

**City of Madison 2018 Capital Improvement Plan**  
*Agency Request Summary*

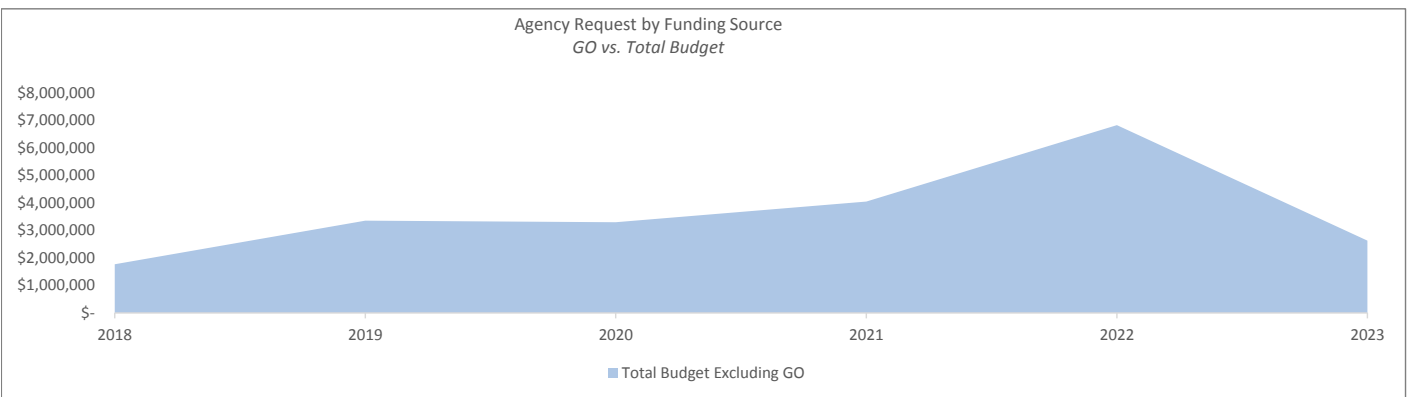
Agency : Sewer Utility

Agency Request by Project (All Funds)

Project	2018	2019	2020	2021	2022	2023
Citywide Pumping Stations-Emergency Power Stational	57,500	57,500	57,500	57,500	57,500	57,500
Lift Station Rehabilitations	62,000	66,000	70,000	70,000	75,000	75,000
Sewer Access Improvements	120,000	123,000	130,000	130,000	135,000	135,000
Sewer Reconstruction	-	300,000	350,000	350,000	500,000	500,000
Trenchless Sewer Rehabilitation	1,530,000	1,610,000	1,690,000	1,690,000	1,860,000	1,860,000
Sewer Impact Fee Districts	-	1,200,000	1,000,000	1,750,000	4,200,000	-
<b>Total</b>	<b>\$ 1,769,500</b>	<b>\$ 3,356,500</b>	<b>\$ 3,297,500</b>	<b>\$ 4,047,500</b>	<b>\$ 6,827,500</b>	<b>\$ 2,627,500</b>

Agency Request by Funding Source

Project	2018	2019	2020	2021	2022	2023
Impact Fees	-	1,200,000	1,000,000	1,750,000	4,200,000	-
Reserves Applied - Sewer	569,500	621,500	692,500	692,500	742,500	742,500
Revenue Bonds - Sewer	1,200,000	1,530,000	1,600,000	1,600,000	1,880,000	1,880,000
Special Assessment - Sewer	-	5,000	5,000	5,000	5,000	5,000
<b>Total</b>	<b>\$ 1,769,500</b>	<b>\$ 3,356,500</b>	<b>\$ 3,297,500</b>	<b>\$ 4,047,500</b>	<b>\$ 6,827,500</b>	<b>\$ 2,627,500</b>





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**Date: May 10, 2017**

**To: David Schmiedicke, Finance Director**

**From: Robert Phillips, P.E., City Engineer**

**Re: 2018 Capital Budget Proposal  
Sewer Utility**

### **Introduction**

The primary objective of the Sewer Utility Budget is to undertake projects which provide for the safe, reliable, efficient, and cost effective collection and conveyance of wastewater to the Nine Springs Wastewater Treatment Plant. An emphasis is placed on projects that reduce the potential for sewer backups and sanitary sewer overflows.

