

**City of Madison 2020 Capital Improvement Plan**  
*Agency Request Summary*

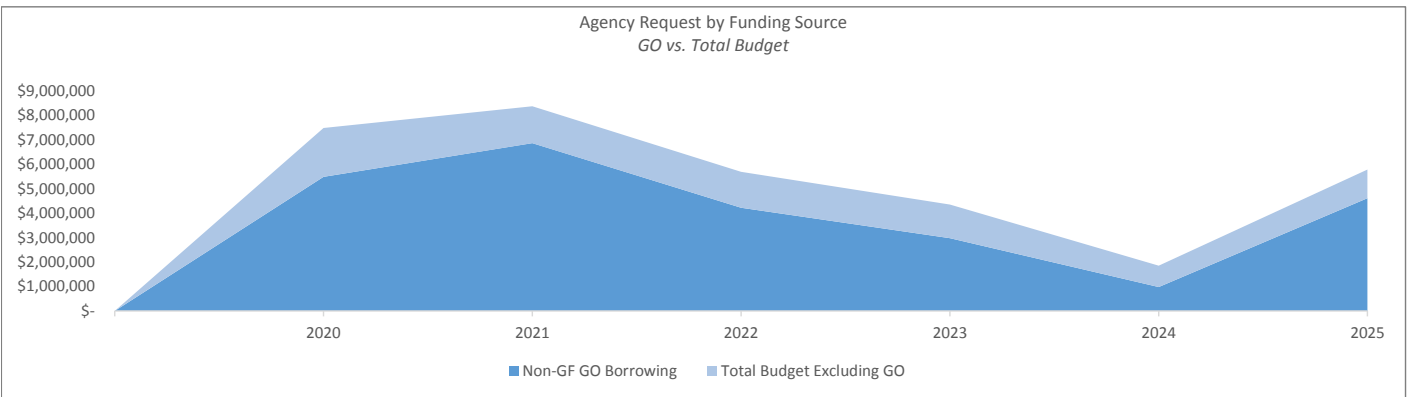
Agency : Stormwater Utility

Agency Request by Item (All Funds)

	2020	2021	2022	2023	2024	2025
Starkweather Coagulant Treatment	1,200,000	100,000	75,000	-	-	-
Street Cleaning Equipment - Streets	455,000	455,000	465,000	300,000	470,000	470,000
Citywide Flood Mitigation	3,000,000	4,515,000	2,800,000	1,900,000	125,000	3,460,000
Storm Sewer System Improvements	475,000	461,000	289,000	400,000	387,000	403,000
Stormwater Quality System Improvements	2,350,000	2,840,000	2,060,000	1,755,000	865,000	1,448,000
<b>Total</b>	<b>\$ 7,480,000</b>	<b>\$ 8,371,000</b>	<b>\$ 5,689,000</b>	<b>\$ 4,355,000</b>	<b>\$ 1,847,000</b>	<b>\$ 5,781,000</b>

Agency Request by Funding Source

Project	2020	2021	2022	2023	2024	2025
Non-GF GO Borrowing	5,486,000	6,864,000	4,219,000	2,980,000	977,000	4,611,000
County Sources	75,000	-	-	-	-	-
Trade In Allowance	45,000	45,000	45,000	25,000	45,000	45,000
Impact Fees	439,000	-	-	-	-	-
Reserves Applied - Stormwater	1,435,000	1,462,000	1,425,000	1,350,000	825,000	1,125,000
<b>Total</b>	<b>\$ 7,480,000</b>	<b>\$ 8,371,000</b>	<b>\$ 5,689,000</b>	<b>\$ 4,355,000</b>	<b>\$ 1,847,000</b>	<b>\$ 5,781,000</b>





Department of Public Works  
**Engineering Division**  
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Jeanne E. Hoffman, Manager  
Bryan Cooper, Principal Architect

**Mapping Section Manager**

Eric T. Pederson, P.S.

**Financial Manager**

Steven B. Danner-Rivers

**Date: May 17, 2019**

**To: David Schmiedicke, Finance Director**

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

**Re: 2020 Capital Budget Proposal  
Stormwater Utility**

**Introduction**

The “Stormwater Utility” budget provides the infrastructure needed to maintain, replace and expand the storm drainage system comprised of pipes, ponds and greenways. The Utility also constructs and maintains various water quality projects that reduce pollutants entering the receiving waters. The 2020 Budget includes four major programs: Citywide Flood Mitigation, Storm Water Quality Improvements, Storm Sewer System Improvements and Street Cleaning Equipment and one major project: Starkweather Coagulant Treatment.

