negotiations.

Table 20 - Remaining SSDP Projects

Budget ID	SSDP Project	Amended Consent Decree Deadline
A18354	RAINTREE DRIVE AND MARIAN COURT SYSTEM IMPROVEMENTS PHASE 1 – PUMP STATION ELIMINATIONS	TBD
H09180	RAINTREE DRIVE AND MARIAN COURT SYSTEM IMPROVEMENTS PHASE 2 – PIPE UPGRADES	TBD
H09165	BARDSTOWN ROAD PUMP STATION IMPROVEMENTS	TBD
H09242	GUNPOWDER PUMP STATION IN-LINE STORAGE	TBD
H09166	LUCAS LANE PUMP STATION IN-LINE STORAGE	TBD
H09179	DELL ROAD AND CHARLAINE PARKWAY INTERCEPTOR IMPROVEMENTS	TBD
H09196	LEVEN PUMP STATION ELIMINATION	TBD
H09182	MONTICELLO PUMP STATION ELIMINATION	TBD
H09192	CINDERELLA PUMP STATION ELIMINATION	TBD
H09164	IDLEWOOD IN-LINE STORAGE	TBD
H09186	MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE, AND UMFLS DIVERSION 2 - PS DIVERSION AND STORAGE	TBD
H09200	SUTHERLAND INTERCEPTOR	TBD
H10048	CAMP TAYLOR PHASE 4 – REHAB AND OFF-LINE STORAGE	TBD
H10044	GOOSE CREEK PUMP STATION IMPROVEMENTS AND WET WEATHER STORAGE 2 – PUMP STATION AND FORCE MAIN UPGRADES	TBD

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Budget ID	SSDP Project	Amended Consent Decree Deadline
H09171	KAVANAUGH ROAD PUMP STATION IMPROVEMENTS	TBD
H09159	LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS	TBD
H09188	MELLWOOD SYSTEM IMPROVEMENTS AND PUMP STATION ELIMINATIONS PHASE 2	TBD

Projects by Program Type

The following tables present each program at the project level. Only projects that are In Progress and have FY21 budget, actuals and/or remaining forecast are included.

Table 21 – Summary of FY21 IOAP Program Projects

Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
A18354 Raintree Court and Marian Court Pump Station Elimination - Phase 1A	Design	\$ 116,002	\$ -	\$ 126,502	\$ (10,500)
H09125 Portland CSO Basin	Closeout	\$ -	\$ 2,199	\$ -	\$ (2,199)
H09127 Rowan Pump Station & Downtown CSO Interceptor	Construction	\$ 2,276,394	\$ 1,108,347	\$ 1,276,331	\$ (108,284)
H09133 Ohio River Tunnel	Construction	\$ 35,000,000	\$ 5,110,460	\$ 30,202,423	\$ (312,883)
H09141 Lexington and Payne CSO Interceptor	Construction	\$ 1,634,187	\$ 986,177	\$ (164,235)	\$ 812,245
H09164 Idlewood Inline Storage	Initiation & Procurement	\$ 396,954	\$ -	\$ 462,884	\$ (65,930)
H16051 FY20 Green Infrastructure	Complete	\$ -	\$ 200	\$ -	\$ (200)
H17019 FY21 IOAP Post Const Compliance Assmt	Initiation & Procurement	\$ 50,000	\$ -	\$ 50,000	\$ -
H18176 Downtown CSO Interceptor RPR & CA Services	Construction	\$ 422,084	\$ 44,833	\$ 401,109	\$ (23,858)

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Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
H18482 FY20 Engineering Planning and Regulatory Compliance Support	Complete	\$ -	\$ 76,129	\$ -	\$ (76,129)
H18483 FY21 Modeling	Initiation & Procurement	\$ 1,200,000	\$ -	\$ 1,200,000	\$ -
H19060 FY21 Green Infrastructure	Initiation & Procurement	\$ 1,250,000	\$ 44,395	\$ 1,205,605	\$ -
H19247 I-64 and Grinstead CSO Interceptor	Construction	\$ 5,304,567	\$ 1,391,452	\$ 2,093,614	\$ 1,819,501
H20040 FY20 CIP Task Assistance	Initiation & Procurement	\$ -	\$ 277,848	\$ -	\$ (277,848)
H20041 FY21 CIP Task Assistance	Initiation & Procurement	\$ 2,000,000	\$ -	\$ 2,000,000	\$ -
H20136 IOAP Major Modification Development Assistance	Initiation & Procurement	\$ 250,000	\$ -	\$ 250,000	\$ -
H21020 1301 W Main GI	Initiation & Procurement	\$ 12,773	\$ -	\$ 13,381	\$ (608)
H21064 Passport Health GI	Initiation & Procurement	\$ 109,957	\$ -	\$ 131,417	\$ (21,460)

WASTEWATER NON-IOAP PROGRAMS

Wastewater management is a vital component of MSD's system. The CIP projects included in the FY21 CIP for the following programs are presented in this section.

- State Agreed Order Projects
- Capacity, Management, Operations, and Maintenance Program
- Development Infrastructure Program
- Nine Minimum Controls Program

State Agreed Order Projects

MSD has entered into agreed orders with the state to resolve site specific issues. The following CIP projects are linked to various agreed orders.

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Table 22 - Schedule Float for Agreed Order Projects

Budget ID	Project	State Agreed Order Date	Schedule Float to Order Deadline (days)
A16073	Mud Lane Interceptor	12/31/2020	112
D20228	MFWQTC Centrifuge Replacement	12/31/2020	0
D19307	MFWQTC FEPS VFD Replacement	6/30/2021	243
D20167	MFWQTC East Headworks HVAC	6/30/2021	310
D18130	MFWQTC FEPS Loadcenter and MCC Replacement	6/30/2021	41
H19142	Upper Floyds Fork Interceptor	7/31/2021	183
D20284	DRGWQTC Dewatering Facility	12/31/2022	518
D20285	MFWQTC LG Dryer Replacements	12/31/2022	517
H14126	HCWQTC Expansion	12/31/2022	472
D21059	Asset Management Plan Development	6/30/2022	184
D19045	MFWQTC Sodium Hypochlorite Relocation	12/31/2023	613
D17042	MFWQTC Sedimentation Basin Rehabilitation	6/30/2026	1135

Capacity, Management, Operations, and Maintenance (CMOM) Program

MSD's Consent Decree requires implementation of a CMOM Program including major renewal and replacement projects at the Hite Creek, Floyds Fork, Cedar Creek, and Derek R. Guthrie WQTCs to ensure MSD can maintain effective wastewater collection, transmission, and treatment. CMOM compliance is required as a component in each WQTC KPDES permit. Additionally, the CMOM Program provides proactive asset management of sewers, pump stations, and major interceptors that make up most of MSD's collection system. A list of active FY21 CMOM related projects is provided in Table 23.

Table 23 – Summary of FY21 Wastewater CMOM Program Projects

Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast		FY21 Project Excess or Shortfall	
D20222 Bells Lane Grit Classifier Drain Line	Closeout	\$	27,589	\$	-	\$	-	\$	27,589
D20167 MFWQTC East Headworks HVAC	Closeout	\$	97,600	\$	-	\$	79,550	\$	18,050
D19227 MFWQTC Primary Sludge Line Replacement	Closeout	\$	17,717	\$	-	\$	-	\$	17,717
H19095 FY20 PS RR	Complete	\$	-	\$	8,400	\$	-	\$	(8,400)

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Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
H20045 FY20 Regulatory Compliance Support	Complete	\$ -	\$ 30,572	\$ -	\$ (30,572)
H20055 FY20 CMOM I_C Implementation	Complete	\$ -	\$ 7,109	\$ -	\$ (7,109)
E19211 FY20 Operations Renewal and Replacement	Complete	\$ -	\$ 203,086	\$ -	\$ (203,086)
D20278 DRGWQTC RAS Building Electrical Modifications	Construction	\$ 117,150	\$ 2,594	\$ 199,933	\$ (85,377)
H20153 SWPS Flood Repair	Construction	\$ 208,895	\$ 33,066	\$ 82,426	\$ 93,403
D16272 CCWQTC Influent PS MCC Upgrades	Construction	\$ 553,982	\$ 13,622	\$ 528,322	\$ 12,038
D18285 ORFM Odor and Corrosion Control	Construction	\$ 914,494	\$ 400,535	\$ 1,560,485	\$ (1,046,526)
D18292 DRGWQTC Clarifier Grout Repair and RAS Gate Replacement	Construction	\$ 1,256,163	\$ 347,677	\$ 944,270	\$ (35,784)
A20280 Harrods Creek Force Main Repair	Construction	\$ 2,023,813	\$ 418,164	\$ 470,408	\$ 1,135,241
D20291 DRGWQTC Dewatering Emergency Phase 1	Construction	\$ 2,200,000	\$ 2,211,761	\$ -	\$ (11,761)

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Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
D21106 DRGWQTC Dewatering Emergency Phase 2	Construction	\$ 8,250,000	\$ 176,763	\$ 8,073,237	\$ -
H14126 HCWQTC Expansion	Construction	\$ 16,505,487	\$ 4,747,028	\$ 10,590,501	\$ 1,167,958
D20304 MFWQTC Headworks and Dumpster Building Structural and Primary Blower Building Stair Repairs	Construction	\$ 202,050	\$ 7,353	\$ 249,906	\$ (55,209)
A20320 Broadfern PS Elimination	Construction	\$ 250,425	\$ 157,080	\$ 92,309	\$ 1,036
D20284 DRGWQTC Dewatering Emergency Contract	Construction	\$ 17,830,685	\$ 2,690,755	\$ 14,967,587	\$ 172,343
D20262 MFWQTC Groundwater Wells Study	Construction	\$ 200,072	\$ 2,865	\$ 188,844	\$ 8,363
D19223 DRGWQTC WWPS Finite Element Analysis Phase 2	Construction	\$ 9,166	\$ -	\$ 10,291	\$ (1,125)
A14129 Gorham Way Pump Station Elimination	Design	\$ 64,628	\$ -	\$ 88,098	\$ (23,470)
E21071 Wathen Lane PS Rehabilitation	Design	\$ 146,381	\$ -	\$ 221,018	\$ (74,637)

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Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast	FY21 Project Excess or Shortfall	
E21091 Sanders Lane PS Rehabilitation	Design	\$	146,381	\$	-	\$ 97,873	\$	48,508
E21070 Rosa Terrace PS Elimination	Design	\$	327,600	\$	-	\$ 522,345	\$	(194,745)
E21090 Sonne Avenue PS Elimination	Design	\$	327,600	\$	-	\$ 272,566	\$	55,034
D20314 MFWQTC Sewer and Manhole Condition Assessment and Repair	Design	\$	390,000	\$	3,462	\$ 432,925	\$	(46,387)
D21077 DRGWQTC PAA System	Design	\$	425,000	\$	-	\$ 425,000	\$	-
D19286 SWPS Gas Monitoring and SP1 Odor Control	Design	\$	550,075	\$	-	\$ 569,000	\$	(18,925)
D21059 Asset Management Plan Development	Design	\$	857,143	\$	-	\$ 421,875	\$	435,268
F20321 Bluegrass Fields PS Renovation	Design	\$	285,496	\$	38,159	\$ 325,363	\$	(78,026)
D20017 CCWQTC Sodium Aluminate Building	Design	\$	650,872	\$	2,742	\$ 628,863	\$	19,267
D19039 CCWQTC Effluent Parshall Flume Upgrade	Design	\$	1,103,511	\$	6,471	\$ 1,145,932	\$	(48,892)
H16045 FY20 Plumbing Modification Program	Initiation & Procurement	\$	-	\$	16,561	\$ -	\$	(16,561)

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Budget ID & Project Name	Phase	FYZ	21 Budget	FY21 Actuals		FY21 Remaining Forecast		FY21 Project Excess or Shortfall	
H20297 FY20 Asset Management Assistance	Initiation & Procurement	\$	-	\$	32,520	\$	(5,274)	\$	(27,246)
W21012 OC FY21 OC Coll System Gravity Sewer Rehab	Initiation & Procurement	\$	50,000	\$	10,000	\$	40,000	\$	-
W21013 OC PS & Treatment Plant Initial Repair	Initiation & Procurement	\$	50,000	\$	-	\$	50,000	\$	-
H20138 FY21 PMIS	Initiation & Procurement	\$	75,000	\$	-	\$	75,000	\$	-
H21111 FY21 FOG Program Support	Initiation & Procurement	\$	90,000	\$	-	\$	90,000	\$	-
W21010 OC FY21 Collection System Modeling	Initiation & Procurement	\$	100,000	\$	-	\$	100,000	\$	-
W21011 OC FY21 OC WQTC R&R	Initiation & Procurement	\$	100,000	\$	-	\$	100,000	\$	-
H18096 FY21 CMOM Program Management Assistance	Initiation & Procurement	\$	135,000	\$	-	\$	135,000	\$	-
W21016 OC FY21 OCEA R&R	Initiation & Procurement	\$	150,000	\$	-	\$	150,000	\$	-
W21009 OC FY21 PS R&R	Initiation & Procurement	\$	200,000	\$	-	\$	200,000	\$	-
H18173 FY21 Information Governance Architecture	Initiation & Procurement	\$	235,000	\$	-	\$	235,000	\$	-
D21063 Odor Management Plan	Initiation & Procurement	\$	250,000	\$	-	\$	250,000	\$	-
H18097 FY21 CMOM, SCAP, AAM and FOG	Initiation & Procurement	\$	250,000	\$	44,180	\$	205,820	\$	-

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Budget ID &	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining	FY21 Project Excess or Shortfall	
Project Name		1121 Duuget	1 121 Actuals	Forecast		
W21015 OC WWTP Eliminations	Initiation & Procurement	\$ 250,000	\$ -	\$ 250,000	\$ -	
W21008 OC PS Elimination Project	Initiation & Procurement	\$ 290,000	\$ -	\$ 290,000	\$ -	
H20056 FY21 CMOM I and C Implementation	Initiation & Procurement	\$ 292,500	\$ -	\$ 292,500	\$ -	
W21007 OC Scada System, Rain Gauge Expansion	Initiation & Procurement	\$ 350,000	\$ -	\$ 350,000	\$ -	
W21006 OC Ash Avenue Interceptor	Initiation & Procurement	\$ 400,000	\$ -	\$ 389,150	\$ 10,850	
A19098 FY21 Construction Inspection	Initiation & Procurement	\$ 500,000	\$ 118,834	\$ 381,166	\$ -	
E18468 FY21 CMOM Collection System PS RR	Initiation & Procurement	\$ 500,000	\$ -	\$ 500,000	\$ -	
D18453 FY21 MFWQTC Equipment RR	Initiation & Procurement	\$ 663,800	\$ 14,100	\$ 649,700	\$ -	
H20062 FY21 CMOM Gravity Line Cleaning and Inspection	Initiation & Procurement	\$ 675,000	\$ -	\$ 675,000	\$ -	
E19212 FY21 Operations Renewal and Replacement	Initiation & Procurement	\$ 1,185,000	\$ 9,915	\$ 1,175,085	\$ -	
D20033 FY21 Regional WQTC Equipment RR	Initiation & Procurement	\$ 1,500,000	\$ 83,853	\$ 1,416,147	\$ -	
W21014 OC Collections Facility	Initiation & Procurement	\$ 1,700,000	\$ -	\$ 1,700,000	\$ -	
G21001 FY21 Renewal and Replacement	Initiation & Procurement	\$ 1,949,000	\$ 30,755	\$ 1,918,245	\$ -	

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Development Infrastructure Program

The 20-Year CRRP includes recommended projects to ensure adequate conveyance and treatment capacity is available in advance of development and population growth. This program is particularly important for avoiding community development initiatives facing moratoriums due to the rated capacity of the WQTCs being exceeded. The development program includes a combination of phased WQTC capacity upgrades and under capacity sewers and pump stations. The development infrastructure projects active in FY21 are listed in Table 24.

Table 24 – Summary of FY21 Development Program Projects

Budget ID & Project Name	Phase	FY	21 Budget	FY	21 Actuals	FY21 Remaining Forecast	I	'21 Project Excess or Shortfall
A16073 Mud Lane Interceptor	Construction	\$	649,692	\$	(108,038)	\$ 160,131	\$	597,599
H19142 Upper Floyds Fork Interceptor	Construction	\$	2,855,291	\$	651,704	\$ 2,412,845	\$	(209,258)
D18489 Fairmount Road Pump Station Force Main Extension - Phase 1	Design	\$	382,579	\$	37,675	\$ 420,321	\$	(75,417)
D20351 Floyds Fork Interceptor	Design	\$	2,317,234	\$	61,924	\$ 2,863,717	\$	(608,407)
G16048 FY20 Development Team Support	Initiation & Procurement	\$	1	\$	11,477	\$ -	\$	(11,477)
G17015 FY21 Development Infrastructure Support	Initiation & Procurement	\$	85,000	\$	-	\$ 85,000	\$	-
G18433 FY21 Dev Infrastructure Excess Cost Reimbursement	Initiation & Procurement	\$	125,000	\$	-	\$ 125,000	\$	-
D20298 DRGWQTC Artificial Intelligence Pilot	Initiation & Procurement	\$	176,571	\$	87,000	\$ 119,000	\$	(29,429)
D20148 FFWQTC Regional Facilities Plan Update	Initiation & Procurement	\$	300,000	\$	-	\$ 300,000	\$	-

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Nine Minimum Controls Program

MSD's Consent Decree requires compliance with the USEPA Nine Minimum Controls Program (NMC) that was initially developed as part of the Clean Water Act CSO Policy to address combined sewer system (CSS) best management practices (BMPs) that do not require significant construction. NMC projects tend to be technology based. NMC programmatic compliance is required in the Morris Forman WQTC KPDES Permit. The 20-year CRRP includes projects focused on NMC including real-time control (RTC) assets in the combined sewer system and the Morris Forman WQTC Improvements. The FY21 approved budget included the NMC projects noted in Table 25.

