



Department of Public Works
Engineering Division
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Mapping Section Manager

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Financial Manager

Steven B. Danner-Rivers

July 11, 2018

To: Dave Schmiedicke, Finance Director

From: Robert F. Phillips, City Engineer

Subject: Engineering Division's 2019 Sewer Utility Budget

The Engineering Division is pleased to submit our 2019 Operating Budget for the Sewer Utility, a utility funded entirely through user fees.

The primary objective of the City of Madison's Sewer Utility is to safely convey wastewater to the Nine Springs Wastewater Treatment Plant. This requires a combination of design, construction and maintenance of our system of sewers and lift stations. Through our activities, infiltration is reduced, pipes in poor condition are repaired or replaced, pipes are cleaned on a regular schedule and problematic sections of pipes are maintained more frequently. The result has been a reliable system with a record low number of sewer backups.

In addition to the routine activities associated with running the Sewer Utility, specific 2018 initiatives include; infiltration studies for sewer drainage areas that have a history of excessive clear water in the system during severe rain events, televising and rating sewers on a 10 year cycle in accordance with our Capacity, Management, Operation, and Maintenance (CMOM) plan, implementing if feasible the installation of backflow prevention on sewer laterals installed with street reconstruction projects, and the continuation of our sewer lining program as a cost effective rehabilitation method for sanitary sewer.

A Sewer Utility rate increase of approximately 3% is expected.


The Engineering Division has submitted four supplemental requests that are partially funded by the Sewer Utility.

1. Computer Aided Design (CAD) Licensing – City agencies are undergoing a conversion from Microstation to AutoCAD and ArcGIS for our design and mapping needs. This conversion started in 2018. Yearly maintenance fees are required for 2019.
2. Public Information Officer (PIO) – The Engineering Division currently has no PIO. With over \$90 million in Public Works Construction, a PIO will help the Engineering Division to better communicate with the public.
3. CCTV Crew – This request, consisting of a two person crew, will enable the Sewer Utility to televise the entire system over a 10 year period as required by the Capacity, Management, Operation, and Maintenance (CMOM) plan. The Sewer Utility currently has two crews and nearly 790 miles of sewer main to televise over a 10 year period.
4. Surveyor 2 – The Engineering Division relies on private sector surveyors for our preconstruction land survey needs. This position would allow the Engineering Division to provide this service in house, increasing the quality of the information that is provided to our designers.

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If you have any questions, please feel free to contact Steve Danner-Rivers or myself.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Phillips', with a long horizontal stroke extending to the right.

Robert F. Phillips, P.E.
City Engineer

RFP:

cc: Travis Martin

Agency: Sewer

Proposed Budget

	Cost to Continue	Proposed	Change
Revenue	-\$38,331,199	-\$40,684,110	-\$2,352,911
Expenditures	<u>\$38,331,199</u>	<u>\$40,684,110</u>	<u>\$2,352,911</u>
Net	\$0	\$0	\$0
	2018	Proposed	Change
FTEs	36	36	0

Request Analysis

2017 Budget

Overbudget	No
2017 Analysis	

2018 Projection

Deficit	No
Projection Analysis	

2019 Request

Budget Request Changes	Sewer Utility revenues were increased to reflect an anticipated 3% rate increase in 2019. Supplies and Purchased Services are in line with C2C level, but increased Waste Disposal expense line item by \$1.35m to reflect the annual increase in MMSD treatment charges assigned to the Madison Sewerage Utility. A reclassification of position #4100 proposed in the 2019 request is resulting in a shift of the positions personnel cost from the GF to the utility budgets, which is seen within the pending personnel line item amount. Fleet Service has agreed to staff one existing Fleet Technician position at the Emil Street facility which houses many of the Sewer/Stormwater vehicles and equipment; Sewer's Fleet charge is increased by \$50,000 to reflect the increase charge from Fleet expected in 2019 for that in-house vehicle maintenance service.
Change in Service	No
Service Impact	
Staffing Levels & Payroll Allocations	A reclassification of position #4100 proposed in the 2019 request is resulting in a shift of the positions personnel cost from the GF to the utility budgets, which is seen within the pending personnel line item amount.