Funding for storm sewer replacement related to street resurfacing and reconstruction projects or other major street projects are placed in the “Engineering – Major Streets” section.

**Prioritized List**

1. Citywide Flood Mitigation
2. Stormwater Quality System Improvements
3. Storm Sewer System Improvements
4. Street Cleaning Equipment
5. Starkweather Coagulant Treatment

**Discussion of Criteria**

The first priority is the Citywide Flood Mitigation program, which has been a critical initiative since the flooding of recent years and the historic flooding in 2018. Watershed studies are being conducted in 2019 and will continue to be funded through the operating budget for the next several years. These studies will identify, prioritize and help budget for major improvements to mitigate flooding around the City. The Stormwater Quality System Improvements program is our second priority and it funds treatment and removal of storm water pollution before reaching the receiving waters. The program also meets DNR/EPA regulatory requirements. The next priority is the Storm Sewer System Improvements. This program funds basic infrastructure repairs that are necessary to keep the system operational, including preventative maintenance such as pipe lining and repairs. The Street Cleaning Equipment program also reduces pollution entering the receiving waters, which is mandated by the DNR/EPA. The final priority is the Starkweather Coagulant Treatment project. This project will remove a significant amount of our required phosphorus and suspended solids reduction requirements.

Submitted

## 2020 Capital Improvement Plan Project Budget Proposal

### Identifying Information

<b>Agency</b>	Stormwater Utility ▼	<b>Project Name</b>	Starkweather Coagulant Treatment ▼
<b>Project Number</b>	10368	<b>Project Type</b>	Project
<b>Project Category</b>	Utility	<b>Priority</b>	5 ▼

### Description

This project funds stormwater diversion runoff from the East Branch of Starkweather Creek to an existing reconfigured pond on land north of Milwaukee Street and east of the Starkweather Creek in the Town of Blooming Grove. Coagulant will be added to diverted runoff allowing it to dissolve phosphorous, preventing it from settling in the pond. The goal of this project is to remove 85% of available phosphorous from the water and to reduce total suspended solids. The new system is expected to remove approximately 1,600 pounds of phosphorous, which is 12% of the City's required regulatory reduction of 13,000 pounds. Common Council amendment #9 reduced funding in 2019 to support the Citywide Flood Mitigation program projects prioritized in 2019. Funding in 2020 will be to restore the previously removed funding back into the project. Construction of the improvements is anticipated in 2020.

**Is this project currently included in the 2019 CIP?** Yes ▼

### Budget Information

**Total Project Budget**  **Prior Appropriation**

### Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
Non-GF GO Borrowing - Stormwater ▼	1,050,000		75,000			
Reserves Applied - Stormwater ▼	150,000	100,000				
<b>Total</b>	\$1,200,000	\$100,000	\$75,000	\$0	\$0	\$0

Insert Funding Source

### Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Stormwater Network ▼	1,200,000	100,000	75,000			
<b>Total</b>	\$1,200,000	\$100,000	\$75,000	\$0	\$0	\$0

Insert Expense Type

### Performance

<b>Metric</b>	Pounds of Total Phosphorous removed to improve water quality within the Starkweather Creek watershed and citywide as mandated for the Rock River TMDL.				
<b>Data Source</b>	Not established yet since project is not built				
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><b>Baseline</b></td> <td style="width: 50%;"><b>Target</b></td> </tr> <tr> <td>0 lbs <input style="width: 80px;" type="text"/></td> <td>1,600 lbs <input style="width: 80px;" type="text"/></td> </tr> </table>	<b>Baseline</b>	<b>Target</b>	0 lbs <input style="width: 80px;" type="text"/>	1,600 lbs <input style="width: 80px;" type="text"/>
<b>Baseline</b>	<b>Target</b>				
0 lbs <input style="width: 80px;" type="text"/>	1,600 lbs <input style="width: 80px;" type="text"/>				

### Priority

<b>Citywide Element</b>	Green and Resilient ▼
<b>Strategy</b>	Improve lake and stream water quality ▼

**Describe how this project advances the Citywide Element:**

Removal of Total Phosphorous is a goal of the Stormwater Utility and is mandated by the Rock River TMDL. This project is anticipated to remove 12% of the City's total requirement and will have a significant benefit to the reduction in phosphorous from the receiving waters.