Table 25 – Summary of FY21 Wastewater NMC Program Projects

Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall	
D19275 MDS Downstream Flow Meter	Closeout	\$ 17,742	\$ 2,594	\$ -	\$ 15,148	
D20226 Bells Lane and MF HW Bar Screen Grit Study	Closeout	\$ 112,889	\$ 51,441	\$ -	\$ 61,448	
D20337 FFWQTC Arc Flash Study	Complete	\$ -	\$ 23,085	\$ -	\$ (23,085)	
D19028 FY20 MFWQTC Upgrade PLCs	Complete	\$ -	\$ 82,301	\$ -	\$ (82,301)	
H18442 FY20 RTC Support	Complete	\$ -	\$ 32,885	\$ -	\$ (32,885)	
D19307 MFWQTC FEPS VFD Replacement	Construction	\$ 319,428	\$ 78,981	\$ 205,685	\$ 34,762	
D15020 MFWQTC Cake Pump Phase II	Construction	\$ 1,038,222	\$ 344,239	\$ 502,780	\$ 191,203	
H16074 Nightingale Rehab	Construction	\$ 2,473,755	\$ 37,533	\$ 2,193,722	\$ 242,500	
D20285 MFWQTC LG Dryer Replacements	Construction	\$ 17,362,297	\$ 977,492	\$ 18,455,334	\$ (2,070,529)	
D20228 MFWQTC Centrifuge Replacement	Construction	\$ 388,025	\$ (76,270)	\$ 321,474	\$ 142,821	

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Budget ID & Project Name	Phase	FY	'21 Budget	FY	21 Actuals	FY21 Remaining Forecast	F	Y21 Project Excess or Shortfall	
D19045 MFWQTC Sodium Hypochlorite Building Relocation	Design	\$	129,697	\$	78,875	\$ 26,670	\$	24,152	
E21074 CSO 190 PCCM	Design	\$	160,000	\$	-	\$ 100,000	\$	60,000	
D19048 MFWQTC Radio Repeater Project	Design	\$	344,586	\$	-	\$ 445,917	\$	(101,331)	
D20012 SGC RTC Enhancements	Design	\$	1,193,552	\$	24,600	\$ 1,268,511	\$	(99,559)	
D17042 MFWQTC Sedimentation Basin RR	Design	\$	3,455,671	\$	425,979	\$ 5,173,595	\$	(2,143,903)	
A20244 Large Diameter Sewer Rehabilitation	Design	\$	5,983,330	\$	118,322	\$ 8,295,053	\$	(2,430,045)	
D20306 MFWQTC Loading Design Criteria Evaluation	Initiation & Procurement	\$	-	\$	17,597	\$ -	\$	(17,597)	
H16056 FY20 NMC	Initiation & Procurement	\$	-	\$	11,351	\$ -	\$	(11,351)	
H20048 FY21 NMC CSO Inspection Cameras	Initiation & Procurement	\$	45,000	\$	-	\$ 45,000	\$	-	
F21061 Clifton Heights Storage Basin Sump Pump Improvements	Initiation & Procurement	\$	50,000	\$	-	\$ 50,000	\$	-	
H17020 FY21 NMC Support	Initiation & Procurement	\$	90,000	\$	-	\$ 90,000	\$	-	
G18444 FY21 Plumbing Modification Program	Initiation & Procurement	\$	225,000	\$	31,609	\$ 193,391	\$	-	

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Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
D18130 MFWQTC FEPS Loadcenter and MCC Replacement	Initiation & Procurement	\$ 500,000	\$ -	\$ 500,000	\$ -
H18443 FY21 NMC_RTC	Initiation & Procurement	\$ 675,000	\$ -	\$ 675,000	\$ -
D18116 MFWQTC Biosolids Facility Replacement FY21	Initiation & Procurement	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -

STORMWATER MANAGEMENT & FLOOD PROTECTION PROGRAMS

Stormwater management is a vital component of MSD's system, because it directly impacts the health and safety of all Louisville and Jefferson County residents. The CIP projects included in the FY21 CIP for the following programs are presented in this section.

- Stormwater Program
- Drainage Response Initiative (DRI) Program
- Floodplain Management Program
- Ohio River Flood Protection Program

Stormwater Quality Municipal Separate Storm Sewer System (MS4) Program

The MS4 Program is a drainage-related program to improve the quality of surface waters through controls on stormwater runoff quality in Jefferson County and to protect the public health, safety, and welfare by reducing the introduction of harmful materials into the MS4s that discharge into community streams. The CRRP identified several large stormwater retention basins with the potential for conversion of all or part of the basin to provide infiltration of stormwater.

MSD coordinates MS4 implementation with the agencies that share implementation of the MS4 Program, including Metro Louisville government, small cities that handle their own drainage, and the Kentucky Department of Transportation. A summary of the MS4 related projects in the FY21 CIP is presented in Table 26.

Table 26 – Summary of FY21 Stormwater MS4 Program Projects

Budget ID & Project Name	Phase	FY21 Budg	get	FY2	FY21 Actuals		FY21 Remaining Forecast		FY21 Project Excess or Shortfall	
H16055 FY20 MS4 Program	Complete	\$	-	\$	35,598	\$	343,646	\$	(379,244)	
H16059 FY20 USGS Stream Monitoring	Complete	\$	-	\$	98,212	\$	-	\$	(98,212)	

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Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast		FY21 Project Excess or Shortfall	
H16049 FY20 Envl Data Collection-MS4 and IOAP	Complete	\$,	\$	61,784	\$	-	\$	(61,784)
H20087 FY21 Tree Program	Initiation & Procurement	\$	150,000	\$	-	\$	150,000	\$	-
H20089 3-Forks BGC USACE General Investigation	Initiation & Procurement	\$	200,000	\$	52,021	\$	(52,021)	\$	200,000
H17023 FY21 USGS Stream Monitoring	Initiation & Procurement	\$	400,000	\$	-	\$	400,000	\$	-
H17016 FY21 MS4 Program	Initiation & Procurement	\$	575,000	\$	-	\$	575,000	\$	-
H17018 FY21 Envl Data Collection-MS4 and IOAP	Initiation & Procurement	\$	875,000	\$	-	\$	875,000	\$	-

Drainage Program

Beginning in 2003, MSD initiated an aggressive program to address a wide variety of drainage issues that were pointed out by customers to address problems ranging from structural flooding to alleviating minor standing water problems. The 20-year CRRP includes an annual allocation ranging from \$2.8 million to \$5 million per year for the DRI Program. While MSD originally thought the DRI Program would be phased out as the backlog of customer drainage issues were resolved, customer drainage requests continue to be among the most common communication received by MSD. The active FY21 Drainage projects are listed in the following table.

Table 27 – Status of Active Drainage Projects

Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast		721 Project Excess or Shortfall
C20090 FY20 Stormwater Asset Inventory and Analysis	Complete	\$ -		\$	37,200	\$	-	\$ (37,200)
C20209 FY20 DRI Inspection	Complete	\$ -		\$	153,855	\$	-	\$ (153,855)
C20210 FY20 Stormwater Hansen Clean Up	Complete	\$ -		\$	24,909	\$	-	\$ (24,909)

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Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast	E	21 Project Excess or Shortfall
C20332 10005 Cedar Creek Drive DIP	Construction	\$	46,154	\$	-	\$ 50,000	\$	(3,846)
H20164 346 S Peterson Ave Stream Restoration	Construction	\$	280,259	\$	2,037	\$ 292,031	\$	(13,809)
C20091 FY21 Stormwater Asset Inventory and Analysis	Initiation & Procurement	\$	230,000	\$	-	\$ 230,000	\$	-
C21073 Tycoon Way DRI	Initiation & Procurement	\$	400,000	\$	-	\$ 400,000	\$	-
C19099 FY21 DRI	Initiation & Procurement	\$	1,440,000	\$	70,112	\$ 1,369,888	\$	-

Floodplain Management Program

The floodplain management projects having spending during FY21 are listed in Table 28.

Table 28 – Summary of FY21 Floodplain Management Program Projects

Budget ID & Project Name	Phase	FY2	FY21 Budget		FY21 Actuals		FY21 emaining Forecast	FY21 Project Excess or Shortfall	
H20088 FY20 Maple St Land Use Planning	Complete	\$	1	\$	8,714	\$	-	\$	(8,714)
F19092 FY20 Emergency Preparedness Plan	Complete	\$	-	\$	(14,694)	\$	-	\$	14,694
H21086 FY21 319 Grant	Initiation & Procurement	\$	50,000	\$	-	\$	50,000	\$	-
H21089 FY21 Maple Street Land Use Planning	Initiation & Procurement	\$	60,000	\$	-	\$	60,000	\$	-
F19100 FY21 Emergency Preparedness Plan	Initiation & Procurement	\$	180,000	\$	-	\$	180,000	\$	-

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Ohio River Flood Protection Program

In 1987, as part of the Memorandum of Agreement with the City of Louisville related to drainage and flood protection services, MSD assumed responsibility for the Ohio River Flood Protection System. In addition to capacity concerns, many flood pumping stations have original 1950's vintage electrical and mechanical equipment. For the most part, the stations are manually operated using control systems that cannot be repaired with off-the-shelf components. The 20-year CRRP includes rehabilitating and/or expanding 15 of the 16 flood pumping stations in MSD's system.

Given the size of these facilities, the costs are substantial, but the risks being addressed are vital to Louisville's protection against catastrophic flooding. A listing of Ohio River Protection projects is provided in Table 29.

Table 29 – Summary of FY21 Ohio River Flood Protection Program Projects

Budget ID & Project Name	Phase	FY2	21 Budget	FY21 Actuals		FY21 emaining Forecast	FY21 Project Excess or Shortfall	
F20211 FY20 Floodwall Toe Drain Inspection	Closeout	\$	-	\$	-	\$ 279,068	\$ (279,068)	
F20212 FY20 Closure Vault Roof Replacement	Closeout	\$	1	\$	-	\$ 86,178	\$ (86,178)	
F20305 4th St Flood Pump Emergency Repairs	Closeout	\$	-	\$	-	\$ 8,401	\$ (8,401)	
F19245 Flood Gate 1 Replacement	Closeout	\$	52,494	\$	22,961	\$ -	\$ 29,533	
F19277 Beargrass Creek FPS Wetwell Relief Gate	Closeout	\$	136,599	\$	101,708	\$ (5,220)	\$ 40,111	
F20013 Beargrass FPS Pump 8	Closeout	\$	147,177	\$	-	\$ 63,005	\$ 84,172	
F18302 Paddy's Run FPS Pumps 1, 2 and 6 Rehab	Closeout	\$	333,828	\$	(414,695)	\$ -	\$ 748,523	
F18238 FY20 Floodwall Closures and Vaults RR	Complete	\$	1	\$	14,844	\$ -	\$ (14,844)	
F21123 10th St MCC Replacement	Construction	\$	175,000	\$	-	\$ 252,000	\$ (77,000)	
F19276 FPS Auto Grease Systems Upgrades	Construction	\$	353,220	\$	-	\$ 383,328	\$ (30,108)	

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Budget ID & Project Name	Phase	FY	FY21 Budget		21 Actuals	FY21 Remaining Forecast	/21 Project Excess or Shortfall
F19267 Pond Creek Emergency Pump Repairs	Construction	\$	488,746	\$	25,650	\$ 511,381	\$ (48,285)
F20342 Upper Mill Creek FPS Emergency	Construction	\$	-	\$	120,797	\$ -	\$ (120,797)
F21124 Starkey and Shawnee Flood PS Arc Flash Studies	Design	\$	50,000	\$	-	\$ 50,000	\$ -
F16004 Canal Street Floodwall	Design	\$	287,237	\$	-	\$ 238,139	\$ 49,098
F15010 Gate 102 Replacement	Design	\$	539,191	\$	-	\$ 550,546	\$ (11,355)
F21087 FY21 Flood Structures RR	Initiation & Procurement	\$	900,000	\$	-	\$ 900,000	\$ -
K18265 FY21 FPS Equipment RR	Initiation & Procurement	\$	900,000	\$	4,411	\$ 895,589	\$ -
F21084 FPS USACE Payment FY21	Initiation & Procurement	\$	1,000,000	\$	-	\$ 1,000,000	\$ -
F20107 Starkey FPS Transformer Replacement and Generator	Initiation & Procurement	\$	1,176,054	\$	-	\$ 1,484,459	\$ (308,405)

SUPPORT PROGRAMS

MSD owns a large inventory of rolling stock, information technology (IT) systems, and above-ground facilities that support MSD's operation of wastewater, stormwater drainage, and Ohio River flood protection infrastructure.

- Capital Equipment Program
- Facilities Program
- IT and LOJIC Programs

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Capital Equipment Program

MSD owns more than 600 vehicles and portable equipment, ranging from passenger vehicles and pickup trucks to large excavators and sewer-cleaning trucks. This equipment is critical to MSD's ability to complete the preventive and corrective maintenance activities required to provide sustainable and reliable wastewater, stormwater, and flood protection services. The 20-year CRRP includes an annual allowance for equipment repair and replacement. The capital equipment allocations and projects are listed in Table 30.

Table 30 – Summary of FY21 Capital Equipment Program Projects

Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
K21128 Fleet Management Information System Replacement	Initiation & Procurement	\$ -	\$ -	\$ 169,776	\$ (169,776)
K15053 FY19 Vehicles and Equipment	Initiation & Procurement	\$ 196,558	\$ 74,905	\$ 80,258	\$ 41,395
K16060 FY20 Vehicles and Equipment	Initiation & Procurement	\$ 917,850	\$ 1,084,018	\$ 99,066	\$ (265,234)
K18003 FY21 Vehicles and Equipment	Initiation & Procurement	\$ 1,075,000	\$ -	\$ 1,075,000	\$ -

Facilities Program

As part of the CRRP, a facility condition assessment was done on more than 200 buildings and recommendations for corrective actions were provided. The main area of deficiency were in roofs. The facility condition assessments also identified deficiencies in areas related to heating, ventilation, and air conditioning, building egress, signage and ancillary equipment, and indications of conditions that could eventually cause structural issues and even structural failure. The 20-year CRRP includes projects to address the specific needs at each facility. Facility projects active during FY21 are listed in Table 31.

Table 31 – Summary of FY21 Facilities Program Projects

Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
G21101 Main Office New Windows	Construction	\$ 55,900	\$ -	\$ 55,900	\$ -
D20016 DRG Admin and RAS Buildings HVAC	Construction	\$ 649,020	\$ 1,127	\$ 619,584	\$ 28,309
G09535 CMF Parking Surface	Construction	\$ 1,462,609	\$ 468,551	\$ 533,145	\$ 460,913

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Budget ID & Project Name	Phase	FY	'21 Budget	FY2	1 Actuals	F	FY21 Remaining Forecast	'21 Project Excess or Shortfall
D18128 DRGWQTC Paving	Construction	\$	371,589	\$	515	\$	269,678	\$ 101,396
G21103 Main Office New Offices and Conference Rooms	Design	\$	25,000	\$	-	\$	25,000	\$ -
G21100 Parking Lot Milling and Resurfacing	Design	\$	157,800	\$	-	\$	157,800	\$ -
G18417 MFWQTC Admin Building Roof Replacement	Design	\$	250,000	\$	-	\$	302,074	\$ (52,074)
G21139 CMF Roof A Replacement	Design	\$	293,820	\$	-	\$	196,086	\$ 97,734
G21140 CMF Roof C Replacement	Design	\$	300,460	\$	-	\$	200,517	\$ 99,943
D15024 MFWQTC Chiller Replacement	Design	\$	317,222	\$	-	\$	382,708	\$ (65,486)
G18477 FY21 MSD Owned Building Roof Replacements	Design	\$	405,720	\$	-	\$	405,720	\$ -
G20018 SWPS Site Security	Design	\$	681,131	\$	-	\$	529,471	\$ 151,660
D18132 DRGWQTC WWPS WW Screen Bldg HVAC	Design	\$	1,030,000	\$	-	\$	1,030,000	\$ -
D21129 DRGWQTC Elevator Repairs	Design	\$	1,150,000	\$	-	\$	418,288	\$ 731,712
G20028 MFWQTC Elevator Repair	Design	\$	1,732,877	\$	44,382	\$	1,030,543	\$ 657,952

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Budget ID & Project Name	Phase	FY2	1 Budget	FY21	Actuals	FY21 emaining Forecast	Exce	Project ess or rtfall
G21102 CMF Floor Replacement	Initiation & Procurement	\$	55,000	\$	-	\$ 55,000	\$	-
G18458 FY21 Miscellaneous Facility Repairs	Initiation & Procurement	\$	90,000	\$	-	\$ 90,000	\$	-
G20067 FY21 Facility Security Upgrades	Initiation & Procurement	\$	225,000	\$	-	\$ 225,000	\$	-

Information Technology (IT) and LOJIC

MSD maintains an extensive inventory of IT hardware and software that is essential to overall agency operations; this includes the MSD intranet system that is the backbone of MSD electronic communication and digital data generation, communication and storage, and regulatory compliance reporting. This hardware and software system is also responsible for supplying the internet connection to MSD's supervisory control and data acquisition (SCADA) system that controls more than 300 pump stations and control gates and serves as the platform for implementing the RTC system. This RTC system is used to optimize use of MSD's conveyance facilities to cost-effectively maximize the use of existing facilities to reduce sewer overflows. Without adequate and updated IT systems, public health and safety could be at risk. This inventory is subject to periodic upgrade and replacement like all MSD's other assets.

The Louisville and Jefferson County Information Consortium (LOJIC) is a multi-agency partnership that began in 1997 with the mission of building and maintaining a comprehensive geographic information system (GIS) to serve all of Louisville and Jefferson County, Kentucky. MSD hosts the LOJIC systems, which similarly require periodic upgrades and replacements to hardware and software. The IT and LOJIC projects active in FY21 are listed in Table 32.