In 2018, Collection System Additions has been removed from the budget. This fund had been used to fund assessable projects when new development requires them however we have found that we generally needed a budget amendment for these fully assessable unforeseen projects and therefore this budget item served little purpose. Infiltration & Inflow Improvements has also been moved out of the capital budget and will be part of the operating budget proposal.

Funds for sewer replacement associated with specific street reconstruction projects are not shown in the Sewer Utility budget but rather in the "Engineering – Major Streets Budget". This was done to provide a full view of funding for City street projects.

### **Prioritized List**

1. Trenchless Sewer Rehabilitation
2. Citywide Pumping Stations – Emergency Power Stationary Generators
3. Lift Station Rehabilitations
4. Sewer Access Improvements
5. Sewer Reconstructions
6. Sewer Impact Fee Districts

### **Discussion of Criteria**

The top priority is Trenchless Sewer Rehabilitation because it is the most cost effective maintenance option we have for the repair of sanitary sewer. It should be noted however that trenchless technology is not able to address all deficiencies in Sanitary Sewers and in some instances sewer replacement is required. As stated in the introduction above, funds for sewer reconstruction can be found in the individual street projects that exist within the Major Streets Budget and these projects are a high priority for the sewer utility. The next priority is Citywide Pumping Stations Emergency Power Generators. This project installs generators at certain lift stations. This is important because in some instances, the City is not able to provide temporary power during a power outage in the timeframe necessary to avoid sewer backups into basements. Sewer Access improvements is the fourth priority because the City is not able to access certain sewers for routine maintenance or emergency repairs. Sewer reconstruction is the fifth priority. Sewer Impact Fee Districts is the last priority however these projects are necessary to facilitate new development.

## Capital Budget Proposals

### Section 1: Identifying Information

#### Agency

#### Proposal Name

#### Munis #

#### Proposal Description

This program is for the systematic installation of emergency power stationary generators at the City's 29 pumping stations, on a prioritized basis.

#### Proposal Type

### Section 2: Budget Information

#### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Reserves Applied - Sewer <input type="text" value="v"/>	57,500	57,500	57,500	57,500	57,500	57,500
<b>Total</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>

 Insert Funding Source

Expense Category	2018	2019	2020	2021	2022	2023
Sanitary Sewer <input type="text" value="v"/>	57,500	57,500	57,500	57,500	57,500	57,500
<b>Total</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>	<b>\$57,500</b>

 Insert Expense Category

### Section 3: Proposal

#### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

 Insert Minor Project

#### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
Machinery and Equipment <input type="text" value="v"/>	Pieces of Machines/Equipment	<input type="text"/>

 Insert End Product

On average, what is the standard useful life for assets maintained by this program?

Is the City currently on track for meeting this standard?

Yes  No

#### Program Goals

What is the program's desired outcome for the customer?

To provide continuous service to City pumping stations even during emergency events. Continuous service will prevent sewer back ups causing private property damage or environmental contamination from sewerage spills.

How is the outcome currently being measured?

Sewer back ups and sanitary sewer overflows(SSO) due to power failure.

#### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

Operating costs are in maintenance of equipment to keep them functional.

#### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No

## Capital Budget Proposals

### Section 1: Identifying Information

#### Agency

#### Proposal Name

#### Munis #

#### Proposal Description

This program funds major repairs and rehabilitation of the Sewer Utility's 29 wastewater lift stations and force mains. This program also provides for unanticipated repairs and equipment replacement for the Sewer Utility.