**What is the justification for this project?**

The Rock River TMDL mandates Total Phosphorous (TP) and Total Suspended Solids (TSS) removal. The City is working towards the goals of the TMDL, in which this project will have a significant impact towards meeting those goals.

### Project Schedule & Location

What is the total time frame for this project?

Start Date: 1/1/2016

End Date: 12/31/2022

	2020	2021	2022	2023	2024	2025
Project Status	Design Completion	Construction	Construction Comple			

Can this project be mapped?

Yes  No

What is the location of the project?

Voit property directly adjacent to Starkweather Creek (Fair Oaks Ave and Milwaukee St)

Is this project on the Project's Portal?

Yes  No

If so, enter the URL:

<http://www.cityofmadison.com/engineering/projects/starkweathertreatment>

### Operating Costs

What are the estimated annual operating costs associated with the project?

\$300,000

#### Personnel

# of FTEs	Annual Cost	Description
0	0	There are no additional employees anticipate to manage this facility.

#### Non-Personnel

Major	Amount	Description
	300,000	<p>This project creates a new treatment system for the removal of phosphorous and total suspended solids from Starkweather Creek. Like all treatment systems, such as ponds, catchbasins, street sweeping and raingardens, the process of removal and collection increases rather than reduces operations costs. The real question is does this project create an efficient operational cost or an inefficient one. To put this into perspective, compare this to other treatment options.</p> <p>A modern catchbasin design captures approximately 4lbs of TP annually and has a capital cost of approximately \$35,000 with an annual maintenance cost of approximately \$1,000. The maintenance per pound of TP removed is approximately \$250/lbs/year. A traditional pond system has a capital cost of approximately \$1,000,000 (not including the cost of land) and could be expected to capture approximately 200lbs of TP per year. Dredging is required every 15 years (on average and costs approximately \$300,000), giving an average cost for TP removal of \$100/lbs/year (ignoring mowing and routine maintenance of the pond).</p> <p>This project does not take into account the additional operational costs for mowing and managing the pond. This treatment system proposed to capture approximately 1600 lbs of TP with annual maintenance cost of \$300,000, which is approximately \$187.50/lbs/year. We believe the operational and maintenance cost for this project is conservative and this estimate is reasonable.</p>

Insert item

Save

Submit

### Notes

Notes:

Save and Close

Submitted

## 2020 Capital Improvement Plan Program Budget Proposal

### Identifying Information

**Agency**  **Project Name**

**Project Number** 10554 **Project Type** Program

**Project Category** Other **Priority**

**2020 Munis Project Number**

### Description

This program funds the replacement of existing street sweeping machines operated by the Streets Division. The City's street sweeping equipment life cycle is five years with interim maintenance. The goal of this program is to reduce the discharge of pollutants and solids to the lakes by removing material from the streets surface before it is mixed with storm water runoff. Funding in 2020 will be used to replace two street cleaning vehicles.

### Budget Information

**Prior Appropriation\***  **Prior Year Actual\***

\*Based on Fiscal Years 2015-2018

### Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
Reserves Applied - Stormwater	410,000	410,000	420,000	275,000	425,000	425,000
Trade In Allowance	45,000	45,000	45,000	25,000	45,000	45,000
<b>Total</b>	<b>\$455,000</b>	<b>\$455,000</b>	<b>\$465,000</b>	<b>\$300,000</b>	<b>\$470,000</b>	<b>\$470,000</b>

Insert Funding Source

### Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Machinery and Equipment	455,000	455,000	465,000	300,000	470,000	470,000
<b>Total</b>	<b>\$455,000</b>	<b>\$455,000</b>	<b>\$465,000</b>	<b>\$300,000</b>	<b>\$470,000</b>	<b>\$470,000</b>

Insert Expense Type

### Performance

**Metric**

**Data Source**

#### Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target
4551		4800	4800

### Priority

**Citywide Element**

**Strategy**

**Describe how this project advances the Citywide Element:**

The City attempts to sweep all areas of the City on a 24-day cycle and downtown areas weekly during the spring, summer and fall months. Additionally, street sweepers are used to sweep immediately (within 24 hour period) after leaf collection. Sweeping reduces the total suspended solids (TSS) and total phosphorous (TP) that enters the storm sewer system, lakes and other water bodies.