Table 32 - Summary of FY21 IT & LOJIC Program Projects

Budget ID & Project Name	Phase	FY21 Budget		FY21 Actuals		FY21 Remaining Forecast		FY21 Project Excess or Shortfall	
N19077 Hansen Migration to Infor Cloud	Closeout	\$	-	\$	47,735	\$	47,527	\$	(95,262)
N20318 Project WIN Website- Rewrite	Closeout	\$	40,000	\$	19,930	\$	20,070	\$	-
N20328 AssetWise (eB) Upgrade_Move to Cloud	Initiation & Procurement	\$	147,200	\$	-	\$	184,000	\$	(36,800)
N21122 Rhythm for Civics for IPS	Initiation & Procurement	\$	216,720	\$	96,895	\$	134,425	\$	(14,600)

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Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall	
N21088 Operating Budget Software	Initiation & Procurement	\$ 250,000	\$ 106,740	\$ 143,260	\$ -	
N20075 FY21 IT Infrastructure Initiatives	Initiation & Procurement	\$ 307,500	\$ 11,532	\$ 295,968	\$ -	
N20078 Mobile Communications Replacement	Initiation & Procurement	\$ 500,000	\$ 5,084	\$ 494,916	\$ -	
N21067 Production Infrastructure Refresh	Initiation & Procurement	\$ 3,800,000	\$ 894,223	\$ 2,905,777	\$ -	
J20023 FY21 LOJIC Survey Control Maintenance	Initiation & Procurement	\$ 50,000	\$ -	\$ 50,000	\$ -	
J17036 FY21 LOJIC HW Upgrades and Replacements	Initiation & Procurement	\$ 100,000	\$ -	\$ 100,000	\$ -	

Asset Management

Table 33 – Summary of FY21 Asset Management Program Projects

Budget ID & Project Name	Phase	FY21 Budget	FY21 Actuals	FY21 Remaining Forecast	FY21 Project Excess or Shortfall
D21092 FY21 WQTC Engineering Support	Initiation & Procurement	\$ 108,000	\$ -	\$ 108,000	\$ -
G21018 FY21 Management Reserve	Initiation & Procurement	\$ 4,272,021	\$ -	\$ 2,778,280	\$ 1,493,741

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SECTION 3: FINANCIAL REPORT

The Financial Report is prepared monthly to provide MSD's Executive Director and the MSD Board with a high-level understanding of MSD's financial position. This report contains information on the following:

- Financial Results for September 2020
- Staffing vacancies and overtime
- One Water reimbursements
- Cash
- Investments
- Historical operating and capital spending analysis

MSD is implementing an Integrated Strategic Business Plan, Blueprint 2025. Critical Success Factor (CSF) 2 is to "Earn Community's Trust Daily as a Leading Provider of Wastewater, Stormwater and Flood Protection Services". One of the business functions under this CSF is responsiveness to supply chain partners, measured by the number of invoices with Net 30 terms paid within 30 days of receipt of invoice. Level 5 success for this CSF for FY21 is 97% on time. Year-to-date through September 30, 2020 MSD reported 96.06% on time.

Critical Success Factor 4 of Blueprint 2025 is to "Ensure Financial Stewardship and Sustainability of Community Resources". Operating budget utilization is a key business function under this CSF, measured as the annualized operating spend as a percentage of the approved operating budget. Level 5 success for this CSF for FY21 is 98.1 - 100% utilization of the operating budget. The current forecast projects 97.8% utilization for FY21.

MSD has two fixed-to-floating interest rate swap agreements outstanding. Their negative value decreased to \$108.8 million in September.

MSD did not issue any commercial paper (CP) during the month of September. At September 30th, there were \$75 million in CP notes outstanding with maturities up to 128 days and at an average interest rate of 0.21%. MSD paid down \$60 million in maturing CP during the month of September with proceeds of the 2020A series revenue bonds. There was \$100 thousand in outstanding note draws on September 30th as required under the Note Purchase Agreement with JP Morgan.

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FINANCIAL STATEMENTS

Comparative Statement of Net Position

Table 34 – Comparative Statement of Net Position

	Louisville & Jefferson County Me Comparative Statement of Net Positio September 30,	on - Preliminary & Unaudited		
	YTD	YTD		
	September 2020	June 2020	Variance	Percent
Current Assets				
Unrestricted Cash & Cash Equivalents	104,247,935	100,073,014	4,174,921	4.17%
Sewer & Drainage Receivable	27,919,194	21,797,110	6,122,084	28.09%
Assessment Warrants Receivable	185,885	206,949	(21,064)	-10.18%
Miscellaneous Receivables	5,139,683	5,222,109	(82,426)	-1.58%
Inventories	5,048,303	4,977,115	71,188	1.43%
Prepaid Expenses	4,177,628	3,961,400	216,229	5.46%
Restricted Funds	141,146,621	97,330,639	43,815,982	45.02%
Accrued Interest Receivable	186,454	186,454	<u> </u>	0.00%
Total Current Assets	288,051,704	233,754,791	54,296,913	23.23%
Non-Current Assets				
Utility Plant in Service	4,139,928,630	4,086,530,306	53,398,324	1.31%
Accumulated Depreciation	(1,395,723,325)	(1,358,640,253)	(37,083,071)	2.73%
Construction in Progress	574,144,228	574,867,330	(723,101)	-0.13%
Net Fixed Assets	3,318,349,533	3,302,757,382	15,592,151	0.47%
Non-Current Receivables	29,616,785	29,798,499	(181,714)	-0.61%
Total Assets	3,636,018,023	3,566,310,672	69,707,351	1.95%
Total Deferred Outflow of Resources	77,285,196	79,766,828	(2,481,632)	-3.11%
Total Assets & Deferred Outflow of Resources	3,713,303,219	3,646,077,499	67,225,719	1.84%
Current Liabilities				
Miscellaneous Accounts Payable	14,075,741	14,689,068	(613,327)	-4.18%
Accounts Payable - Construction	5,754,309	26,644,222	(20,889,913)	-78.40%
Contract Retainage	13,640,234	13,215,740	424,494	3.21%
Accrued Interest Payable	42,999,931	17,314,394	25,685,537	148.35%
Current Maturities of Bonds Payable	43,710,000	43,460,000	250,000	0.58%
Current Maturities of Subordinate Debt	1,762,658	2,166,636	(403,978)	-18.65%
Deposits Payable	2,795,499	2,954,366	(158,867)	-5.38%
Accrued Salaries & Wages	2,322,858	3,049,583	(726,725)	-23.83%
Accrued Workers' Comp Insurance	2,536,310	2,280,418	255,892	11.22%
Employee Comp Absences Payable	4,027,480	4,157,014	(129,535)	-3.12%
Total Current Liabilities	133,625,019	129,931,440	3,693,579	2.84%
Non-Current Liabilities				
Long-Term Senior Debt Payable	2,093,205,000	1,868,455,000	224,750,000	12.03%
Long-Term Subordinate Debt Payable	331,987,859	509,724,459	(177,736,600)	-34.87%
Other Long-Term Liability	325,976,415	324,716,880	1,259,536	0.39%
Total Non-Current Liabilities	2,751,169,275	2,702,896,339	48,272,936	1.79%
Total Liabilities	2,884,794,294	2,832,827,779	51,966,515	1.83%
Total Deferred Inflow of Resources	16,401,548	16,519,510	(117,962)	-0.71%
Total Liabilities & Deferred Inflow of Resources	2,901,195,841	2,849,347,289	51,848,553	1.82%
Net Position	812,107,377	796,730,211	15,377,167	1.93%
Total Liabilities, Deferred Inflow of Resources and				
Net Position	#3,713,303,219	3,646,077,499	67,225,719	1.84%

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Statement of Revenue, Expense and Change in Net Position

Table 35 – Statement of Revenues, Expenses and Changes in Net Position

			erson County Metr					
	Statement o	of Revenues, Expens			eliminary & Una	audited		
			September 30, 2	020				
		YTD	YTD	YTD	% YTD	YTD	YTD	% YTD
		Actual	Budget	Variance	Variance	Prior Year	Variance	Variance
Wastewater Charges			_					
Residential	\$	38,130,799 \$	33,797,520 \$	4,333,279	12.8% \$	32,741,871 \$	5,388,928	16.59
Commercial		20,299,854	20,523,323	(223,469)	-1.1%	20,555,889	(256,034)	-1.29
Industrial		5,875,250	6,301,448	(426,199)	-6.8%	5,619,902	255,348	4.59
Other Wastewater		937,966	3,185,271	(2,247,305)	-70.6%	2,446,792	(1,508,827)	-61.79
Free Wastewater Charges		(939,484)	(671,768)	(267,716)	39.9%	(1,802,900)	863,415	-47.99
Total Wastewater Charges		64,304,384	63,135,795	1,168,590	1.9%	59,561,555	4,742,830	8.09
Stormwater Charges								
Residential		7,183,413	6,842,936	340,476	5.0%	6,476,951	706,462	10.99
Commercial		11,462,770	10,697,113	765,657	7.2%	10,166,222	1,296,548	12.89
Industrial		1,311,833	1,213,017	98,816	8.1%	1,168,999	142,834	12.29
Other Stormwater		571,127	727,284	(156,157)	-21.5%	746,157	(175,030)	-23.59
Free Stormwater Charges		(574,213)	(561,606)	(12,607)	2.2%	(530,284)	(43,929)	8.39
Total Stormwater Charges		19,954,930	18,918,744	1,036,185	5.5%	18,028,045	1,926,885	10.79
Total Service Charges		84,259,314	82,054,539	2,204,775	2.7%	77,589,599	6,669,715	8.6%
Other Operating Income		995,497	1,068,750	(73,253)	-6.9%	1,401,907	(406,410)	-29.0%
	-							
Total Operating Revenue		85,254,811	83,123,289	2,131,522	2.6%	78,991,506	6,263,304	7.9%
Operating Expenses								
Salaries & Wages		12,544,066	13,135,321	(591,255)	-4.5%	12,097,741	446,325	3.79
Labor Related Overhead		6,505,895	5,929,475	576,420	9.7%	6,086,732	419,163	6.99
Utilities		3,652,898	4,163,219	(510,321)	-12.3%	4,395,431	(742,534)	-16.99
Materials & Supplies		1,603,764	1,878,639	(274,875)	-14.6%	1,838,293	(234,529)	-12.89
Contractual Services		8,441,028	10,130,939	(1,689,911)	-16.7%	7,078,230	1,362,797	19.39
Chemicals		1,077,082	1,300,321	(223,239)	-17.2%	1,087,353	(10,271)	-0.9%
Fuel		232,395	344,206	(111,811)	-32.5%	215,622	16,772	7.89
Insurance Premiums & Claims		640,879	702,241	(61,362)	-8.7%	507,026	133,853	26.49
Bad Debt		942,825	875,006	67,819	7.8%	906,369	36,456	4.09
Other Operating Expense		206,233	742,698	(536,465)	-72.2%	280,734	(74,501)	-26.59
Mapping/Insurance Recovery		_	-	-	0.0%	(190,011)	190,011	0.09
Capitalized Overhead		(8,434,368)	(9,408,496)	974,128	-10.4%	(8,510,879)	76,511	-0.99
Capital Expenses (over)/under applied		-	-	-	0.0%	-	0	0.09
Net Service and Administrative Costs		27,412,697	29,793,569	(2,380,872)	-8.0%	25,792,643	1,620,054	6.39
Depreciation		23,794,863	23,846,373	(51,510)	-0.2%	24,114,143	(319,280)	-1.39
Amortization		376,072	348,420	27,652	7.9%	390,349	(14,278)	-3.79
Total Depreciation/Amortization		24,170,935	24,194,793	(23,858)	-0.1%	24,504,492	(333,558)	-1.49
Total Operating Expenses		51,583,632	53,988,362	(2,404,731)	-4.5%	50,297,135	1,286,497	2.69
Net Operating Income		33,671,179	29,134,926	4,536,252	15.6%	28,694,371	4,976,808	17.3%
Non-Operating Revenue (Expenses)								
Gain/Loss Disposal of Assets		11,890	-	11,890	0.0%	-	11,890	0.09
Investment Income		2,752,351	4,186,871	(1,434,520)	-34.3%	2,620,078	132,273	5.09
Interest Expense		(23,104,203)	(22,827,793)	(276,410)	1.2%	(21,301,270)	(1,802,934)	8.59
Total Non-Operating Revenue (Expenses)	(20,339,962)	(18,640,922)	(1,699,040)	9.1%	(18,681,191)	(1,658,771)	8.9%
Contributions		216,898.80	-	216,899	0.0%	-	216,899	0.09
Change in Net Position Before Swaps		13,548,116	10,494,004	3,054,111	29.1%	10,013,180	3,534,936	35.39
Change in Fair Value of Swaps		1,829,051	-	1,829,051	0.0%	(6,423,094)	8,252,145	-128.5%
Change in Net Position After Swaps	\$	15,377,167 \$	10,494,004 \$	4,883,162	46.5% \$	3,590,086 \$	11,787,081	328.39

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Financial Statement Overview - Reporting Month

MSD completed its acquisition of the Oldham County Environmental Authority (OCEA) on June 30, 2020. This acquisition added approximately 6,200 customers to the service area. Revenue and expenses for the former OCEA service area are combined with all other revenues and expenses of the MSD service area in the results reported below. This will drive variances to prior year results.

Revenues

Total Operating Revenue is \$85.2 million year-to-date compared to a budget of \$83.1 million, which is an increase of \$2.1 million, or 2.6%. When compared to this same period one year ago, Total Operating Revenue has increased by \$6.3 million, or 7.9%.

Wastewater Service Charges total \$64.3 million year-to-date compared to a budget of \$63.1 million, which is an increase of \$1.2 million, or 1.9%. When compared to this same period one year ago, Wastewater Service Charges have increased by \$4.7 million, or 8.0%. The year-over-year increase is due to a 5.0% rate increase enacted on August 1, 2020.

Drainage Service Charges total \$19.9 million year-to-date compared to a budget of \$18.9 million, which is an increase of \$1.0 million, or 5.5%. When compared to this same period one year ago, Drainage Service Charges have increased by \$1.9 million, or 10.7%. A 5.0% rate increase enacted on August 1, 20 is driving the year-over-year increase.

Other Income totals \$0.9 million year-to-date compared to a budget of \$1.0 million, which is a decrease of \$0.1 million, or 6.9%. Other Income has decreased by \$0.4 million, or 29.0%, compared to the same period one year ago.

Operating Expenses

Service & Administrative costs total \$35.8 million year-to date compared to a budget of \$39.2 million, which is a decrease of \$3.4 million, or 8.6%. Salaries, Utilities, Materials & Supplies, Contractual Services, Chemicals, Fuel and Other Operating expenses are trending below budget (\$4.0 million combined). Service and Administrative costs have increased \$1.5 million, or 4.5%, compared to the same period one year ago.

Depreciation and Amortization expenses total \$24.2 million year-to date compared to a budget of \$24.2 million, which is equal to budget. Depreciation and Amortization expenses have increased \$0.3 million, or 1.4%, compared to the same period one year ago.

Total Operating Expenses are \$51.6 million year-to date compared to a budget of \$54.0 million, which is an increase of \$2.4 million, or 4.5%, due to the increased Depreciation expense described above. When compared to this same period one year ago, Total Operating Expenses have increased by \$1.2 million, or 2.6%.

Net Income

Net Operating Income (NOI) is \$33.6 million year-to date compared to a budget of \$29.1 million, which is an increase of \$4.5 million, or 15.6%. NOI has increased \$5.0 million, or 17.3%, compared to the same period one year ago.

Investment Income is \$2.7 million year-to date compared to a budget of \$4.1 million, which is a decrease of \$1.4 million, or 34.3%. Investment income has increased \$0.1 million, or 5.0%, compared to the same period one year ago.

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Interest expense is \$23.1 million year-to date compared to a budget of \$22.8 million, which is a increase of \$0.3 million, or 1.2%. Interest expense has increased \$1.8 million, or 8.5%, compared to the same period one year ago.

Change in Net Position before Swaps totals \$13.5 million year-to date compared to a budget of \$10.5 million, which is an increase \$3.0 million, or 29.1%. Change in Net Position before Swaps has increased \$3.5 million, or 35.3%, compared to the same period one year ago. Change in Net Position including the mark-to-market change on swaps totals \$15.3 million year-to-date compared to (\$3.6) million one year ago, a difference of \$11.8 million. The negative value of MSD's swap portfolio has decreased \$1.8 million year-to-date.

SUPPLEMENTAL FINANCIAL REPORTING

The supplemental financial reporting section provides additional insights into various components of the FY21 financial statements.

Number of Customers & Revenue by Customer Class

	Number of Customers		Revenue Per C	Customer Class	Budget Per Cı	ustomer Class
	Augu	ıst	Aug	gust	Aug	gust
	FY 2021	FY 2020	FY 2021	FY 2020	FY 2021	FY 2020
Wastewater						
Residential	228,789	220,452	12,478,273	10,347,489	10,796,182	10,189,859
Commercial	21,511	21,356	7,700,664	7,607,160	7,640,842	7,181,002
Industrial	393	389	1,939,984	1,913,026	1,774,273	751,218
Sub-Total:	250,693	242,197	22,118,921	19,867,675	20,211,296	18,122,079
Drainage						
Residential	207,437	215,426	2,268,869	1,919,686	2,140,971	2,079,220
Commercial	14,079	14,847	3,992,783	3,330,302	3,606,227	3,379,200
Industrial	270	304	455,439	386,735	422,504	422,541
Sub-Total:	221,786	230,577	6,717,091	5,636,723	6,169,702	5,880,961
Grand Total:			\$ 28,836,012	\$ 25,504,398	\$ 26,380,998	\$ 24,003,040

^{*}FY21 wastewater totals includes acquired OCEA customers

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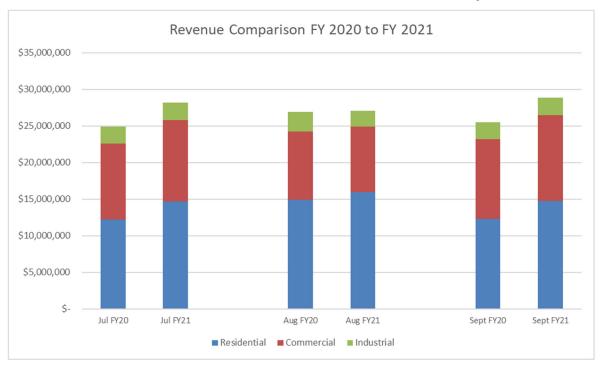
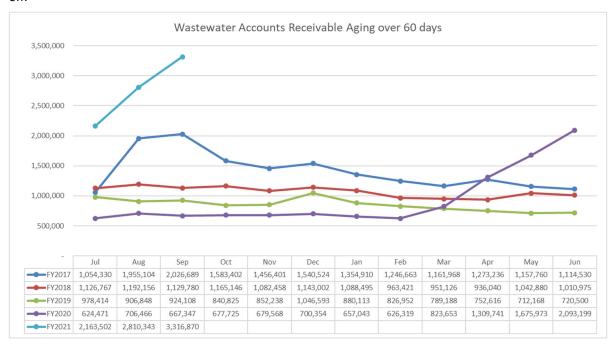


Figure 3 – Revenue Comparison FY 2020 to FY2021 Charts

Accounts Receivable Aging

The following charts reflect MSD customer account balances unpaid 60 days or more after the invoice due date for Wastewater and Stormwater accounts. These accounts represent past due balances and are at a higher risk of write off.