#### Proposal Type

### Section 2: Budget Information

#### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Reserves Applied - Sewer <input type="text" value="v"/>	62,000	66,000	70,000	70,000	75,000	75,000
<b>Total</b>	<b>\$62,000</b>	<b>\$66,000</b>	<b>\$70,000</b>	<b>\$70,000</b>	<b>\$75,000</b>	<b>\$75,000</b>

 Insert Funding Source

Expense Category	2018	2019	2020	2021	2022	2023
Sanitary Sewer <input type="text" value="v"/>	62,000	66,000	70,000	70,000	75,000	75,000
<b>Total</b>	<b>\$62,000</b>	<b>\$66,000</b>	<b>\$70,000</b>	<b>\$70,000</b>	<b>\$75,000</b>	<b>\$75,000</b>

 Insert Expense Category

### Section 3: Proposal

#### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

 Insert Minor Project

#### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
Machinery and Equipment <input type="text" value="v"/>	Pieces of Machines/Equipment	<input type="text"/>

 Insert End Product

On average, what is the standard useful life for assets maintained by this program?

Is the City currently on track for meeting this standard?

Yes  No

#### Program Goals

What is the program's desired outcome for the customer?

How is the outcome currently being measured?

#### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

#### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No

## Capital Budget Proposals

### Section 1: Identifying Information

#### Agency

#### Proposal Name

#### Munis #

#### Proposal Description

This program will establish permanent sewer maintenance access roads, trails, or paths in areas where access is not well established or non-existent.

#### Proposal Type

### Section 2: Budget Information

#### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Reserves Applied - Sewer <input type="text" value="v"/>	120,000	123,000	130,000	130,000	135,000	135,000
<b>Total</b>	<b>\$120,000</b>	<b>\$123,000</b>	<b>\$130,000</b>	<b>\$130,000</b>	<b>\$135,000</b>	<b>\$135,000</b>

 Insert Funding Source

Expense Category	2018	2019	2020	2021	2022	2023
Land Improvements <input type="text" value="v"/>	120,000	123,000	130,000	130,000	135,000	135,000
<b>Total</b>	<b>\$120,000</b>	<b>\$123,000</b>	<b>\$130,000</b>	<b>\$130,000</b>	<b>\$135,000</b>	<b>\$135,000</b>

 Insert Expense Category

### Section 3: Proposal

#### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
Unallocated		

 Insert Minor Project

#### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
<input type="text" value="v"/>		

 Insert End Product

On average, what is the standard useful life for assets maintained by this program?

Is the City currently on track for meeting this standard?

Yes  No

#### Program Goals

What is the program's desired outcome for the customer?

How is the outcome currently being measured?

#### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

#### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No

## Capital Budget Proposals

### Section 1: Identifying Information

#### Agency

#### Proposal Name

#### Munis #

#### Proposal Description

This program is for extending sanitary sewer to service developing lands. Funding for this program is entirely from sewer service impact fees, and annually budgeted amounts are dependent on development.

#### Proposal Type

### Section 2: Budget Information

#### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Impact Fees <input type="text" value=""/>	0	1,200,000	1,000,000	1,750,000	4,200,000	
<b>Total</b>	\$0	\$1,200,000	\$1,000,000	\$1,750,000	\$4,200,000	\$0
<input type="checkbox"/> Insert Funding Source						
Expense Category	2018	2019	2020	2021	2022	2023
Sanitary Sewer <input type="text" value=""/>		1,200,000	1,000,000	1,750,000	4,200,000	
<b>Total</b>	\$0	\$1,200,000	\$1,000,000	\$1,750,000	\$4,200,000	\$0
<input type="checkbox"/> Insert Expense Category						

### Section 3: Proposal

#### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
Felland Road District	\$0	planned in 2019
Pumpkin Hollow District	\$0	planned in 2020
Lower Badger Mill Phase IV District	\$0	planned in 2021
Northeast Neighborhood Gaston Road Extension District	\$0	planned in 2022

Insert Minor Project

#### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
Sanitary Sewer <input type="text" value=""/>	Miles	

Insert End Product

On average, what is the standard useful life for assets maintained by this program?

New sanitary sewer is planned for a 100 year useful life.

Is the City currently on track for meeting this standard?

Yes  No

#### Program Goals

What is the program's desired outcome for the customer?

Service to developing areas.

How is the outcome currently being measured?

Outcome is based on need by development, no measurement.

#### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

Operating costs would be added due to new additions to the sanitary sewer system.

#### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No

Re-Edit

# Capital Budget Proposals

## Section 1: Identifying Information

### Agency

### Proposal Name

### Munis #

### Proposal Description

This program provides for the replacement of old, problematic sewers in the City. Coordination for the replacement of these sewers is oftentimes completed with the Street Reconstruction and Pavement Management Programs.

### Proposal Type

## Section 2: Budget Information

### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Revenue Bonds - Sewer <input type="text" value="v"/>	0	250,000	250,000	250,000	400,000	400,000
Reserves Applied - Sewer <input type="text" value="v"/>	0	45,000	95,000	95,000	95,000	95,000
Special Assessment - Sewer <input type="text" value="v"/>		5,000	5,000	5,000	5,000	5,000
<b>Total</b>	\$0	\$300,000	\$350,000	\$350,000	\$500,000	\$500,000

 Insert Funding Source

Expense Category	2018	2019	2020	2021	2022	2023
Sanitary Sewer <input type="text" value="v"/>	0	300,000	350,000	350,000	500,000	500,000
<b>Total</b>	\$0	\$300,000	\$350,000	\$350,000	\$500,000	\$500,000

 Insert Expense Category

## Section 3: Proposal

### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

 Insert Minor Project

### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
<input type="text" value="v"/>	<input type="text"/>	<input type="text"/>

 Insert End Product

On average, what is the standard useful life for assets maintained by this program?

Is the City currently on track for meeting this standard?

Yes  No

### Program Goals

What is the program's desired outcome for the customer?

How is the outcome currently being measured?

### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No



# Capital Budget Proposals

## Section 1: Identifying Information

### Agency

Sewer Utility

### Proposal Name

Trenchless Sewer Rehabilitation

### Munis #

10450

### Proposal Description

This program rehabilitates failing sewers that meet certain criteria but do not necessitate the need for a complete replacement by means of open cutting. Current technology allows the lining of existing sewer mains using cameras and remote controlled tools. Some are also rehabilitated (or lined) to address inflow and infiltration problems, where clear water flow enters the sewer system, reducing pipe capacity and increasing treatment costs.

### Proposal Type

Program

## Section 2: Budget Information

### Budget by Year

Funding Source	2018	2019	2020	2021	2022	2023
Revenue Bonds - Sewer	1,200,000	1,280,000	1,350,000	1,350,000	1,480,000	1,480,000
Reserves Applied - Sewer	330,000	330,000	340,000	340,000	380,000	380,000
<b>Total</b>	<b>\$1,530,000</b>	<b>\$1,610,000</b>	<b>\$1,690,000</b>	<b>\$1,690,000</b>	<b>\$1,860,000</b>	<b>\$1,860,000</b>

Insert Funding Source

Expense Category	2018	2019	2020	2021	2022	2023
Sanitary Sewer	1,530,000	1,610,000	1,690,000	1,690,000	1,860,000	1,860,000
<b>Total</b>	<b>\$1,530,000</b>	<b>\$1,610,000</b>	<b>\$1,690,000</b>	<b>\$1,690,000</b>	<b>\$1,860,000</b>	<b>\$1,860,000</b>

Insert Expense Category

## Section 3: Proposal

### Minor Projects

List the minor projects, estimated amounts and locations currently planned for 2017

Minor Project Name	Estimated Cost	Minor Project Location
Standard CIP Lining	\$1,130,000	Citywide
Hot Water Cure Lining	\$400,000	Citywide

Insert Minor Project

### Service Level

What are the end products (asset or infrastructure type) provided by this program?

End Product	Product Unit	# of Units Provided
Sanitary Sewer	Miles	7

Insert End Product

On average, what is the standard useful life for assets maintained by this program?

Estimated life for a lined pipe is 50 years.

Is the City currently on track for meeting this standard?

Yes  No

### Program Goals

What is the program's desired outcome for the customer?

To reduce infiltration of ground water and reduce sewer back ups.

How is the outcome currently being measured?

Number of sewer back ups annually.

### Operating Costs

What are the ongoing operating costs associated with proposed projects within the program?

A slight decrease in operating costs. Rehabilitated sewer requires maintenance one time every 3 years versus 3x per year.

### Matching Funds

Have matching funds been secured for any projects within the program?

Yes  No

Re-Edit