### Project Schedule & Location

**2020 Projects**

Project name	Est Cost	Location
Machinery and Equipment Replacement	\$455,000	NA

Insert item

**Explain the justification for selecting projects planned for 2020:**

Replacement of machinery and equipment is on a 5-year cycle. In 2020, 2021, 2022, 2024 and 2025 (2) mechanical sweepers will be replaced per yer.

**2021 Projects**

Project Name	Est Cost	Location
Machinery and Equipment Replacement	\$455,000	NA

Insert item

**Explain the justification for selecting projects planned for 2021:**

Replacement of machinery and equipment is on a 5-year cycle. In 2020, 2021, 2022, 2024 and 2025 (2) mechanical sweepers will be replaced per yer.

**2022 Projects**

Project Name	Est Cost	Location
Machinery and Equipment Replacement	\$465,000	NA

Insert item

**Explain the justification for selecting projects planned for 2022:**

Replacement of machinery and equipment is on a 5-year cycle. In 2020, 2021, 2022, 2024 and 2025 (2) mechanical sweepers will be replaced per yer.

**2023 Projects**

Project name	Est Cost	Location
Machinery and Equipment Replacement	\$300,000	NA

Insert item

**Explain the justification for selecting projects planned for 2023:**

In 2023 the existing vacuum sweeper will be replaced.

**2024 Projects**

Project name	Est Cost	Location
Machinery and Equipment Replacement	\$470,000	NA

Insert item

**Explain the justification for selecting projects planned for 2024:**

Replacement of machinery and equipment is on a 5-year cycle. In 2020, 2021, 2022, 2024 and 2025 (2) mechanical sweepers will be replaced per yer.

**2025 Projects**

Project name	Est Cost	Location
Machinery and Equipment Replacement	\$470,000	NA

Insert item

**Explain the justification for selecting projects planned for 2025:**

Replacement of machinery and equipment is on a 5-year cycle. In 2020, 2021, 2022, 2024 and 2025 (2) mechanical sweepers will be replaced per yer.

### Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program?

**Personnel**

# of FTEs	Annual Cost	Description
<input type="text" value="0"/>	<input type="text" value="1,414,100"/>	No additional staffing will be required to continue this program as this is just a replacement of the existing equipment. Last year the Stormwater Utility paid \$1,985,724.26 for the sweeping service. That breaks down to \$1,409,788.37 Salary/Fringe and \$575,935.89 Other Costs.

**Non-Personnel**

Major	Amount	Description
<input type="text"/>	<input type="text" value="575,900"/>	See above. It is expected that the costs can be absorbed in the existing operating budget.

Insert item

### Notes

Notes:

v. 5-22-2019

Save and Close

Submitted

## 2020 Capital Improvement Plan Program Budget Proposal

### Identifying Information

**Agency**  **Project Name** 
  
**Project Number** 11513 **Project Type** Program
   
**Project Category** Utility **Priority** 
  
**2020 Munis Project Number**

### Description

This program funds improvements to the stormwater network in the City where flooding occurs during large rain events. The goal of the program is to eliminate flooding and protect property from damage. Common Council amendment #9 added funding to 2019 for watershed studies, land acquisitions, and public works projects as a direct result from the August 2018 flood event. Continued funding for flood mitigation in 2020 include work in the Hawks Landing subdivision, design and permitting of channel and pond improvements and flood mitigation on South Street.

### Budget Information

**Prior Appropriation\***  **Prior Year Actual\*** 
  
\*Based on Fiscal Years 2015-2018

### Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
Non-GF GO Borrowing - Stormwater	1,591,000	4,015,000	250,000	1,550,000	75,000	3,160,000
Reserves Applied - Stormwater	500,000	500,000	350,000	350,000	50,000	300,000
Non-GF GO Borrowing - TIF District	470,000		2,200,000			
Impact Fees	439,000					
<b>Total</b>	<b>\$3,000,000</b>	<b>\$4,515,000</b>	<b>\$2,800,000</b>	<b>\$1,900,000</b>	<b>\$125,000</b>	<b>\$3,460,000</b>