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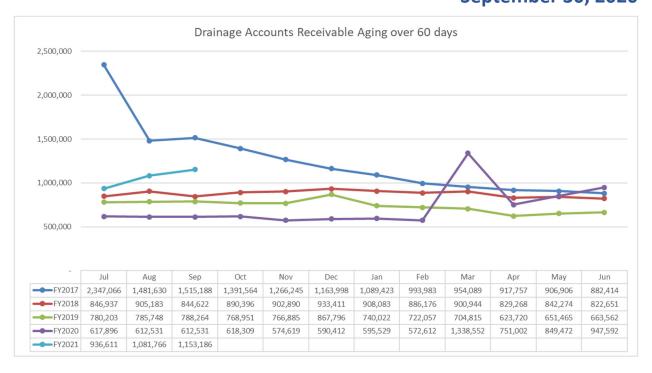


Figure 4 – Wastewater and Stormwater Accounts Receivable Aging Charts

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Wastewater & Stormwater Write-Offs

MSD uses the allowance method to account for its accounts receivable. Bad Debt expense is recorded on a monthly basis to maintain the allowance for doubtful accounts based on historical collection experience and a review of current account balances. Accounts that remain outstanding after management has exerted reasonable collection efforts are written off through a charge to allowance for doubtful accounts and a credit to accounts receivable. Accounts written off are turned over to a third party for subsequent collection efforts.

Wastewater write offs, as a percentage of revenue were 0.12% for the month of September and are 0.04% year to date. This is below the FY20 percentage of 0.73%. Drainage write offs, as a percentage of revenue were 0.72% for the month of September and are 0.90% year to date. This is below the FY20 percentage of 1.50%. As of March 16, 2020, Louisville Water Company suspended water service disconnections for non-payment due to the COVID-19 pandemic. As a result, delinquent accounts are not moving through the normal write-off process which accounts for the growth in aged receivables and reduction in write offs year-over-year.

The following charts reflect monthly write offs of uncollectible Wastewater and Drainage accounts.



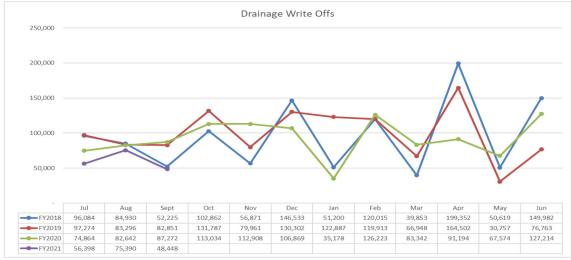
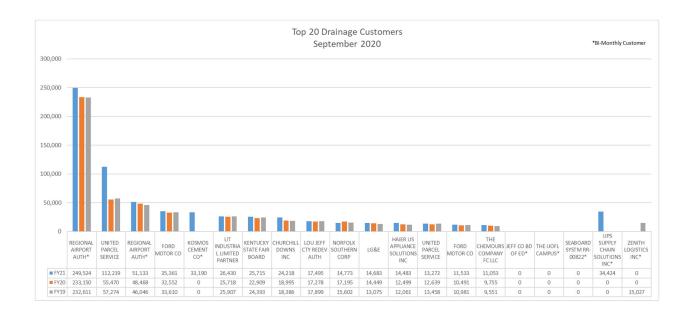


Figure 5 – Wastewater and Stormwater Bad Debt Charts

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Top 20 Customers





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Comparative Operating Budget Performance

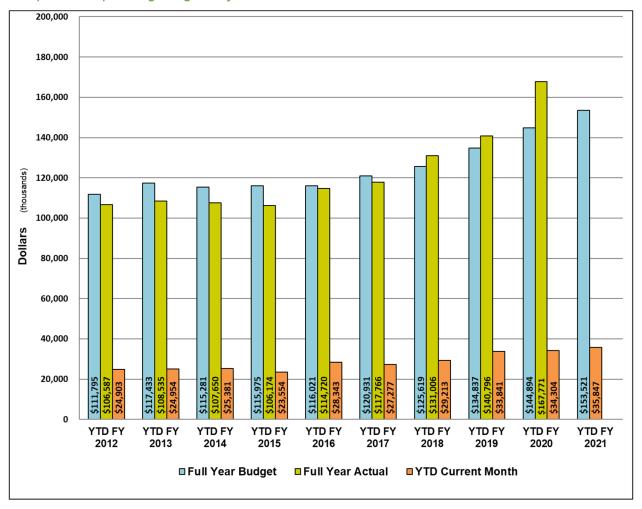


Figure 6 – Comparative Operating Budget Performance Chart

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Comparative Total Operating Budget Expenditures

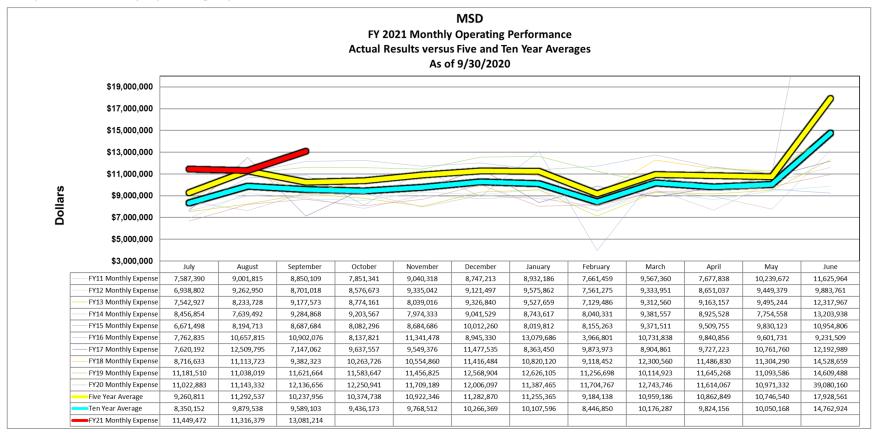
	_						YTD Ac	tuals					
<u>Fiscal Year</u>	Annual Budget	<u>Jul</u>	Aug	<u>Sep</u>	<u>Oct</u>	Nov	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>
FY16	116,021,156	7,762,835	16,440,660	28,342,724	37,926,793	46,102,024	58,298,571	68,378,257	75,313,842	86,045,680	95,886,535	105,489,677	114,719,776
FY17	120,930,511	7,620,192	20,131,479	27,277,326	36,914,606	46,463,982	57,941,517	66,304,967	76,178,939	85,083,800	94,811,091	105,572,784	117,765,773
FY18	125,619,049	8,716,633	19,830,607	29,212,214	39,475,941	50,030,801	61,447,285	72,267,405	81,385,856	93,686,417	105,173,247	116,477,537	131,006,196
FY19	134,837,024	11,181,510	22,219,166	33,840,830	45,424,477	56,881,302	69,450,206	82,076,580	93,333,009	103,447,932	115,093,201	126,186,788	140,796,276
FY20	144,894,334	11,022,883	22,166,195	34,303,521	46,554,463	58,263,652	70,269,749	81,657,215	93,361,982	106,105,728	117,719,794	128,691,127	167,771,286
FY21	153,521,000	11,449,472	22,765,851	35,847,065									
						Perce	nt Expended Y	TD of Total Ac	tual				
FY16	-	6.77%	14.33%	24.71%	33.06%	40.19%	50.82%	59.60%	65.65%	75.01%	83.58%	91.95%	100.00%
FY17		6.47%	17.09%	23.16%	31.35%	39.45%	49.20%	56.30%	64.69%	72.25%	80.51%	89.65%	100.00%
FY18		6.65%	15.14%	22.30%	30.13%	38.19%	46.90%	55.16%	62.12%	71.51%	80.28%	88.91%	100.00%
FY19		7.94%	15.78%	24.04%	32.26%	40.40%	49.33%	58.29%	66.29%	73.47%	81.74%	89.62%	100.00%
FY20		6.57%	13.21%	20.45%	27.75%	34.73%	41.88%	48.67%	55.65%	63.24%	70.17%	76.71%	100.00%
	5 Year Average	6.88%	15.11%	22.93%	30.91%	38.59%	47.63%	55.61%	62.88%	71.10%	79.26%	87.37%	100.00%
	_					Per	formance Matı	rix Results - FY2	20				
FY20 YTD Budget		12,622,114	25,860,317	37,867,298	50,002,244	62,573,202	74,943,028	86,701,893	97,941,113	109,345,922	120,875,627	133,474,142	144,894,335
FY20 YTD Total		11,022,883	22,166,195	34,303,521	46,554,463	58,263,652	70,269,749	81,657,215	93,361,982	106,105,728	117,719,794	128,691,127	167,771,286
Variance of Actual to Budget		(1,599,231)	(3,694,122)	(3,563,777)	(3,447,781)	(4,309,550)	(4,673,279)	(5,044,678)	(4,579,131)	(3,240,194)	(3,155,833)	(4,783,015)	22,876,951
FY20 Performance Level Matrix Res	sults	87.33%	85.72%	90.59%	93.10%	93.11%	93.76%	94.18%	95.32%	97.04%	97.39%	96.42%	115.79%
	_	Performance Matrix Results - FY21											
FY21 YTD Budget		13,232,329	26,859,184	39,202,065	51,745,729	64,950,043	78,132,867	91,248,733	103,480,814	115,839,545	127,974,560	141,343,213	153,521,000
FY21 YTD Total		11,449,472	22,765,851	35,847,065									
Variance of Actual to Budget		(1,782,857)	(4,093,333)	(3,355,000)									
FY20 Performance Level Matrix Res	sults	86.53%	84.76%	91.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

	<u>Budget</u>	<u>Actual</u>	<u>Percentage</u>	5 Yr Average
FY16	116,021,156	114,719,776	98.88%	104.15%
FY17	120,930,511	117,765,773	97.38%	
FY18	125,619,049	131,006,196	104.29%	
FY19	134,837,024	140,796,276	104.42%	
FY20	144,894,334	167,771,286	115.79%	

ASSUMPTIONS: Matrix results assume a typical weather year and no extraordinary events exceeding contingency reserve.

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Comparative Monthly Operating Expenditures



February Average & Actual results lower due to short period's impact on Salary & Labor Related Overhead expenses.

FY16 February decrease due to reclasses of \$6.5M for Bad Debt and \$2M for Capital expenses from Operating, and also recording insurance reimbursements of \$1.75M for flooding at MFWTP.

Figure 7 – Comparative Monthly Operating Expenditures

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Operating Expense Summary

Table 36 – Operating Expense Summary

				Variance Actual	Variance Actua
Operating Expenses	FY21 YTD Budget	FY21 YTD Actual	FY20 YTD Actual	<u>to Budget</u>	to Prior Yea
Salaries & Wages	13,135,321	12,544,066	12,097,741	(591,255)	446,325
Labor Related Overhead	5,929,475	6,505,895	6,086,732	576,420	419,163
Utilities	4,163,219	3,652,898	4,395,431	(510,321)	(742,534
Materials & Supplies	1,810,389	1,603,764	1,838,293	(206,625)	(234,529
Contractual Services	10,199,189	8,441,028	7,078,230	(1,758,161)	1,362,798
Chemicals	1,300,321	1,077,082	1,087,353	(223,239)	(10,271
Fuel	344,206	232,395	215,622	(111,811)	16,772
Insurance Premiums & Claims	702,241	640,879	507,026	(61,362)	133,853
Bad Debt	875,006	942,825	906,369	67,819	36,456
Other Operating Expense	742,698	206,233	280,734	(536,465)	(74,501
Mapping Recovery - LOJIC	0	0	0	0	0
System Roll-up Variance	0	0	(190,010)	0	190,010
TOTAL	39,202,065	35,847,065	34,303,521	(3,355,000)	1,543,544

				Variance Actual	Variance Actual
DIVISIONS	FY21 YTD Budget	FY21 YTD Actual	FY20 YTD Actual	to Budget	to Prior Year
Corporate Costs	5,565,895	3,779,592	3,408,526	(1,786,303)	371,066
Engineering	2,828,719	2,926,007	2,761,767	97,288	164,240
Administration	2,548,450	2,236,225	1,891,280	(312,225)	344,945
Finance	673,790	513,689	695,727	(160,101)	(182,038)
Human Resources	680,854	635,357	657,745	(45,497)	(22,389)
Information Technology	2,620,504	2,380,832	2,930,806	(239,672)	(549,974)
Legal Services	920,297	492,170	505,540	(428,127)	(13,370)
OPERATIONS GROUP	22,654,001	22,249,119	20,959,789	(404,882)	1,289,329
Supply Chain	709,555	634,075	682,352	(75,480)	(48,277)
Mapping Recovery - LOJIC	0	0	0	0	0
System Roll-up Variance	0	0	(190,010)	0	190,010
TOTAL	39,202,065	35,847,065	34,303,521	(3,355,000)	1,543,543

OPERATIONS GROUP	FY21 YTD Budget	FY21 YTD Actual	FY20 YTD Actual	Variance Actual to Budget	Variance Actual to Prior Year
COLLECTIONS - (Metro)	6,400,820	8,082,186	7,041,464	1,681,366	1,040,722
DRAINAGE & FP - (I&FP)	4,028,677	2,788,910	3,652,245	(1,239,767)	(863,334)
PERFORMANCE	163,224	184,147	143,571	20,923	40,576
SUPPORT - (Phy Assets)	2,008,115	1,735,043	1,776,223	(273,072)	(41,180)
TREATMENT - (MFWTP)	9,021,138	8,491,249	8,346,287	(529,889)	144,961
OCEA	1,032,027	967,584	0	(64,443)	967,584
Operations Group Total	22,654,001	22,249,119	20,959,789	(404,882)	1,289,328

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Operating Expense by Division

Table 37 – Operating Expense by Division

	CORPORAT	E COSTS	ENGINEE	RING	ADMINIST	<u>RATION</u>	FINAN	ICE_	HUMAN RES	SOURCES
Operating Expenses	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Ac
Salaries & Wages	336,911	60,876	1,855,708	1,905,574	1,100,957	1,128,953	325,750	293,866	376,711	381,507
Labor Related Overhead	547,620	585,060	795,900	878,597	432,131	497,439	136,548	140,831	156,915	195,827
Utilities	0	0	1,115	176	92,559	73,316	0	0	0	0
Materials & Supplies	20,000	0	33,436	21,470	77,988	(1,393)	27,312	745	5,575	108
Contractual Services	3,063,017	1,537,130	101,390	108,721	553,843	477,171	164,047	75,441	103,215	56,841
Chemicals	0	0	0	0	0	0	0	0	0	0
Fuel	0	0	0	0	0	0	0	0	0	0
Insurance Premiums & Claims	699,241	638,700	0	0	0	0	0	0	0	0
Bad Debt	875,006	942,825	0	0	0	0	0	0	0	0
Other Operating Expense	24,100	15,000	41,170	11,469	290,972	60,739	20,133	2,805	38,438	1,074
Settlement Accounts	0	0	0	0	0	0	0	0	0	0
Mapping Recovery - LOJIC	0	0	0	0	0	0	0	0	0	0
System Roll-up Variance	0	0	0	0	0	0	0	0	0	0
	5,565,895	3,779,592	2,828,719	2,926,007	2,548,450	2,236,225	673,790	513,689	680,854	635,357
Total	5,303,693	3,179,392	2,020,713	2,320,001	2,3 10, 130	2,230,223		313,005	000,000	000,001
	INFORMATION	TECHNOLOGY	<u>LEG</u> A	VL	OPERATION	S GROUP	SUPPLY (CHAIN	TOTA	<u>AL</u>
Operating Expenses						S GROUP FY21 YTD Act				<u>AL</u>
	INFORMATION	TECHNOLOGY	<u>LEG</u> A	VL	OPERATION	S GROUP	SUPPLY (CHAIN	TOTA	AL FY21 YTD Ac
Operating Expenses	INFORMATION T	FY21 YTD Act	LEGA FY21 YTD Bud	NL FY21 YTD Act	OPERATION FY21 YTD Bud	S GROUP FY21 YTD Act	SUPPLY (FY21 YTD Act	TOTA	
Operating Expenses Salaries & Wages	INFORMATION FY21 YTD Bud 689,551	FY21 YTD Act 691,380	LEG/ FY21 YTD Bud 233,518	FY21 YTD Act 240,910	OPERATION FY21 YTD Bud 7,807,552	S GROUP FY21 YTD Act 7,401,436	SUPPLY (FY21 YTD Bud 408,663	FY21 YTD Act 439,563	TOTA FY21 YTD Bud 13,135,321	FY21 YTD Ac 12,544,066 6,505,895
Operating Expenses Salaries & Wages Labor Related Overhead	INFORMATION : FY21 YTD Bud 689,551 286,991	FY21 YTD Act 691,380 307,801	LEG/ FY21 YTD Bud 233,518 84,055	FY21 YTD Act 240,910 98,355	OPERATION FY21 YTD Bud 7,807,552 3,320,704	S GROUP <u>FY21 YTD Act</u> 7,401,436 3,615,025	SUPPLY 0 FY21 YTD Bud 408,663 168,611	FY21 YTD Act 439,563 186,959	TOTA FY21 YTD Bud 13,135,321 5,929,475	FY21 YTD Ac 12,544,066 6,505,895 3,652,898
Operating Expenses Salaries & Wages Labor Related Overhead Utilities	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048	FY21 YTD Act 691,380 307,801 221,065	LEGA FY21 YTD Bud 233,518 84,055 0	FY21 YTD Act 240,910 98,355 0	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497	FY21 YTD Act 7,401,436 3,615,025 3,358,341	SUPPLY 0 <u>FY21 YTD Bud</u> 408,663 168,611 0	FY21 YTD Act 439,563 186,959 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219	AL FY21 YTD Ac 12,544,066
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944	FY21 YTD Act 691,380 307,801 221,065 37,625	LEGA FY21 YTD Bud 233,518 84,055 0 3,759	FY21 YTD Act 240,910 98,355 0 479	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053	SUPPLY 0 <u>FY21 YTD Bud</u> 408,663 168,611 0 17,814	FY21 YTD Act 439,563 186,959 0 677	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365	FY21 YTD Act 240,910 98,355 0 479 142,230	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247	FY21 YTD Act 439,563 186,959 0 677 4,573	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0	240,910 98,355 0 479 142,230	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0	FY21 YTD Act 439,563 186,959 0 677 4,573 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0 0	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0 0	240,910 98,355 0 479 142,230 0	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321 344,206	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0 0	FY21 YTD Act 439,563 186,959 0 677 4,573 0 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321 344,206	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082 232,395
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0 0 0	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0 0	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0 0	240,910 98,355 0 479 142,230 0	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321 344,206 3,000	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0 0 0	FY21 YTD Act 439,563 186,959 0 677 4,573 0 0 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321 344,206 702,241	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082 232,395 640,879
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0 0 0 0	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0 0 0	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0 0	240,910 98,355 0 479 142,230 0 0	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321 344,206 3,000 0	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0 0 0 0	FY21 YTD Act 439,563 186,959 0 677 4,573 0 0 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321 344,206 702,241 875,006	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082 232,395 640,879 942,825
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt Other Operating Expense	INFORMATION : FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0 0 0 0 61,784	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0 0 0 2,755	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0 0 0 20,600	240,910 98,355 0 479 142,230 0 0 0	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321 344,206 3,000 0 195,281	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0 99,894	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0 0 0 0 50,220	FY21 YTD Act 439,563 186,959 0 677 4,573 0 0 0 2,302	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321 344,206 702,241 875,006 742,698	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082 232,395 640,879 942,825 206,233
Operating Expenses Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt Other Operating Expense Settlement Accounts	INFORMATION 1 FY21 YTD Bud 689,551 286,991 315,048 212,944 1,054,186 0 0 0 0 61,784 0	FY21 YTD Act 691,380 307,801 221,065 37,625 1,120,205 0 0 0 2,755	LEGA FY21 YTD Bud 233,518 84,055 0 3,759 578,365 0 0 0 20,600 0	FY21 YTD Act 240,910 98,355 0 479 142,230 0 0 0 10,195	OPERATION FY21 YTD Bud 7,807,552 3,320,704 3,754,497 1,411,561 4,516,879 1,300,321 344,206 3,000 0 195,281 0	FY21 YTD Act 7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0 99,894 0	SUPPLY 0 FY21 YTD Bud 408,663 168,611 0 17,814 64,247 0 0 0 50,220	FY21 YTD Act 439,563 186,959 0 677 4,573 0 0 0 2,302 0	TOTA FY21 YTD Bud 13,135,321 5,929,475 4,163,219 1,810,389 10,199,189 1,300,321 344,206 702,241 875,006 742,698 0	FY21 YTD Ac 12,544,066 6,505,895 3,652,898 1,603,764 8,441,028 1,077,082 232,395 640,879 942,825 206,233