Sewer Utility

Function: Public Works & Transportation

Position Summary

	2018 Budget			Request		2019 Executive		Adopted	
	CG	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
ENGINEER	18	2.00	158,953	2.00	131,926	-	-	-	-
ENGR FIELD AIDE	15	1.00	62,914	1.00	51,394	-	-	-	-
ENGR OPER CLK	15	1.00	56,173	1.00	62,594	-	-	-	-
ENGR OPER LDWKR	15	1.00	70,991	1.00	54,153	-	-	-	-
IT SPEC	18	1.00	84,796	1.00	86,738	-	-	-	-
PROG ASST	20	1.00	58,993	1.00	59,532	-	-	-	-
PUB WKS GEN FORE	18	2.00	130,705	2.00	136,700	-	-	-	-
PUB WKS GEN SUPV	18	1.00	77,356	1.00	89,170	-	-	-	-
S/D MAINT TECH	15	10.00	610,381	10.00	606,180	-	-	-	-
SSMO	15	15.00	802,402	15.00	782,627	-	-	-	-
SURVEYOR	15	1.00	73,772	1.00	74,056	-	-	-	-
TOTAL		36.00	\$ 2,187,434	36.00	\$ 2,135,068	-	\$ -	-	\$ -

Salary amounts recorded on this page are for total budgeted salaries; this amount may differ from budgeted permanent wages as presented in the Line Item Detail due to payroll allocations to other funding sources (capital projects, grants, etc.) or inter-agency services are not reflected in this summary page.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Sewer Utility

SELECT YOUR AGENCY'S SERVICE:

Sewer Engineering and Administration

SERVICE DESCRIPTION:

This service is responsible for: (1) the inspection, design, evaluation, and construction of the City's sewer collection system, (2) reviewing and inspecting permits related to sanitary sewer system excavation and plugging (3) collection of sewer area connection fees as well as impact fees related municipal sewer improvements. The goal of this service is to centrally plan and monitor the City's sewer system.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-11,889,896	-11,543,550	-11,521,652	-12,823,037	-1,301,385
Expense	11,642,208	11,541,647	11,549,737	12,823,037	1,273,300
Net Budget	-247,688	-1,903	28,085	0	-28,085

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

Update of various line items to reflect current projected activity, including reallocation amongst services

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

No operational impacts are anticipated

SERVICE GOALS

1. Who is the recipient of this service?

- Madison Sewer Utility ratepayers
- Residents
- Businesses and their employees and customers
- Visitors to our City
- Developers with pending development

2. What activities are you responsible for providing under this service?

- Policy Development
- Plan review services.
- Impact and private development fees.
- Plan, design, construct and inspect sanitary sewer infrastructure (new development, redevelopment, reconstruction, etc.)
- Project estimating, budgeting and reporting.
- Project management, construction inspection and contract administration services.
- Public information process.
- Sewer Utility user rates
- Monitoring and billing – industrial discharge, restaurant class, adjacent municipalities
- Asset inventory and financial reporting.
- 5 Year Capital Improvement Program
- Survey – construction staking and as-builts
- Construction inspection – public works, private development and redevelopment, connections, abandonments and deduct meters
- Permitting – connections, abandonments, deduct meters, dewatering
- Respond to customer complaints and concerns.
- Sewer Capacity and I/I Studies
- Regulatory compliance and reporting

3. How do you define success within this service?

- Convey wastewater to the Nine Springs Wastewater Treatment Plant with minimum inflow, infiltration and exfiltration to prevent public health hazards and protect the environment.
- Minimize the number of Sanitary Sewer Overflows (SSOs) and sanitary sewer backups.
- Comply with regulatory requirements.
- Maintain the current level of service to customers.
- Expand system as necessary to accommodate the growth of the City minimizing the cost to current City residents.
- Provide adequate capacity to convey all peak design flows.
- Protect municipal investment by increasing the useful life and capacities of the system and parts.
- Use operating funds efficiently.