Insert Funding Source

### Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Stormwater Network	3,000,000	4,515,000	2,800,000	1,900,000	125,000	3,460,000
<b>Total</b>	<b>\$3,000,000</b>	<b>\$4,515,000</b>	<b>\$2,800,000</b>	<b>\$1,900,000</b>	<b>\$125,000</b>	<b>\$3,460,000</b>

Insert Expense Type

### Performance

**Metric** 
  
**Data Source**

#### Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target

### Priority

**Citywide Element** 
  
**Strategy**

#### Describe how this project advances the Citywide Element:

The goal of this program is to reduce flooding on a local and regional scale. Improvements listed will protect property and will provide flood mitigation on roadways for vehicles, bicycles and pedestrians while also improving street and roadway access for emergency vehicles during large rain events.



## Project Schedule &amp; Location

**2020 Projects**

<i>Project name</i>	<i>Est Cost</i>	<i>Location</i>
Unallocated Backyard Drainage	\$50,000	Locations TBD
Local Flood Mitigation - South Street	\$470,000	South Street from Wingra Drive to Midland Street
Regional Flood Mitigation - Hawks Landing	\$500,000	Hawks Landing Subdivision
Regional Flood Mitigation - Old Sauk Trails Pond	\$75,000	8308 Excelsior Drive
Unallocated Regional Flood Mitigation	\$1,405,000	Locations TBD
Land Acquisition - Hawks Landing Flood Mitigation	\$500,000	10004 and 10150 Mid Town Road

Insert item

**Explain the justification for selecting projects planned for 2020:**

The South Street stormwater project is a project to upgrade the storm sewer system to alleviate flooding in conjunction with the redevelopment that is occurring in this area.

The flood mitigation projects at Hawks Landing have been in the planning and design phase for several years. Additional funds are being added to supplement the 2019 budget. Land Acquisition for the properties adjacent to Hawks Landing will be used to construct a large regional Stormwater facility, as identified in the Lower Badger Mill Creek Sanitary and Stormwater Management Impact Fee Needs Assessment.

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

It is anticipated that several large flood mitigation projects will be identified in the 8 Watershed Studies that Engineering will be conducting in 2019-2020. Unallocated funds are being set aside for design, permitting and construction of those projects.

**2021 Projects**

<i>Project Name</i>	<i>Est Cost</i>	<i>Location</i>
Unallocated Backyard Drainage	\$50,000	Locations TBD
Unallocated Local Flood Mitigation	\$50,000	Locations TBD
Unallocated Regional Flood Mitigation	\$4,415,000	Locations TBD

Insert item

**Explain the justification for selecting projects planned for 2021:**

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

It is anticipated that several large flood mitigation projects will be identified in the 8 Watershed Studies that Engineering will be conducting in 2019-2020. Unallocated funds are being set aside for design, permitting and construction of those projects.

**2022 Projects**

<i>Project Name</i>	<i>Est Cost</i>	<i>Location</i>
Unallocated Backyard Drainage	\$50,000	Locations TBD
Unallocated Local Flood Mitigation	\$50,000	Locations TBD
Regional Flood Mitigation - Winnebago/Eastwood/Amoth/Atwood	\$2,200,000	Winnebago/Eastwood/Amoth/Atwood
Unallocated Regional Flood Mitigation	\$500,000	Location TBD

Insert item

**Explain the justification for selecting projects planned for 2022:**

Regional flood mitigation efforts on Winnebago/Eastwood/Amoth/Atwood have been previously identified in the 2019 budget.

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

It is anticipated that several large flood mitigation projects will be identified in the Watershed Studies that Engineering will be conducting. Unallocated funds are being set aside for design, permitting and construction of those projects.

**2023 Projects**

<i>Project name</i>	<i>Est Cost</i>	<i>Location</i>
Unallocated Backyard Drainage	\$50,000	Locations TBD
Unallocated Local Flood Mitigation	\$50,000	Locations TBD
Unallocated Regional Flood Mitigation	\$1,800,000	Locations TBD

Insert item

**Explain the justification for selecting projects planned for 2023:**

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

It is anticipated that several large flood mitigation projects will be identified in the Watershed Studies that Engineering will be conducting. Unallocated funds are being set aside for design, permitting and construction of those projects.