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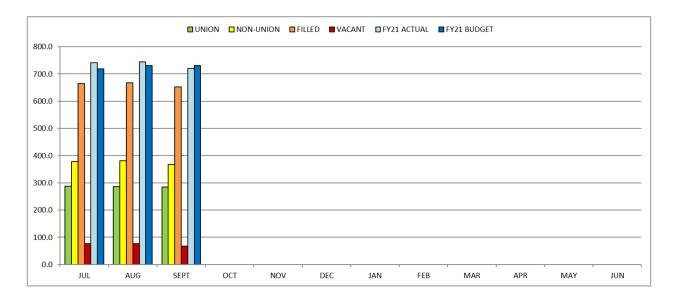
1	COLLECTIONS		DRAINAGE & FP		<u>OLDHAM</u>		PERFORMANO	CE MATRIX
Operating Expenses	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act
Salaries & Wages	2,862,526	4,854,799	1,625,870	575,085	50,699	0	108,836	123,276
Labor Related Overhead	1,218,070	1,355,634	697,720	753,396	21,319	0	46,473	60,148
Utilities	686,248	632,444	777,900	684,924	126,000	63,237	0	0
Materials & Supplies	510,431	483,460	246,395	255,713	15,000	5,250	1,200	103
Contractual Services	754,707	481,429	653,068	518,418	772,509	845,054	4,445	384
Chemicals	307,050	250,671	0	351	40,500	42,918	0	0
Fuel	3,999	7,619	2,500	0	0	5,220	0	0
Insurance Premiums & Claims	0	1,422	3,000	757	0	0	0	0
Bad Debt	0	0	0	0	0	0	0	0
Other Operating Expense	57,789	14,707	22,224	267	6,000	5,905	2,270	236
Settlement Accounts	0	0	0	0	0	0	0	0
Mapping Recovery - LOJIC	0	0	0	0	0	0	0	0
System Roll-up Variance	0	0	0	0	0	0	0	0
Total	6,400,820	8,082,186	4,028,677	2,788,910	1,032,027	967,584	163,224	184,147
Operating Expenses	SUPPO FY21 YTD Bud	ORT FY21 YTD Act	TREATM	<u>1ENT</u> <u>FY21 YTD Act</u>	FY21 YTD Bud	FY21 YTD Act	OPERATION FY21 YTD Bud	S GROUP FY21 YTD Act
	FY21 YTD Bud	FY21 YTD Act	FY21 YTD Bud	FY21 YTD Act			FY21 YTD Bud	FY21 YTD Act
Salaries & Wages	FY21 YTD Bud 770,469	FY21 YTD Act 758,333	FY21 YTD Bud 2,389,152	FY21 YTD Act 1,089,943	0	0	FY21 YTD Bud 7,807,552	FY21 YTD Act 7,401,436
Salaries & Wages Labor Related Overhead	FY21 YTD Bud 770,469 326,690	758,333 353,076	FY21 YTD Bud 2,389,152 1,010,432	1,089,943 1,092,772	0	0	7,807,552 3,320,704	7,401,436 3,615,025
Salaries & Wages Labor Related Overhead Utilities	770,469 326,690	758,333 353,076	2,389,152 1,010,432 2,164,349	1,089,943 1,092,772 1,977,736	0 0 0	0 0 0	7,807,552 3,320,704 3,754,497	7,401,436 3,615,025 3,358,341
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies	770,469 326,690 0 416,506	758,333 353,076 0 341,885	2,389,152 1,010,432 2,164,349 249,029	1,089,943 1,092,772 1,977,736 457,642	0 0 0 0	0 0 0	7,807,552 3,320,704 3,754,497 1,438,561	7,401,436 3,615,025 3,358,341 1,544,053
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services	770,469 326,690 0 416,506 125,060	758,333 353,076 0 341,885 65,497	2,389,152 1,010,432 2,164,349 249,029 2,180,090	1,089,943 1,092,772 1,977,736 457,642 3,007,932	0 0 0 0	0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals	770,469 326,690 0 416,506 125,060	758,333 353,076 0 341,885 65,497	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142	0 0 0 0 0	0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals	770,469 326,690 0 416,506 125,060 0 335,007	758,333 353,076 0 341,885 65,497 0 214,899	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656	0 0 0 0 0	0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims	770,469 326,690 0 416,506 125,060 0 335,007	758,333 353,076 0 341,885 65,497 0 214,899	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700 0	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656 0	0 0 0 0 0 0	0 0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206 3,000	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt	770,469 326,690 0 416,506 125,060 0 335,007 0	758,333 353,076 0 341,885 65,497 0 214,899 0	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700 0	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206 3,000 0	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt Other Operating Expense	770,469 326,690 0 416,506 125,060 0 335,007 0 0 34,383	758,333 353,076 0 341,885 65,497 0 214,899 0 0	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700 0 0 72,615	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206 3,000 0 195,281	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0 99,894
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt Other Operating Expense Settlement Accounts	770,469 326,690 0 416,506 125,060 0 335,007 0 0 34,383	758,333 353,076 0 341,885 65,497 0 214,899 0 0 1,352	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700 0 0 72,615	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656 0 0 77,427	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206 3,000 0 195,281	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0 99,894
Salaries & Wages Labor Related Overhead Utilities Materials & Supplies Contractual Services Chemicals Fuel Insurance Premiums & Claims Bad Debt Other Operating Expense	770,469 326,690 0 416,506 125,060 0 335,007 0 0 34,383	758,333 353,076 0 341,885 65,497 0 214,899 0 0	2,389,152 1,010,432 2,164,349 249,029 2,180,090 952,771 2,700 0 0 72,615	1,089,943 1,092,772 1,977,736 457,642 3,007,932 783,142 4,656 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	7,807,552 3,320,704 3,754,497 1,438,561 4,489,879 1,300,321 344,206 3,000 0 195,281	7,401,436 3,615,025 3,358,341 1,544,053 4,918,715 1,077,082 232,395 2,179 0 99,894

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Staffing by Division

Table 38 – Staffing by Division

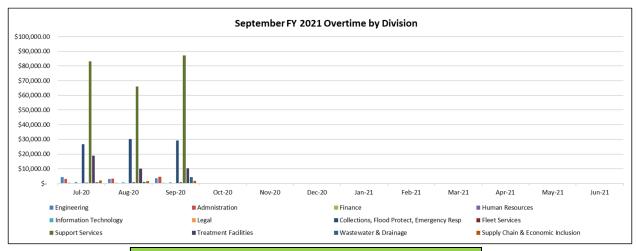
UNION	NON-UNION	FILLED	VACANT	FY21 ACTUAL	FY21 BUDGET
0.0	87.0	87.0	6.0	93.0	95.0
0.0	52.0	52.0	10.0	62.0	63.0
0.0	17.0	17.0	3.0	20.0	20.0
0.0	16.0	16.0	2.0	18.0	18.0
0.0	29.0	29.0	3.0	32.0	32.0
0.0	8.0	8.0	2.0	10.0	10.0
284.0	135.0	419.0	40.0	459.0	470.0
0.0	24.0	24.0	2.0	26.0	23.0
284.0	368.0	652.0	68.0	720.0	731.0
s include One Water	r Employees that are li	sted in Figure 12.)			
286.0	381.0	667.0	77.0	744.0	731.0
287.0	378.0	665.0	76.0	741.0	731.0
	0.0 0.0 0.0 0.0 0.0 284.0 0.0 284.0	0.0 87.0 0.0 52.0 0.0 17.0 0.0 16.0 0.0 29.0 0.0 8.0 284.0 135.0 0.0 24.0 284.0 368.0 s include One Water Employees that are li	0.0 87.0 87.0 0.0 52.0 52.0 0.0 17.0 17.0 0.0 16.0 16.0 0.0 29.0 29.0 0.0 8.0 8.0 284.0 135.0 419.0 0.0 24.0 24.0 284.0 368.0 652.0	0.0 87.0 87.0 6.0 0.0 52.0 52.0 10.0 0.0 17.0 17.0 3.0 0.0 16.0 16.0 2.0 0.0 29.0 29.0 3.0 0.0 8.0 8.0 2.0 284.0 135.0 419.0 40.0 0.0 24.0 24.0 2.0 284.0 368.0 652.0 68.0	0.0 87.0 87.0 6.0 93.0 0.0 52.0 52.0 10.0 62.0 0.0 17.0 17.0 3.0 20.0 0.0 16.0 16.0 2.0 18.0 0.0 29.0 29.0 3.0 32.0 0.0 8.0 8.0 2.0 10.0 284.0 135.0 419.0 40.0 459.0 0.0 24.0 24.0 2.0 26.0 284.0 368.0 652.0 68.0 720.0



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Overtime by Division

This report below represents a look into MSD's overtime expense on a month-to-month basis compared to last year's total. For the month of August, MSD's total overtime expense decreased by 52% as compared to this time last year, with year to date totals remaining under budget.



September FY 2021 YTD Overtime	
Engineering	11,007.04
Administration	10,561.95
Finance	-
Human Resources	-
Information Technology	2,669.43
Legal	292.09
Collections, Flood Protection, & Emergency Resp	86,163.48
Fleet Services	2,064.24
Supply Chain & Economic Inclusion	235,952.47
Support Services	39,323.74
Treatment Facilities	6,165.08
Wastewater & Drainage	5,055.60
YTD Total:	399,255.12
YTD Budget:	605,580.00

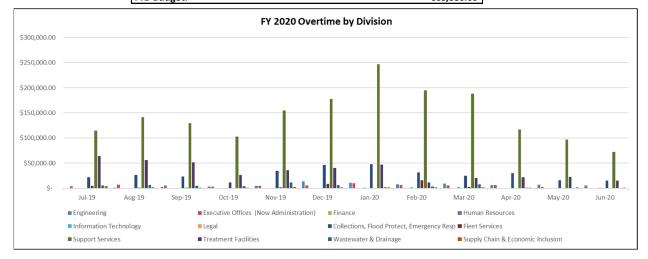


Figure 8 – Overtime by Division Chart

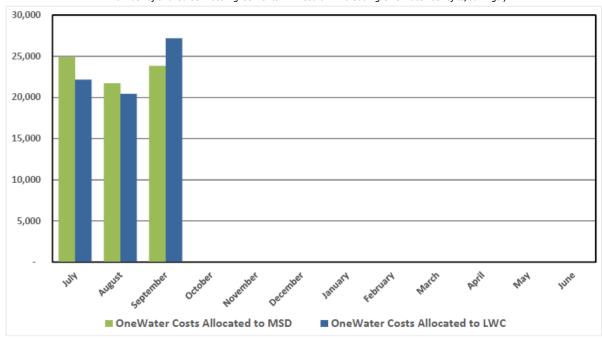
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One Water Open Work Orders

The following tables display existing Work Orders between MSD and Louisville Water Company (LWC) for One Water costs. Work orders dictate how expenses are allocated between MSD and LWC. Work orders currently exist for One Water employee labor costs and for One Water projects.

Table 39 – One Water Open Work Orders

(This schedule only shows MSD related costs from Shared Services and does not reflect overall OneWater benefits/savings. Increasing the number of Shared Services Agreements will result in increasing OneWater benefits/savings.)



OneWater Costs Allocated to MSD by Shared Service Contract															
Shared Service	MSD%	LWC%	July	August	September	October	November	December	January	February	March	April	May	June	TOTAL
Billing Services Feasability Study	50%	50%			-	-	-	-	-	-	-	-	-	-	-
LAGIT	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-
Travel	50%	50%	-	-	-	-	-	-	-	-		-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-

OneWater Costs Allocated to LWC by Shared Service Contract															
Shared Service	MSD%	LWC%	July	August	September	October	November	December	January	February	March	April	May	June	TOTAL
Billing Services Feasability Study	50%	50%	-	-	-	-	-	-	-		-	-	-	-	-
LAGIT	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-
Travel	50%	50%		-	-				-			-	-	-	

OneWater Costs Allocated to MSD by Employee															
LWC OneWater Employees	MSD%	LWC%	July	August	September	October	November	December	January	February	March	April	May	June	TOTAL
IT Vice President	50%	50%	13,160	11,444	12,588	-	-	-	-	-		-	-	-	37,19
Project Liasion Director	50%	50%	8,603	7,480	8,229	-	-	-	-	-	-	-	-	-	24,31
Vice President of Communications*	N/A	N/A	-		-	-	-	-		-		-		-	-
Manager of Education & Outreach*	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-
Customer Service Manager	25%	75%	2,679	2,329	2,562	-	-	-	-	-				-	7,57
Customer Service Representative	20%	80%	461	461	461	-			-			-	-	-	1,38
•			24,903	21,715	23,840	-	-	-	-	-		-	-	-	70,45

OneWater Costs Allocated to LWC by Employee															
MSD OneWater Employees	MSD%	LWC%	July	August	September	October	November	December	January	February	March	April	May	June	TOTAL
Chief Innovation Officer*	N/A	N/A	8,299	6,577	6,922	-	-	-	-	-	-	-	-	-	21,79
Fleet Services Director**	68%	32%	4,881	4,881	10,416	-	-	-	-	-	-	-	-	-	20,178
Fleet Services Administrator**	68%	32%	3,443	3,443	4,306	-	-	-	-	-	-	-	-	-	11,193
Procurement Director	71%	29%	5,543	5,543	5,543	-	-	-	-	-	-	-	-	-	16,629
OneWater Buyer	60%	40%	-	-	-	-	-	-	-	-	-		-	-	-
•			22,167	20,445	27,187									-	69,79

^{*}Position work percentage is based on actual hours worked and flu **September Billing includes Retroactive Pay Effective 07/01/2020

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CASH

The following section provides information on MSD's cash balances as well as actual and planned uses of cash.

Sources and Uses of Cash

The following schedule summarizes total planned and actual sources and uses of cash for FY 2021 in millions.

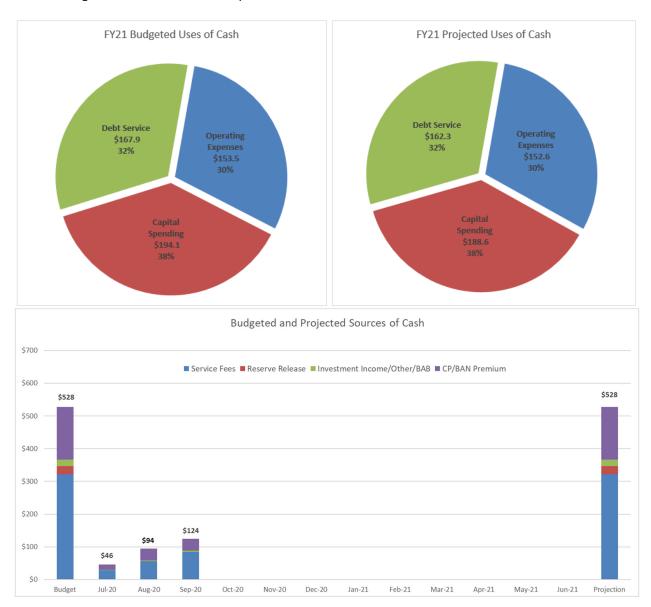


Figure 9 – Sources and Uses of Cash Charts

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Revenue Fund Summary

Revenue Fund transactions are summarized by type for the last 12 months:

Table 39 – Revenue Fund Summary

	Revenue Fund Actual Cash Activity (000s)												
	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20
Revenue	30,184	31,863	25,481	33,726	26,470	27,766	25,698	32,378	23,750	26,255	27,673	27,900	26,605
Operating Expenses	(12,531)	(14,471)	(12,766)	(11,846)	(13,898)	(10,587)	(13,306)	(10,954)	(10,839)	(13,898)	(15,109)	(11,518)	(12,067)
Debit Service	(8,011)	(5,607)	(12,611)	(12,786)	(13,097)	(12,605)	(13,143)	(12,820)	(12,946)	(13,178)	(12,915)	(13,270)	(13,524)
Funds Available	9,642	11,785	103	9,094	(526)	4,574	(750)	8,603	(36)	(821)	(351)	3,113	1,015
Transfer In/Out	7,230	10,135	11,632	16,251	10,000	10,000	5,000	30,000	10,000	30,000	25,000	10,000	20,000
Captial Expenses	(10,477)	(11,635)	(17,899)	(10,382)	(8,956)	(13,886)	(19,259)	(14,674)	(15,675)	(38,209)	(22,322)	(12,934)	(12,807)
Net Change	6,395	10,284	(6,163)	14,963	518	689	(15,009)	23,929	(5,711)	(9,029)	2,327	179	8,208

Capital expense reflect total capital invoices paid in the month. Monthly spend numbers reported in the CIP Monthly Activity Report reflect capital invoices received during the period.