4. What strategies are planned for 2019?

- Rehabilitate and replace system assets in a planned manner based on condition to assure assets function as designed.
- Coordinate sewer replacements with street reconstruction and resurfacing projects to maximum extent feasible.
- Use trenchless CIPP technology to rehabilitate existing sewers where feasible to reduce cost and minimize disruption to residents, businesses and visitors.
- Expansion of services funded by developers and sewer impact fee districts.
- Develop and implementation flow model.
- Review and enhance written construction inspection standards for sanitary sewer installation and develop checklists for same.
- Adopt a written asset management plan.
- Continue work to eliminate existing infrastructure deficit and develop plan for funding future replacement and rehabilitation of assets with particular attention to projected peaks.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Sewer Utility

SELECT YOUR AGENCY'S SERVICE:

Sewer Operations

SERVICE DESCRIPTION:

This service is responsible for the operation and maintenance of the City's sanitary sewer system which consists of nearly 790 miles of sanitary sewer mains connected by more than 18,000 sanitary access structures. This system is supported by 31 pumping stations and transports 27.8 million gallons of raw sewage per day from Madison homes and businesses to the Nine Springs Wastewater Treatment Plant (WWTP). The goal of this service is to eliminate preventable main backups and overflows and convey wastewater to the WWTP with minimum inflow, infiltration and exfiltration to prevent public health hazards and protect the environment.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-25,416,970	-26,809,547	-26,809,547	-27,861,073	-1,051,526
Expense	25,664,658	26,811,450	26,781,462	27,861,073	1,079,611
Net Budget	247,688	1,903	-28,085	0	28,085

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

Update of various line items to reflect current projected activity, including reallocation amongst services

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

No operational impacts are anticipated

SERVICE GOALS

1. Who is the recipient of this service?

- Madison Sewer Utility ratepayers
- Residents
- Businesses and their employees and customers
- Visitors to our City

2. What activities are you responsible for providing under this service?

- Scheduled preventive maintenance
- CCTV inspection and condition assessment
- Proactive and reactive repairs
- Emergency response
- Utility locating and marking
- Structure inspections
- Flow monitoring
- Deduct meter inspection
- Spill clean up
- Waste oil recycling
- Q & Q sampling
- CIPP inspection
- Fleet maintenance
- Contract services (MMSD, ANG, Dane County, etc.)

3. How do you define success within this service?

- Comply with regulatory requirements.
- Eliminate preventable sanitary sewer overflows and basement backups.
- Reduce inconvenience and damage by responsibly handling service interruptions.
- Eliminate claims and legal fees related to back up by providing immediate, concerned and efficient service to all emergency calls.
- Protect municipal investment by increasing the useful life and capacities of the system and parts.
- Use operating funds efficiently.
- Perform all activities safely and avoid injury.

4. What strategies are planned for 2019?

- Continue scheduled preventive maintenance cleaning of existing sewer lines. Add newly constructed sewer mains to this program.
- Continue replacement of pin-type lids to reduce I&I.
- Perform open-cut and trenchless repairs as needed to maintain system functionality.
- Implement a GIS-centric Computerized Maintenance Management System (CMMS) with paperless work orders for field crews;
- Implement scheduled CCTV inspection and condition assessment of entire system on a 10-year cycle.
- Assign a criticality rating to each asset; conduct a formal business risk assessment.
- Identify means of maintaining and assessing condition of existing force mains.
- Install dedicated emergency generators at prioritized lift stations.

Supplemental Request

Agency:

Sewer Utility

Enter Your Agency's Service:

Sewer Operations

Supplement Title:

Add CCTV Crew

Amount:

FTE:

- Expansion to Existing Service
- New Initiative

Provide an overview of the supplemental request.

Add CCTV crew to enable the Engineering Division to perform CCTV inspections of entire sanitary sewer system on a 10-year cycle per the Sewer Utility's Capacity, Management, Operations and Maintenance (CMOM) Program.

What is the desired outcome of the request?

- Meet CMOM goal.
- Provide condition assessment ratings (structural and maintenance) for every pipe segment.
- Establish an objective methodology for identifying and prioritizing pipes for reconstruction and trenchless rehabilitation.
- Improve budget forecasting through expanded knowledge of pipe condition and maintenance needs.

How will the desired outcome be measured?

- % of system televised annually