**2024 Projects**

<i>Project name</i>	<i>Est Cost</i>	<i>Location</i>
Unallocated Backyard Drainage	\$50,000	Locations TBD
Unallocated Local Flood Mitigation	\$75,000	Locations TBD

Insert item

**Explain the justification for selecting projects planned for 2024:**

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

**2025 Projects**

Project name	Est Cost	Location
Unallocated Backyard Drainage	\$50,000	Locations TBD
Unallocated Local Flood Mitigation	\$200,000	Locations TBD
Unallocated Regional Flood Mitigation	\$3,210,000	Locations TBD

Insert item

**Explain the justification for selecting projects planned for 2025:**

Backyard Drainage and Local Flood Mitigation funds are used for projects that come up during the year that can address smaller scale flood mitigation efforts.

It is anticipated that several large flood mitigation projects will be identified in the Watershed Studies that Engineering will be conducting. Unallocated funds are being set aside for design, permitting and construction of those projects.

**Operating Costs**

What are the estimated annual operating costs associated with the projects planned within this program?

**Personnel**

# of FTEs	Annual Cost	Description
<input type="text" value="0"/>	<input type="text" value="0"/>	Operational costs for improvements to the storm sewer system should not increase or add the need for full time staff. Many of the anticipated improvements will be upgrades to the existing stormwater network or improvements or additions to existing detention, retention, greenway or other flood control systems.

**Non-Personnel**

Major	Amount	Description
<input type="text"/>	<input type="text" value="0"/>	Maintenance of existing storm sewer and existing flood control systems such as ponds and greenways are already covered under the existing operating budget. Upgrading existing storm sewer pipes should not add any significant operating costs. If any additional green infrastructure such as ponds or greenways are added, those costs for mowing and general maintenance of the facilities will be absorbed into the existing operating budget.

Insert item

**Notes**

Notes:

Submitted

## 2020 Capital Improvement Plan Program Budget Proposal

### Identifying Information

**Agency**  **Project Name** 
  
**Project Number** 11664 **Project Type** Program
   
**Project Category** Utility **Priority** 
  
**2020 Munis Project Number**

### Description

This program funds improvements to the storm sewer network by providing repairs, rehabilitation, and expansion throughout the City. The goal of this program is to ensure a reliable storm sewer system for City residents. The program includes annual minor projects for storm sewer cured-in-place-pipe lining (CIPP), storm sewer improvements in developing areas, and stormwater conveyance improvements.

### Budget Information

**Prior Appropriation\***  **Prior Year Actual\*** 
  
\*Based on Fiscal Years 2015-2018

### Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
Non-GF GO Borrowing - Stormwater	70,000	226,000	89,000	150,000	237,000	203,000
Reserves Applied - Stormwater	75,000	235,000	200,000	250,000	150,000	200,000
Non-GF GO Borrowing - TIF District	330,000					
<b>Total</b>	<b>\$475,000</b>	<b>\$461,000</b>	<b>\$289,000</b>	<b>\$400,000</b>	<b>\$387,000</b>	<b>\$403,000</b>

Insert Funding Source

### Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Stormwater Network	475,000	461,000	289,000	400,000	387,000	403,000
<b>Total</b>	<b>\$475,000</b>	<b>\$461,000</b>	<b>\$289,000</b>	<b>\$400,000</b>	<b>\$387,000</b>	<b>\$403,000</b>

Insert Expense Type

### Performance

**Metric** 
  
**Data Source**

#### Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target
48601			2%

### Priority

**Citywide Element** 
  
**Strategy** 
  
**Describe how this project advances the Citywide Element:**

## Project Schedule & Location

### 2020 Projects

Project name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$10,000	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$135,000	various locations
South Street Storm Improvements - Stormwater Only Project	\$330,000	South Street from W. Wingra Drive to Midland Street

Insert item

#### Explain the justification for selecting projects planned for 2020:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; and the South Street stormwater project is a project to upgrade the storm sewer system to alleviate flooding in conjunction with the redevelopment that is occurring in this area.

### 2021 Projects

Project Name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$21,000	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$200,000	various locations
Lake View Storm Improvements - Stormwater Only Project	\$240,000	Mid block stormwater improvements between Lake View Avenue to Drewry Lane in conjunction with the Lake Vie...

Insert item

#### Explain the justification for selecting projects planned for 2021:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; and the Lake View Avenue stormwater project is a project to upgrade the storm sewer system to fix failing pipes that are located within easements on private property.