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Revenue Fund & Construction Fund Balances

Revenue Fund and Construction Fund ending balances are summarized by type for the last 12 months below. Construction Fund balances for June 2019 through September 2020 include both the Surety Construction Fund and the Commercial Paper Construction Fund.

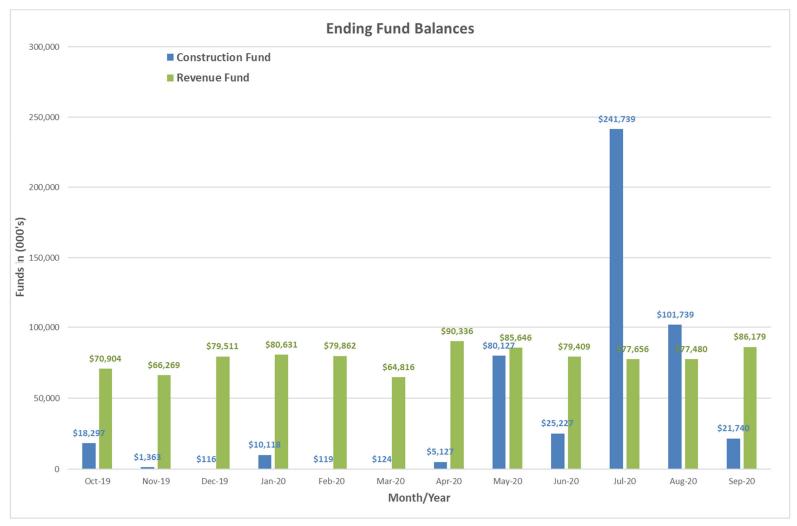


Figure 10 – Revenue Fund and Construction Fund Balances Chart

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Commercial Paper Program Summary

MSD operates a \$500 million Commercial Paper (CP) program to provide interim financing for its capital program. JP Morgan Chase and Bank of America, NA. provide liquidity support. Merrill Lynch, Pierce, Fenner & Smith Inc and JP Morgan Securities are dealers for the program. In September, we had five maturities. In September, we did not issued any new money CP. In October, we have \$25M in notes maturing. The maturing notes will be paid down or partially paid down with bond proceeds.

The CP Construction Fund balance as of September 30 was \$21,639,280.05. Outstanding CP notes are currently split 53.3% with JP Morgan and 46.7% with Bank of America.

CP Issuanc	e Details									
Currently Outs	tanding									
Issuance Date	CUSIP	Principal	Rate	Term (# of days)	Maturity Date	Dealer (JPM/BAML)	Interest Cost	New Issuance or Roll?	SIFMA Index	Spread over (under) SIFMA
6/26/2020	54658NBZ3	15,000,000	0.25%	103	10/7/2020	BAML	10,582.19	New	0.13%	0.12%
6/29/2020	54658QBZ6	10,000,000	0.25%	128	11/4/2020	JPM	8,767.12	New	0.13%	0.12%
7/28/2020	54658NCA7	20,000,000	0.22%	100	11/5/2020	BAML	12,054.79	Roll	0.18%	0.04%
7/29/2020	54658QCA0	10,000,000	0.20%	104	11/10/2020	JPM	5,698.63	New	0.18%	0.02%
8/13/2020	54658QCB8	10,000,000	0.18%	119	12/10/2020	JPM	5,868.49	New	0.11%	0.07%
8/27/2020	54658QCC6	10,000,000	0.13%	57	10/23/2020	JPM	2,030.14	New	0.09%	0.04%
Currently	Outstanding: \$						\$ 45,001			
	FY21 YTD: \$	30,000,000					\$ 13,597			

The Securities Industry and Financial Markets Association (SIFMA) publishes a 7-day high-grade market index comprised of tax-exempt Variable Rate Demand Obligations (VRDOs) with certain characteristics. The Index is calculated and published by Bloomberg and is overseen by SIFMA's Municipal Swap Index Committee. The SIFMA is a short-term interest rate index that MSD uses to gauge the interest rates we receive on our CP placements.

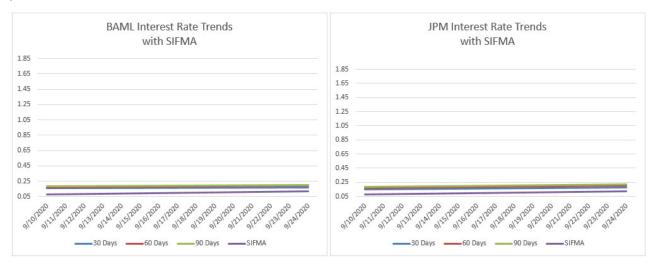


Figure 11 – Interest Rate Trends

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INVESTMENTS

MSD's Investment Policy requires monthly reporting on MSD's investment activity.

Investment by Category

The following schedule itemizes MSD investments by type.

Table 40 – Investments by Type *Schedule*

Total by Category	Market Value	Face Value	Cost Value	Accrued Interest	Market Gain/Loss	Market Yield
Cash/Overnight Sweep	49,114,475.29	49,114,475.29	49,114,475.29	-	-	
Federated Gov Oblig*	71,560,846.20	71,364,846.20	71,560,846.20	764.59	-	0.01%
Investco Gov Agency*	7,622,759.33	7,622,759.33	7,622,759.33	-	-	0.01%
Dreyfus Cash Mgmt*	20,725,329.74	20,706,533.57	20,722,722.90	-	2,606.84	0.01%
First American Government*	21,739,708.52	21,739,708.52	21,739,708.52	908.05	-	0.01%
Federal Farm Credit Banks	1,020,160.00	1,000,000.00	1,000,000.00	5,625.00	20,160.00	2.65%
Federal Home Loan Banks	338,873.70	330,000.00	331,701.15	557.50	7,172.55	2.92%
Resolution Funding Corp Principal Strip	22,669,866.45	22,671,000.00	22,194,731.05	-	475,135.40	0.00%
Federal Home Loan Mortgage Corp	19,999,521.00	20,000,000.00	20,000,000.00	5,781.39	(479.00)	0.20-0.30%
US Treasury Note	7,186,833.00	7,100,000.00	7,048,414.06	77,862.36	138,418.94	2.35%
Municipal Obligations	19,486,294.40	19,200,000.00	19,332,617.95	157,466.07	153,676.45	0.52-5.10%
Certificate of Deposit	100,000.00	100,000.00	100,000.00	-	-	1.75%
	\$ 241,564,667.63	\$ 240,949,322.91	\$ 240,767,976.45	\$ 248,964.96	\$ 796,691.18	

Total earnings from investments FY2021 YTD: \$ 130,902.52

September Investment Activity

The following schedule summarizes investment trade activity for the reporting month.

Table 41 – Investments by Type Schedule

Account	Transaction Type	Category	Amount
2009A Debt Service Reserve	Purchase	Lextingtion- Fayette Co Urban Gov Muni	1,841,453.60
2009B Debt Service Reserve	Redemption	Federal Home Loan Banks	(3,156.00)
2009C Debt Service Reserve	Redemption	US Treasury Bond	(5,191,128.75)
2009C Debt Service Reserve	Purchase	Federal Home Loan MTG Corp	5,000,000.00
2010A Debt Service Reserve	Redemption	Federal Home Loan Banks	(262,993.73)
2011/2013 Debt Service Reserve	Redemption	Federal Home Loan Banks	(189,062.15)
2013C Debt Service Reserve	Redemption	Federal Home Loan Banks	(342,955.38)
Revenue Fund	Purchase	Milwaukee Wis Area Technical College	3,080,298

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Municipal Bond Investments

The following table provides detailed information on existing investments in Municipal Bonds.

Table 42 – Municipal Bond Investments

Investments	Market Value	Face Value	Cost Value	Accrued Interest	Market Gain/Loss	Market Yield	Coupon Rate	Yield to Maturity	Duration	Moody's Rating	Maturity Date
City of Austin TX Water & Wastewater System	5,026,100.00	5,000,000.00	5,087,981.25	96,805.56	(61,881.25)	5.10%	5.13%	4.98%	20.1	Aa2	11/15/2040
City of New York NY	5,713,120.00	5,600,000.00	5,650,792.00	44,800.00	62,328.00	2.35%	2.40%	1.59%	1.1	Aa2	12/1/2021
County of Baltimore MD	578,658.30	570,000.00	555,197.10	1,992.15	23,461.20	2.07%	2.10%	5.50%	0.8	Aaa	8/1/2021
County of Baltimore MD	3,248,608.00	3,200,000.00	3,116,896.00	11,184.00	131,712.00	2.07%	2.10%	5.49%	0.8	Aaa	8/1/2021
Lexington-Fayette Urban County Gov	1,841,453.60	1,840,000.00	1,841,453.60	26.58	-	0.52%	0.52%	0.50%	4.0	Aa2	10/1/2024
Milwaukee Wis Area Technical College	3,078,354.50	2,990,000.00	3,080,298.00	2,657.78	(1,943.50)	2.00%	2.00%	0.15%	1.6	Aa1	6/1/2022
	\$ 19 486 294 40	\$ 19 200 000 00	\$ 10 332 617 05	\$ 157,466,07	\$ 153 676 45						

Total Weighted Average Yield to Maturity: 2.91%
Total Weighted Average Coupon Rate: 2.81%
Total Weighted Average Market Yield: 2.78%
Total Weighted Average Duration: 6.36

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MSD's Current Investment Model

Series	Revenue Fund	Debt Service Fund	Debt Reserve Fund	Construction Fund	Cost of Issuance	Total
2008A	-	-	951,040	-	-	951,040
2009A	-	-	4,448,366	-	-	4,448,366
2009B	-	-	15,167,154	-	-	15,167,154
2009C	-	4,148,727	13,767,358	-	-	17,916,085
2010A	-	6,940,722	18,637,755	-	-	25,578,477
2011A	-	4,921,676	-	-	-	4,921,676
2013A	-	1,587,785	24,528,213	-	-	26,115,998
2013B	-	2,156,609	-	-	-	2,156,609
2013C	-	1,624,003	359,880	-	-	1,983,883
2014A	-	1,169,820	-	-	-	1,169,820
2015A	-	2,738,034	150,040	-	-	2,888,073
2015B	-	1,912,574	-	-	-	1,912,574
2016A	-	1,935,198	-	-	-	1,935,198
2016B	-	1,019,048	-	-	-	1,019,048
2016C	-	7,066,890	-	-	-	7,066,890
2017A	-	4,400,348	1,571,275	-	-	5,971,623
2017B	-	819,961	-	-	-	819,961
2018A	-	831,176	-	-	-	831,176
2020A	-	989,060	1,205,494	-	-	2,194,554
2019 BAN Note	-	6,800,624	-	-	-	6,800,624
2019 Bond Fund	-	3,350,771	-	-	-	3,350,771
2020A COI	-	-	-	-	11,500	11,500
Surety Construction Fund	-	-	-	-	-	-
CP 2018 A-1 & A-2	-	-	-	21,739,709	-	21,739,709
Cash	48,880,692	-	-	-	-	48,880,692
Certificate of Deposit	100,000	-	-	-	-	100,000
Muni-Bonds	3,078,355	-	-	-	-	3,078,355
US Treasury Agency	14,999,521	-	-	-	-	14,999,521
Money Market	17,555,291	-	-	-	-	17,555,291
	\$ 84,613,859	\$ 54,413,024	\$ 80,786,576	\$ 21,739,709	\$ 11,500	\$ 241,564,668

Asset Description	Revenue Fund	Debt Service Fund	Debt Reserve Fund	Construction Fund	Cost of Issuance	Total
Cash	48,880,692	83,743	150,040	-	-	49,114,475
Certificate of Deposit	100,000	-	-	-	-	100,000
Money Market Funds	17,555,291	54,329,281	28,012,863	21,739,709	11,500	121,648,644
Muni-Bonds	3,078,355	-	16,407,940	-	-	19,486,294
US Treasury Bills	-	-	7,186,833	-	-	7,186,833
US Treasury Agency	14,999,521	-	29,028,900	-	-	44,028,421
Corporate Commercial Paper	-	-	-	-	-	-
	\$ 84,613,859	\$ 54,413,024	\$ 80,786,576	\$ 21,739,709	\$ 11,500	\$ 241,564,668

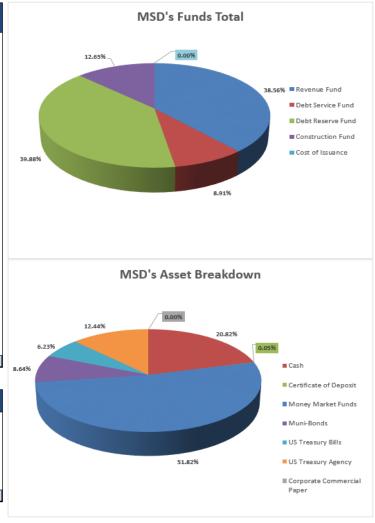


Figure 12 – Current Investment Model

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CAPITAL MARKETS

Capital markets information provides readers insight into interest rate forecasts and market trends.

Interest Rate Forecasts

MMD YIELDS	10/2/2020	11/2/2020	4Q2020	1Q2021	2Q2021	3Q2021
2-Year	0.13%	0.15%	0.25%	0.25%	0.25%	N/A
5-Year	0.26%	0.30%	0.30%	0.30%	0.30%	N/A
10-Year	0.88%	0.95%	0.80%	0.90%	0.90%	N/A
30-Year	1.63%	1.70%	1.65%	1.70%	1.75%	N/A
TAXABLE YIELDS	10/2/2020	11/2/2020	4Q2020	1Q2021	2Q2021	3Q2021
Fed Funds	0.09%	0.05%	0.05%	0.05%	0.05%	0.05%
3-Month LIBOR	0.23%	0.25%	0.25%	0.20%	0.20%	0.20%
2-Year T Note	0.13%	0.15%	0.15%	0.20%	0.20%	0.20%
5-Year T Note	0.28%	0.30%	0.25%	0.30%	0.35%	0.35%
10-Year T Note	0.69%	0.70%	0.80%	0.85%	0.90%	0.90%
30-Year T Bond	1.48%	1.50%	1.60%	1.70%	1.75%	1.80%

Source: J.P. Morgan Research, US Fixed Income Markets Weekly, 10/2/2020, jpmm.com; Thomson Reuters Municipal Market Data; Bloomberg; forecasts as of 10/2/2020, current rates as of 10/2/2020

Figure 13 – Interest Rate Forecasts

Market Monitor

Market Monitor

SHORT TERM MUNICIPAL MARKET	10/2/2020	1-WEEK Δ	10Y AVERAGE
SIFMA Index	0.11%	-1 bp	0.52%
1-Month LIBOR	0.14%	-1 bp	0.74%
SOFR*	0.10%	2 bps	0.48%
SIFMA/1-Month LIBOR Ratio	78.57%	-3.55% pts	70.86%
Tax-exempt MMF Flows 4-week Avg.1	-\$1,216mm	-\$1,398mm	-
LONG TERM MUNICIPAL MARKET	10/2/2020	1-WEEK Δ	10Y AVERAGE
AAA MMD (30-Year)	1.63%	5 bps	3.04%
AAA MMD (30 – 2 Year)	1.50%	5 bps	2.30%
30-Year SIFMA Swap Rate ²	1.01%	5 bps	2.42%
30-Year 3M LIBOR Swap Rate ²	1.12%	5 bps	2.73%
All Muni Fund Flows 4-week Avg.3	\$1,255mm	\$1,531mm	-
CORPORATE SPREADS TO UST (BPS)	10/2/2020	1-WEEK Δ	10Y AVERAGE
J.P. Morgan JULI Index	172	-3 bps	166
J.P. Morgan Domestic HY Index	595	-32 bps	540
EQUITIES AND ENERGY (\$)	10/2/2020	1-WEEK Δ	YTD A
S&P 500	3,348	1.52%	3.64%
DJIA	27,683	1.87%	-3.00%
NASDAQ 100	11,256	0.94%	28.89%
WTI Crude Oil (\$ per bbl.)	37.05	-7.95%	-39.32%

Source: J.P. Morgan; Bloomberg; Thomson Reuters Municipal Market Data; The Bond Buyer; Lipper FMI, iMoneyNet; *Average dating back to 8/22/2014 using historical indicative SOFR, Federal Reserve Bank of New York

Figure 14 – Market Monitor Forecasts

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Baird Municipal Market Update

Kentucky Municipal Market Update

October 2020

Prepared by the Kentucky Public Finance Department of Baird for the Louisville & Jefferson Metropolitan Sewer District



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Economic Outlook

- Heading into Q4, volatility is expected in the market and the direction of interest rates will be highly dependent on schools remaining open and the election.
- The U.S. economy added 661,000 jobs in September which was below the market forecasts of 850,000. The unemployment rate declined to 7.9% from 8.4% in August, below the anticipated rate of 8.2%.
- Bloomberg survey forecasts suggest short-term Treasury rates will inch
 up 0.05% and long-term rates will decline up to 0.07% throughout Q4.
- Corporate credit spreads are acting more like risky assets in this time
 of volatility. The increased volatility is related to increasing levels of
 COVID and the lack of fiscal relief to the economy.