### 2022 Projects

Project Name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$22,000	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$225,000	various locations
Unallocated - Stormwater Only Project	\$42,000	various TBD

Insert item

#### Explain the justification for selecting projects planned for 2022:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; the unallocated stormwater project funds will be used for stormwater improvements to be determined in the future.

### 2023 Projects

Project name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$20,000	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$220,000	various locations
Unallocated - Stormwater Only Project	\$160,000	various TBD

Insert item

#### Explain the justification for selecting projects planned for 2023:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; the unallocated stormwater project funds will be used for stormwater improvements to be determined in the future.

### 2024 Projects

Project name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$17,500	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$200,000	various locations
Unallocated - Stormwater Only Project	\$170,000	various TBD

Insert item

#### Explain the justification for selecting projects planned for 2024:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; the unallocated stormwater project funds will be used for stormwater improvements to be determined in the future.

### 2025 Projects

Project name	Est Cost	Location
Cured In Place Pipe (CIPP)	\$20,000	various locations
Citywide Stormwater Improvements (ULO and Waterways)	\$200,000	various locations
Unallocated - Stormwater Only Project	\$183,000	various TBD

Insert item

#### Explain the justification for selecting projects planned for 2025:

CIPP projects are on-going preventative maintenance practices; the ULO contract is used on a yearly basis to help identify utility conflicts prior to construction of public works contracts to save time and money with costly delays and redesigns; Waterways is a yearly group of projects that is performed by City Operations to complete repairs in-house vs hiring contractors to perform repairs to the storm sewer system; the unallocated stormwater project funds will be used for stormwater improvements to be determined in the future.

### Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program? \$0

#### Personnel

# of FTEs	Annual Cost	Description
0	0	There are no anticipated employee or staffing needs to maintain this program.

#### Non-Personnel

Major	Amount	Description
	0	Improvements to the storm sewer network will help reduce issues with maintenance and cleaning, which will eventually lead to less staff time or contractor repairs which is normally seen in a system with aging and failing infrastructure.

Insert item

Save

Submit

### Notes

Notes:

Save and Close

Submitted

## 2020 Capital Improvement Plan Program Budget Proposal

### Identifying Information

**Agency**  **Project Name**

**Project Number** 11665 **Project Type** Program

**Project Category** Utility **Priority**

**2020 Munis Project Number**

### Description

This program funds stormwater quality improvement projects associated with the City's WDNR/EPA stormwater discharge permit. The goal of this program is to improve the quality of the stormwater and compliance with environmental guidelines and initiatives. Projects within the program are prioritized annually and include: greenway reconstructions, storm water pond improvements, shoreline restoration, and urban water quality projects. Smaller projects include rain gardens with street reconstruction and dredging.

### Budget Information

**Prior Appropriation\***  **Prior Year Actual\***

\*Based on Fiscal Years 2015-2018

### Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
Non-GF GO Borrowing - Stormwater	1,975,000	2,623,000	1,605,000	1,280,000	665,000	1,248,000
Reserves Applied - Stormwater	300,000	217,000	455,000	475,000	200,000	200,000
County Sources	75,000					
<b>Total</b>	<b>\$2,350,000</b>	<b>\$2,840,000</b>	<b>\$2,060,000</b>	<b>\$1,755,000</b>	<b>\$865,000</b>	<b>\$1,448,000</b>

Insert Funding Source

### Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Stormwater Network	2,350,000	2,840,000	2,060,000	1,755,000	865,000	1,448,000
<b>Total</b>	<b>\$2,350,000</b>	<b>\$2,840,000</b>	<b>\$2,060,000</b>	<b>\$1,755,000</b>	<b>\$865,000</b>	<b>\$1,448,000</b>

Insert Expense Type

### Performance

**Metric**

**Data Source**

#### Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target

### Priority

**Citywide Element**

**Strategy**

**Describe how this project advances the Citywide Element:**

This program directly correlates to the strategy of improved lake and stream water quality. The removal and reduction of Total Phosphorus (TP) and Total Suspended Solids (TSS) will have a direct impact on water quality and will help meet our goals and mandates of the Rock River TMDL.