Corporate	Yield %	OAS (bps)	Chg. OAS (bps)	Chg. OAS (bps)	Chg. OAS (bps)
Intermediate IG Index	1.4	108	12	11	38
AA rated	1.51	84	9	8	36
A Rated	1.68	107	10	10	37
BBB Rated	2.44	180	13	10	55
Intermed. High-yield Index	6.08	546	49	61	213
BB Rated	4.65	408	49	72	226
B Rated	6.32	568	58	83	244
CCC Rated	10.38	937	19	-63	68
Preferred Index	5.31				

Municipal Market Rates

 Treasuries and Muni yields entered October experiencing remarkable stability amidst an increasingly volatile climate.

	Treasur	ies	Munis (Bloomberg	berg AAA GO Index)		
Tenor	Change (bps) - MTD	Yield (%)	Change (bps) - MTD	Yield (%)		
3 mos.	+0.5	0.10%				
1year	0.0	0.12%	-1	0.13%		
2 year	-0.3	0.13%	-1	0.15%		
5 year	+0.0	0.27%	-2	0.28%		
10 year	-5.4	0.66%	+1	0.81%		
30 year	-7.7	1.41%	+1	1.63%		

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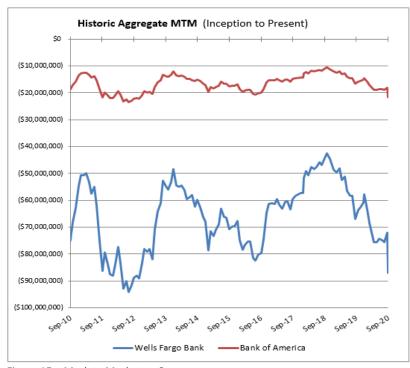


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Mark to Market on Swaps

At September 30, 2020, MSD had two derivative instruments outstanding. Both swaps have termination dates of May 15, 2033. Both swaps are fixed-to-floating swaps. Payments are due on the fifteenth of each month. MSD pays fixed at 4.425% and receives 67% of 30-day LIBOR. MSD's swaps are measured at fair value using significant other observable inputs with a mid-market derivative valuation using a 67% of LIBOR Fixed Payer Swap rate.

Credit Support Provider	Description	Maturity Date	Notional Amount	Outstanding Notional Amount	Clean Market Value	Accrued Interest	Market-to- Market Value
Wells Fargo NA	1999 - 1 - \$225.732M 67% LIBOR Fixed Payer	5/15/2033	180,716,000.00	180,716,000.00	(86,620,697.31)	(413,744.11)	(87,034,441.42)
Bank of America NA	1999 - 2 -\$56.433 67% LIBOR Fixed Payer	5/15/2033	56,433,000.00	45,284,000.00	(21,668,679.29)	(103,624.05)	(21,772,303.34)
			\$ 237,149,000	\$ 226,000,000	\$ (108,289,377) \$	(517,368)	\$ (108,806,745)



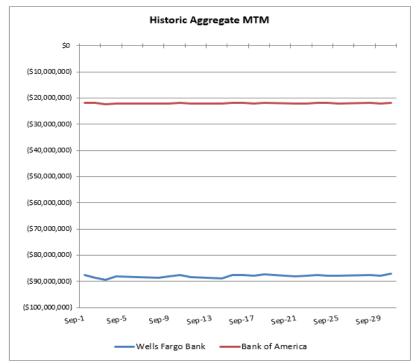


Figure 15 – Mark to Market on Swaps

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MISCELLANEOUS REPORTS

MasterCard Program Total Spend

The Purchase Card Spend Report quantifies the total monthly spend amount for the last 12 months that has been charged to an employee's Purchase Card as well as all the Travel Cards.

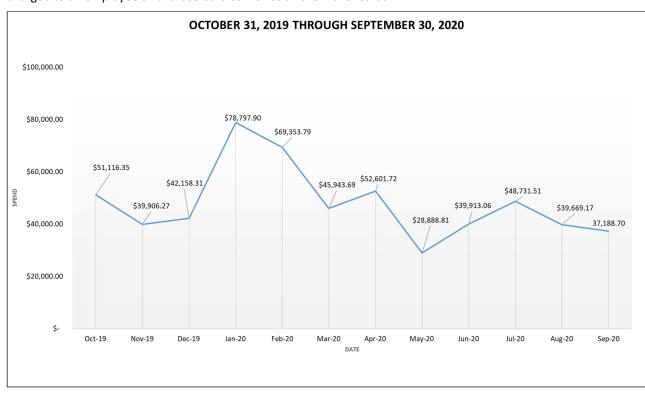




Figure 16 – MasterCard Program Total Spend Chart

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MBE/WBE Expenditure Report

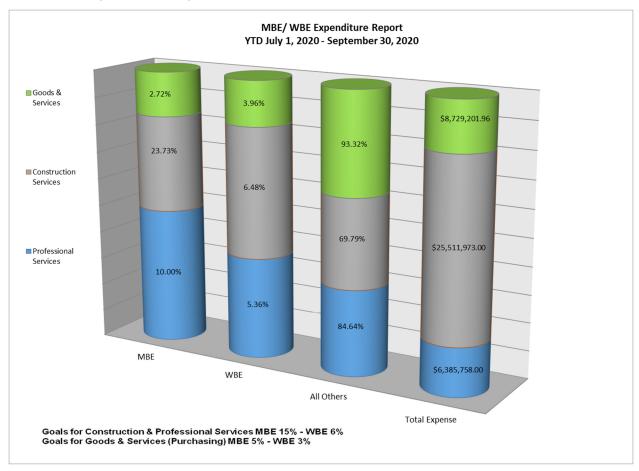


Figure 17 – MBE/WBE Expenditure Chart

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Approvals for Operating and Capital Expenditures

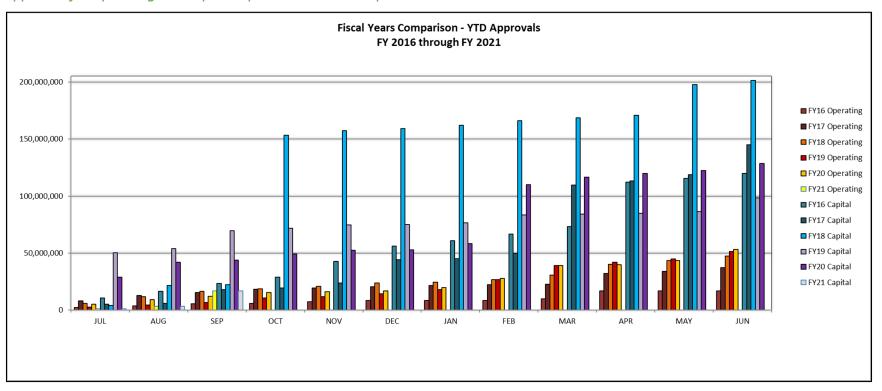
Expenditures over \$30,000 require a Board Report. Expenditures over \$1,000,000 require Board Approval. This report includes all expenditures reported to or approved by the Board in the month of September.

Table 43 – May Approvals for Operating and Capital Expenditures

OARD MEETING 9-28-20 EXPENDITURE APPROVALS			Operating	Capital
endor Name / Description of Procurement	Department / Cap Proj ID / Division	SAP Account / Name	Expense	Expense
ecurian Financial / Group LTD Insurance	2100041 - Corporate	51230 - Long Term Disability	\$93,117	
ecurian Financial / Group Life and Voluntary Life Insurance	2100041 - Corporate	51240 - Group Life & AD&D	\$205,900	
ace Analytical Service / Organic Sampling Support	5530311 - Operations	52140 - Professional	\$49,000	
ohnson Controls / Fire & Life Safety, Inspections Only	3230511 - Executive / Facilities	52160 - Maintenance & Repairs	\$83,215	
hnson Controls / Fire & Life Safety, Repairs Only	3230511 - Executive / Facilities	52160 - Maintenance & Repairs	\$63,000	
uburban Towing Inc / Towing Service	3600591 - Operations	52160 - Maintenance & Repairs	\$35,000	
erby City Environmental / Treatment Hauling of Biosolids	Various - Operations	52170 - Sludge & Grit Disposal	\$718,000	
aste Management of Ky / Dewatered Biosolids at MSD Various Locations	7420082 - Operations	52170 - Sludge & Grit Disposal	\$1,104,350	
necranes / Crane and Hoist Inspection/Maintenance/Repair	Various - Operations	52195 - Other Contract Services	\$165,000	
encer Machine & Tool Co / Machine Shop Services	Various - Operations	52195 - Other Contract Services	\$88,988	
ex Inc / Fleet Fuel Onsite Service	3600591 - Operations / Fleet	53120 - Gasoline / 53130 Diesel	\$539,033	
oice Equipment / One Four-Post 30,000 Lb Vehicle Lift	3600591 - Operations / Fleet	53120 - Gasoline / 53130 Diesel	\$37,412	
uthern Petroleum / Renewal of Non-Road Diesel Fuel	Various - Operations	53130 - Diesel	\$49,000	
bin Tires Company / Vehicle and Equipment Tires, Repair Materials	3600591 - Operations	53140 - Materials & Supplies	\$350,000	
uisville Water Company / Ready Mix Concrete	Various - Operations	53140 - Materials & Supplies	\$80,000	
ing Material Handling / Ready Mix Concrete	Various - Operations	53140 - Materials & Supplies	\$234,000	
er Environmental / Screened Topsoil	Operations - Drainage Sanitary	53140 - Materials & Supplies	\$160,000	
aste Mgmnt / Spoils Disposal	Various - Operations	53160 - Landfill Cost	\$232,000	
oqua Water Technologies / Calcium Nitrate Solution Supply & Odor Control	Operations - Collections	53280 - Bioxide	\$843,200	
o4mance Fire & Water Restoration Services / Water Damage & Cleaning Svcs	2100041 - Corporate	54140 - General Liability Claims	\$360,000	
omson Reuters / Online Research Service Contract	5200321 - Legal	54600 - Dues, Fees and Subs	\$35,000	
e Call Concepts / Utility Locating Services	Various - Operations	Not provided	\$864,000	
mer Engineering / Rosa Terrace PS Elimination Project	A21070 - Engineering	56204 - Design		\$179
tra Tech / FY21 RTC Facilities Design Support	H18443 - Engineering	56204 - Design		\$674
ndel Scott & Associates / Sonne Avenue PS Elimination Project	A21090 - Engineering	56204 - Design		\$138
ack & Veatch Corp / Ohio River Tunnel Project	H09133 - Engineering	56208 - Program Management		\$3,946
eeley & Hansen / MFWQTC Primary Sedimentation Basins rehab	D17042 - Engineering	56208 - Program Management		\$1,332
obs / Engineering Professional Services - CD/CIP Task Assistance	H20041 - Engineering	56208 - Program Management		\$1,375
nsen & Sawyers / MFWQTC Louisville Gree Dryer Emergency Replacement	D20285 - Engineering	56208 - Program Management		\$2,155
obs Engineering Group / FY21 Engineering Services WQTC Projects	D19048 - Engineering	56208 - Program Management		\$500
and Associates / FY21 Engineering Services WQTC Projects	D19039 - Engineering	56208 - Program Management		\$500
(Systems / Information Technology System Development	N21067 - Information Technology	56208 - Program Management		\$390
Consultants / Stormwater Asset Inventory Assist & Level of Service Proj	C19099 - Engineering	56208 - Program Management		\$171
AC Construction / Replace, resurface and repair roads at DRGWQTC	D18128 - Engineering	56216 - Construction		\$248
R Contracting / Norfolk Drive DIP	C19099 - Engineering	56216 - Construction		\$73
terrain Paving & Construction / Pembroke Road DIP	C19099 - Engineering	56216 - Construction		\$38
Installations LLC / Weyanoke Court DIP	C19099 - Engineering	56216 - Construction		\$108
errick Construction Companies / Fabrication Services	E19212 - Operations	56216 - Construction		\$159
rby City Pump & Valve Service / Peerless Vertical Turbine Pumps and Motor	D18453 - Operations	56216 - Construction		\$150
fferson County PVA / 2021 LOJIC Aerial Imagery & Map Updates	J17037 - Information Technology	56219 - Other Expense		\$484
DR Engineering / FY21 HDR Professional Services	Not Provided	Not provided		\$500
		SEPTEMBER TOTALS	\$6,389,214	\$13,127,
		Y-T-D TOTALS	\$13,578,614	\$16,491,

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Approvals for Operating and Capital Expenditures – FY Comparison



<u>2021</u>	July	<u>August</u>	<u>September</u>	October	November	<u>December</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	May		<u>June</u>	<u>Total</u>	<u>Percentage</u>
Operating Capital	942,185 1,180,780	7,189,399 3,364,584	13,578,614 16,491,845											13,578,614 16,491,845	45% 55%
Total	2,122,965	10,553,983	30,070,458	0) 0	() () (0	0	0	0	0	30,070,458	100%

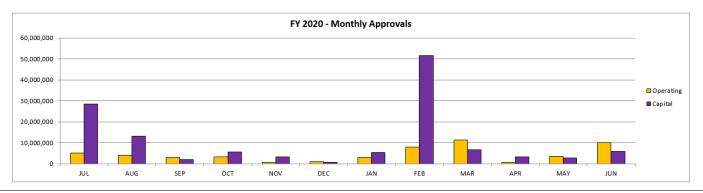
Figure 18 – FY Comparison: YTD Operating and Capital Expenditure Approvals

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Approvals for Operating and Capital Expenditures – Historical



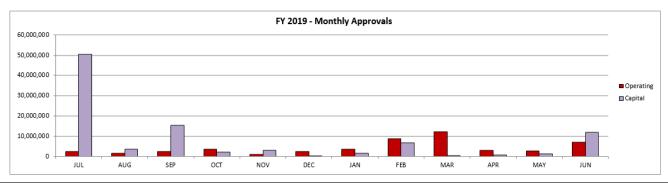
2021	July	August	September	October	November	December	January	February	March	<u>April</u>	May	Ī	<u>lune</u>	<u>Total</u>	<u>Percentage</u>
Operating	942,185	6,247,214	6,389,214											13,578,614	45%
Capital	1,180,780	2,183,804	13,127,261											16,491,845	55%
Total _	2,122,965	8,431,018	19,516,475	0) 0	0	0) ()	0	0	0	0	30,070,458	100%



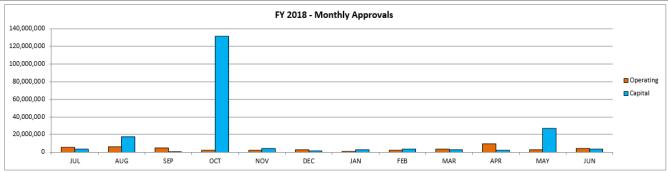
2020	July	August	<u>September</u>	October	November	<u>December</u>	January	<u>February</u>	March	<u>April</u>	May	<u>June</u>	<u>Total</u>	<u>Percentage</u>
Operating	5,171,975	3,995,200	2,925,615	3,190,599	656,025	843,662	2,923,236	8,015,913	11,247,869	751,271	3,474,230	10,061,954	53,257,549	29%
Capital	28,530,330	13,159,347	2,026,048	5,626,729	3,178,411	622,591	5,324,833	51,599,974	6,558,935	3,354,032	2,641,164	5,983,708	128,606,103	71%
Total	33,702,305	17,154,547	4,951,663	8,817,328	3,834,436	1,466,253	8,248,069	59,615,887	17,806,803	4,105,303	6,115,394	16,045,663	181,863,651	100%

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Approvals for Operating and Capital Expenditures – Historical (Continued)



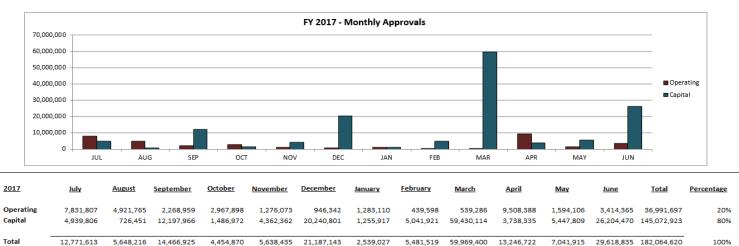
2019	July	August	<u>September</u>	<u>October</u>	November	<u>December</u>	January	February	March	<u>April</u>	May	<u>June</u>	<u>Total</u>	<u>Percentage</u>
Operating Capital	2,478,791 50,497,241	1,760,365 3,666,741	2,378,894 15,401,254	3,749,522 2,255,988	1,208,976 3,154,602	2,610,629 213,332	3,548,302 1,532,274	8,719,359 6,856,734	12,191,342 511,422	3,145,870 899,264	2,768,280 1,394,600	6,979,387 12,066,724	51,539,718 98,450,177	34% 66%
Total	52,976,033	5,427,106	17,780,148	6,005,511	4,363,578	2,823,961	5,080,576	15,576,093	12,702,764	4,045,134	4,162,880	19,046,111	149,989,895	100%



2018	July	<u>August</u>	<u>September</u>	<u>October</u>	November	<u>December</u>	January	February	March	<u>April</u>	May	<u>June</u>	Total	<u>Percentage</u>
Operating	5,595,785	6,019,744	4,617,131	2,186,235	2,285,815	2,859,668	723,504	2,177,792	3,861,491	9,573,598	3,200,079	4,483,767	47,584,609	19%
Capital	3,879,849	17,623,990	604,044	131,170,367	3,935,294	1,839,900	3,132,816	3,742,106	2,731,370	2,290,473	26,880,631	3,425,760	201,256,600	81%
Total	9,475,635	23,643,734	5,221,175	133,356,602	6,221,109	4,699,568	3,856,320	5,919,898	6,592,861	11,864,071	30,080,710	7,909,527	248,841,209	100%

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Approvals for Operating and Capital Expenditures – Historical (Continued)



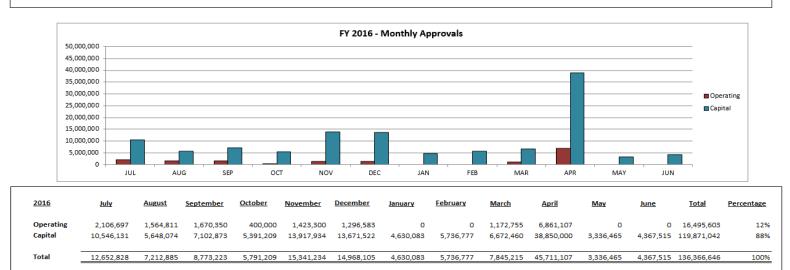


Figure 19 - Historical: Operating and Capital Expenditure Approvals

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Open Construction Orders Report

This report includes all Purchase Orders for Construction Contracts active in SAP.

Table 44 – Open Construction Orders

Date Created	Agreement#	PO#	Vendor	Project Name	PO Amount	PO Amount Remaining Open	Completion Scheduled	Payment % Complete	Status
6/13/2017	4600006516	4500076623	Basham Construction & Rental	Linwood Ave Flood Mitigation Demolition	\$349,876	\$108,440	12/31/2019	69%	Under Construction
7/24/2017	4600006571	4500077135	Thieneman Construction	I-64 & Grinstead CSO Basin Construction	\$23,165,364	\$17,381,910	12/15/2019	25%	Under Construction
11/13/2017	4600006692	4500078455	Shea-Traylor JV	Ohio River Tunnel & Shafts Package	\$148,417,760	\$49,387,637	2/4/2021	67%	Under Construction
11/27/2017	4600006711	4500078565	Garney Companies, Inc.	Lexington & Payne CSO Interceptor	\$23,868,020	\$2,293,272	11/5/2020	90%	Under Construction
2/22/2018	4600006785	4500079578	Basham Construction & Rental	Algonquin Meadows Flood Mitigation Demolition	\$50,899	\$4,724	6/30/2018	91%	Under Construction
2/22/2018	4600006786	4500079580	Basham Construction & Rental	Wewoka West Park Flood Mitigation Demolition	\$143,265	\$30,049	6/30/2018	79%	Under Construction
3/19/2018	4600006821	4500079829	Basham Construction & Rental	Riverside SRL Flood Mitigation Demolition	\$158,340	\$7,400	12/31/2018	95%	Under Construction
7/11/2018	4600006976	4500073823	Pace Contracting	Rowan PS & Downtown CSO Interceptor	\$26,126,010	\$2,773,041	8/8/2020	89%	Under Construction
7/11/2018	4600006995	4500081230	TRC, LLC	FY18 Floodwall Closure Upgrades	\$20,120,010	\$51,151	12/31/2018	81%	Under Construction
7/30/2018	4600007009	4500081321	Allterrain Paving & Construction	5312 Alba Way DIP	\$131,910	\$8,675	7/31/2019	93%	Under Construction
12/5/2018	4600007009	4500081409	Leak Eliminators, LLC	1300 Ellison/St. Michael Cemetery Emergency	\$108,875	\$48,029	6/30/2019	56%	Under Construction
1/4/2019	4600007184	4500083011	Basham Construction & Rental	Riverside 2016 Demolition Project	\$67,711	\$48,029	3/31/2019	86%	Under Construction
2/4/2019	4600007210	4500083641	American Roofing & Metal Company	CMF Roof E & F Replacement	\$3,085,865	\$153,040	11/30/2019	95%	Under Construction
4/3/2019	4600007280	4500084331	Merrick Company LLC	Hatch & Cover Plate - Elevation 420 SWPS	\$18,699	\$8,400	8/16/2019	55%	Under Construction
5/24/2019	4600007334	4500084925	Basham Construction & Rental	2901 Long Creek Way	\$10,000	\$7,559	5/15/2019	24%	Under Construction
5/24/2019	4600007403	4500084926	Pace Contracting	3402 Charlane Parkway Concrete Repair	\$10,000	\$6,955	5/24/2019	30%	Under Construction
6/28/2019	4600007410	4500085386	Grant Line Garden Center & Nurserv	Story Avenue Green Infrastructure Maintenance	\$2,869	\$723	12/31/2019	75%	Under Construction
6/28/2019	4600007447	4500085380	Grant Line Garden Center & Nursery	Portland Green Infrastructure Maintenance	\$6,044	\$3,361	12/31/2019	44%	Under Construction
8/21/2019	4600007510	4500085978	Rennirt's Septic Service	6112/6205 Catheen & 6116 Gloria Ln Demolition	\$28,865	\$28,865	11/15/2019	0%	Awaiting Start
8/21/2019	4600007511	4500085979	Rennirt's Septic Service	908 West Indian Trail Demolition	\$8,600	\$8,600	11/15/2019	0%	Awaiting Start
8/27/2019	4600007518	4500086063	Robert Woodford	Rain Garden & Bioswale Maintenance	\$7,850	\$1,075	6/30/2020	86%	Under Construction
8/30/2019	4600007529	4500086111	Dugan & Meyers LLC	Hite Creek Expansion to 9MGD	\$25,531,709	\$11,703,282	9/15/2021	54%	Under Construction
9/3/2019	4600007530	4500086133	Hanka Builders, LLC	Belguin Re-Scope /Catheen Property Secure	\$9,500	\$950	12/30/2019	90%	Under Construction
9/16/2019	4600007546	4500086294	MAC Construction & Excavation	I-64 & Grinstead CSO Interceptor	\$5,962,171	\$4,025,632	12/31/2020	32%	Under Construction
9/20/2019	4600007557	4500086371	B&R Contracting	Westfield Road DIP	\$23,530	\$23,530	10/31/2019	0%	Awaiting Start
9/27/2019	4600007570	4500086452	B&R Contracting	1010 Mt. Holly Road DIP	\$43,300	\$16,300	6/30/2020	62%	Under Construction
10/4/2019	4600007574	4500086512	Thieneman Construction	MFWQTC Cake Pump Phase II	\$1,543,618	\$581,295	10/31/2020	62%	Under Construction
10/11/2019	4600007581	4500086586	Pace Contracting	Riverfront PS FM Emergency T&M Repair	\$50,000	\$40,811	6/30/2020	18%	Under Construction
10/22/2019	4600007597	4500086720	Allterrain Paving & Construction	Ethel Avenue DIP	\$138,177	\$0	1/31/2020	100%	Under Construction
10/28/2019	4600007602	4500086783	Robinson Pipe Cleaning	11508 Shelbyville Road Emergency Sewer Repair	\$15,000	\$4,550	6/30/2020	70%	Under Construction
10/29/2019	4600007603	4500086790	Thieneman Construction	DRGWQTC Grout Repair & Gate & Actuator Replace	\$1,740,332	\$653,340	9/9/2021	62%	Under Construction
11/13/2019	4600007612	4500086969	MAC Construction & Excavation	MDS Downstream Flow Meter Project	\$287,856	\$34,624	8/7/2020	88%	Under Construction
11/20/2019	4600007627	4500087060	Robinson Pipe Cleaning	Nightingale I&I Rehab	\$2,980,279	\$2,030,948	6/30/2021	32%	Under Construction
11/27/2019	4600007639	4500087159	MAC Construction & Excavation	Mud Lane Interceptor	\$1,792,707	\$187,212	9/30/2020	90%	Under Construction
12/17/2019	4600007654	4500087343	Basham Construction & Rental	1009 Clay Avenue DIP	\$9,600	\$9,600	12/30/2019	0%	Awaiting Start
12/20/2019	4600007661	4500087387	Revrac Construction	967 Ida Way DIP	\$47,387	\$622	3/31/2020	99%	Under Construction

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Date Created	Agreement#	PO#	Vendor	Project Name	PO Amount	PO Amount Remaining Open	Completion Scheduled	Payment % Complete	Status
1/3/2020	4600007675	4500087465	Ulliman Schutte Construction LLC	DRGWQTC Dewatering Emergency Project	\$11,527,293	\$0	12/31/2020	100%	Under Construction
1/3/2020	4600007676	4500087466	MAC Construction	Fairmount Rd FM Emergency T&M Repair	\$35,000	\$4,453	6/30/2020	87%	Under Construction
1/13/2020	4600007684	4500087562	Allterrain Paving & Construction	1712 Sheridan Avenue DIP	\$192,325	\$13,109	6/30/2020	93%	Under Construction
1/17/2020	4600007693	4500087620	EZ Construction	Beargrass Creek FPS Relief Flap Gate	\$228,590	\$11,430	7/15/2020	95%	Under Construction
1/23/2020	4600007696	4500087699	Hanka LLC	FY20 FEMA Buyout Demolitions	\$225,000	\$89,071	12/31/2020	60%	Under Construction
1/23/2020	4600007697	4500087700	Basham Construction & Rental	FY20 FEMA Buyout Demolitions	\$125,000	\$51,452	6/30/2020	59%	Under Construction
2/7/2020	4600007715	4500087875	Derby City Pump & Valve Service	Beargrass Creek FPS Pump #8 Bearing Replacement	\$187,500	\$187,500	7/31/2020	0%	Awaiting Start
2/13/2020	4600007723	4500087941	Tru Test LLC	FY20 CCTV Inspection	\$6,000	\$2,439	4/7/2020	59%	Under Construction
2/18/2020	4600007727	4500087994	Cardinal Services Inc.	FY20 FEMA Buyout Demotions	\$125,000	\$14,154	6/30/2020	89%	Under Construction
2/24/2020	4600007735	4500088061	Basham Construction & Rental	Linwood Re-Scope Mitigation Demolition	\$59,900	\$6,592	5/31/2020	89%	Under Construction
2/25/2020	4600007736	4500088074	TEM Group	Southwestern Pump Station Flood Repair	\$349,890	\$87,407	12/31/2020	75%	Under Construction
2/27/2020	4600007739	4500088113	Pro-Line Concrete Pumping	Mitchell Hill Road Concrete Pumping	\$1,200	\$600	3/30/2020	50%	Under Construction
3/6/2020	4600007744	4500088196	Basham Construction & Rental	4623 Preston Hwy DIP	\$103,000	\$5,150	5/31/2020	95%	Under Construction
3/10/2020	4600007745	4500088221	AEP Enterprises	8912 Mitchell Lane DIP	\$44,160	\$1,504	5/31/2020	97%	Under Construction
3/11/2020	4600007749	4500088247	Pace Contracting	4th Street FPS Emergency T&M Repairs	\$50,000	\$23,545	6/30/2020	53%	Under Construction
3/23/2020	4600007757	4500088403	Flynn Brothers Construction	Upper Floyds Fork Interceptor	\$3,036,519	\$2,446,519	1/29/2021	19%	Under Construction
4/1/2020	4600007766	4500088512	JCI Industries, Inc.	Upper Mill Creek FPS Pump #1 Emergency Repair	\$450,000	\$13,422	6/30/2020	97%	Under Construction
4/1/2020	4600007767	4500088518	Seven Seas Construction	CMF Parking Improvements	\$1,657,263	\$492,237	1/31/2021	70%	Under Construction
4/1/2020	4600007768	4500088519	TEM Group	CCWQTC Influent PS MCC Upgrades	\$465,000	\$460,950	12/31/2020	1%	Under Construction
4/8/2020	4600007777	4500088603	Pace Contracting	ORFM Door & Corrosion Control	\$1,657,684	\$1,283,675	3/29/2021	23%	Under Construction
4/13/2020	4600007778	4500088633	Pace Contracting	MFWQTC East Headworks MCC & Control Rm HVAC	\$101,900	\$59,450	11/30/2020	42%	Under Construction
4/15/2020	4600007780	4500088686	Robinson Pipe Cleaning	Rivers Edge Court PS Manhole Repairs	\$6,760	\$345	6/15/2020	95%	Under Construction
4/20/2020	4600007784	4500088714	Judy Construction	MFWQTC LG Dryer Replacement - Emergency	\$44,200,000	\$19,011,942	9/1/2021	57%	Under Construction
4/20/2020	4600007787	4500088718	Allterrain Paving & Construction	Trio Culvert Replacement	\$59,394	\$449	7/31/2020	99%	Under Construction
4/29/2020	4600007805	4500088817	Pace Contracting	FPS Electric Grease Lubrication Upgrade	\$348,900	\$348,900	9/30/2020	0%	Awaiting Start
5/4/2020	4600007813	4500088848	Robinson Pipe Cleaning	FY20 Floodwall Toe Drain Inspections	\$232,683	\$232,683	7/31/2020	0%	Awaiting Start
5/4/2020	4600007817	4500088850	American Roofing & Metal Co Inc.	FY20 Floodwall Closure Vaults Roof Replacement	\$174,522	\$55,631	7/31/2020	68%	Under Construction
5/6/2020	4600007818	4500088886	Malone Contracting LLC	Picadilly Avenue DIP	\$43,384	\$43,384	7/31/2020	0%	Awaiting Start
5/8/2020	4600007820	4500088909	Temple & Temple Excavating	CSO 016 Emergency T&M Manhole Repair	\$300,000	\$190,986	6/30/2020	36%	Under Construction
5/19/2020	4600007829	4500088996	Pace Contracting	11th Street Cavity Repair	\$10,000	\$3,957	5/22/2020	60%	Under Construction
5/21/2020	4600007835	4500089038	Basham Construction & Rental	Kings Highway DIP	\$95,000	\$7,458	8/31/2020	92%	Under Construction
5/21/2020	4600007836	4500089039	K Weihe Construction	Bramton Road DIP	\$22,650	\$150	6/30/2020	99%	Under Construction
5/26/2020	4600007838	4500089055	LC Installations LLC	8904 Blossom Lane DIP	\$65,824	\$65,824	8/31/2020	0%	Awaiting Start
6/8/2020	4600007844	4500089178	Louisville Water Company	Mud Ln Interceptor Water Main Relocation	\$4,500	\$4,500	12/31/2020	0%	Awaiting Start
6/8/2020	4600007845	4500089183	Advanced Paving & Construction	Broadfern PS Elimination	\$227,460	\$81,325	8/31/2020	64%	Under Construction
6/10/2020	4600007851	4500089205	Abbico Contracting	5703 Southland Blvd DIP	\$20,675	\$975	6/30/2020	95%	Under Construction

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Date Created	Agreement#	PO#	Vendor	Project Name	PO Amount	PO Amount Remaining Open	Completion Scheduled	Payment % Complete	Status
6/12/2020	4600007858	4500089246	Abbico Contracting	1410 Penile Court DIP	\$10,000	\$10,000	6/15/2020	0%	Awaiting Start
6/12/2020	4600007859	4500089247	B&R Contracting	Calm River Road DIP	\$10,000	\$10,000	7/15/2020	0%	Awaiting Start
6/17/2020	4600007862	4500089292	Cardno, Inc.	346 S Peterson Ave Stream Restoration	\$259,000	\$259,000	8/31/2020	0%	Awaiting Start
6/25/2020	4600007871	4500089372	Allterrain Paving & Construction	2016 Lowell Ave DIP	\$57,445	\$675	9/30/2020	99%	Under Construction
7/7/2020	4600007878	4500089469	Advanced Electrical Systems	MFWQTC FEPS VFD Replacement Emergency T&M	\$300,000	\$143,094	8/31/2020	52%	Under Construction
7/9/2020	4600007883	4500089509	Tru Test LLC	4th Street Sewer Investigation	\$5,000	\$2,018	7/31/2020	60%	Under Construction
7/13/2020	4600007887	4500089540	Basham Construction & Rental	Mt. Holly Water Service Relocation	\$2,375	\$1,175	7/15/2020	51%	Under Construction
7/30/2020	4600007901	4500089713	TEM Group	DRGWQTC RAS Electrical Modifications	\$116,883	\$116,883	11/30/2020	0%	Awaiting Start
7/31/2020	4600007902	4500089717	Basham Construction & Rental	Rosa Terrace Force Main Repair	\$10,000	\$5,013	7/31/2020	50%	Under Construction
7/31/2020	4600007904	4500089732	Walker Mechanical Contractors	DRGWQTC Admin & RAS Bldgs HVAC	\$546,000	\$546,000	1/31/2021	0%	Awaiting Start
7/31/2020	4600007905	4500089733	Allterrain Paving & Construction	10005 Cedar Gardens DIP	\$54,449	\$54,449	10/31/2020	0%	Awaiting Start
8/13/2020	4600007921	4500089868	B&R Contracting	3405 Hardwood Place DIP	\$10,000	\$10,000	8/31/2020	0%	Awaiting Start
8/13/2020	4600007922	4500089870	DD Midori Construction	1110 Audubon Parkway DIP	\$26,610	\$26,610	8/31/2020	0%	Awaiting Start
8/13/2020	4600007923	4500089871	B&R Contracting	3926 Storyrun Drive DIP	\$13,000	\$13,000	8/31/2020	0%	Awaiting Start
8/13/2020	4600007924	4500089872	Abbico Contracting	Royal Garden DIP	\$16,600	\$16,600	8/31/2020	0%	Awaiting Start
8/19/2020	4600007929	4500089926	Ulliman Schutte Construction	Design Build Large Diameter Sewer Rehab Stage 1	\$5,589,367	\$5,506,308	8/31/2023	1%	Under Construction
8/21/2020	4600007932	4500089957	CE Power Solutions	10th St FPS MCC Replacement - Emergency	\$250,000	\$250,000	6/30/2021	0%	Awaiting Start
8/26/2020	4600007939	4500090033	T&T Pipe Renovations	Manhole Repair 4001 Whiteblossom Estates	\$10,000	\$10,000	8/24/2020	0%	Awaiting Start
9/9/2020	4600007953	4500090174	MAC Construction & Excavating	DRG RAS PS Spool Piece Replace - Emergency	\$236,775	\$236,775	6/30/2021	0%	Awaiting Start
9/10/2020	4600007957	4500090187	B&R Contracting	7000 Brook Bend Way DIP	\$19,000	\$19,000	10/31/2020	0%	Awaiting Start
9/14/2020	4600007960	4500090208	Allterrain Paving & Construction	Cedar Gardens Drive DIP	\$309,340	\$87,620	12/31/2020	72%	Under Construction
9/21/2020	4600007962	4500090271	K Weihe Construction	7009 Glendale Road DIP	\$10,000	\$10,000	10/15/2020	0%	Awaiting Start
9/21/2020	4600007963	4500090273	B&R Contracting	6808 Foxcroft DIP	\$19,000	\$19,000	11/30/2020	0%	Awaiting Start
				Totals	\$340,537,808	\$124,291,441			
							Total Amount Paid	Amount Paid	
			Fiscal Year		Total Open PO's	Total Still Open		Sept 2020 Only	1
			FY17		\$349,876	\$108,440	\$241,436	\$0	-
			FY18		\$195,803,648	\$69,104,992	\$126,698,656	\$3,213,637	
			FY19		\$29,842,983	\$3,070,385	\$26,772,598	\$244,500	
			FY20		\$106,996,902	\$44,934,079	\$62,062,823	\$5,373,279	
			FY21		\$7,544,399	\$7,073,545	\$470,854	\$320,721	

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