## Project Schedule &amp; Location

**2020 Projects**

Project name	Est Cost	Location
Greenway - Old Sauk Trails Business Park (design and permits)	\$75,000	8308 Excelsior Drive
Greenway - Sauk Creek Ph 3 & 4	\$275,000	7498 Tree Lane and 7713 Old Sauk Road
Pond - Curtis /Coyote Pond - agreement with UW-Madison Arboretum	\$500,000	UW Arboretum, Longenecker Dr, Madison, WI 53713
Dredge - Wexford pond and greenway	\$700,000	1005 N. Highpoint Road
Rain garden - Spring Harbor School	\$75,000	1110 Spring Harbor Drive
Pond -Sycamore Dry pond retrofit	\$675,000	4801 Sycamore Avenue
Unallocated Rain Gardens	\$25,000	various locations TBD
Other Water Quality BMP - Hawks Landing Sediment Traps	\$25,000	Hawks Landing Golf Course

Insert item

**Explain the justification for selecting projects planned for 2020:**

Several projects in 2020 have been planned and design and permitting have begun. The Curtis Pond and Coyote Pond are in conjunction with an Intergovernmental Agreement (IGA) between the City of Madison, City of Fitchburg, Town of Madison, WDOT and UW Madison-Wisconsin, which addressed joint funding for stormwater management and construction improvements that drain to the UW-Madison Arboretum lands. In 2020 the City will reimburse the UW-Madison Arboretum \$500,000 and in 2021 the City will reimburse the remaining \$500,000, in accordance with the IGA.

The Sycamore Dry Pond retrofit and rain gardens will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**2021 Projects**

Project Name	Est Cost	Location
Greenway - Sauk Creek Ph 5	\$340,000	7598 Tree Lane
Greenway - Old Sauk Trails Business Park (Construction)	\$900,000	8308 Excelsior Drive
Greenway - Hickory Hollow	\$750,000	6024 Old Middleton Road
Pond - Curtis /Coyote Pond - agreement with UW-Madison Arboretum	\$500,000	UW Arboretum, Longenecker Dr, Madison, WI 53713
Unallocated Dredge	\$300,000	Location TBD
Unallocated Rain Gardens	\$25,000	various locations TBD
Other Water Quality BMP - Hawks Landing Sediment Traps	\$25,000	Hawks Landing Golf Course

Insert item

**Explain the justification for selecting projects planned for 2021:**

Planning for the Sauk Creek greenway corridor has occurred over the last 5 years with the final section (Phase 5) to be completed in 2021. Planning, design and permitting for the pond at Old Sauk Business Park will occur in 2019 and 2020 while construction will commence in 2021. The greenway at Hickory Hollow has been requested by property owners who have had flooding and drainage issues. The Stricker's/Mendota Watershed Study will be completed in 2020 and will provide alternatives for the Hickory Hollow greenway and channel repairs. In addition to mitigation of flooding, this project will also provide Total Phosphorus (TP) and Total Suspended Solid (TSS) removal prior to discharging to Lake Mendota. The Curtis Pond and Coyote Pond are in conjunction with an Intergovernmental Agreement between the City of Madison, City of Fitchburg, Town of Madison, WDOT and UW Madison-Wisconsin, which addressed joint funding for stormwater management and construction improvements that drain to the UW-Madison Arboretum lands. In 2020 the City will reimburse the UW-Madison Arboretum \$500,000 and in 2021 the City will reimburse the remaining \$500,000, in accordance with the IGA.

Rain gardens and other Water Quality BMPs will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**2022 Projects**

Project Name	Est Cost	Location
Greenway - Mendota Spring Harbor - Regent Street	\$225,000	5348 Regent Street
Greenway - Mendota Spring Harbor - South Hill Drive	\$360,000	5399 Regent Street
Greenway - Mendota Spring Harbor - Masthead Drive	\$270,000	101 Nautilus Drive
Greenway - Arbor Hills	\$270,000	2701 Post Road
Pond - Cottage Grove Road Retention Pond (SW)	\$300,000	801 Cottage Grove Rd
Dredge - Garner Park Pond	\$250,000	333 S. Rosa Road
Unallocated Dredge	\$300,000	Location TBD
Unallocated Shoreline	\$25,000	Location TBD
Unallocated Rain Gardens	\$35,000	various locations TBD
Other Water Quality BMP - Hawks Landing Sediment Traps	\$25,000	Hawks Landing Golf Course

Insert item

**Explain the justification for selecting projects planned for 2022:**

The Mendota Spring Harbor greenways are now to the point where they require a major renovation to improve conveyance, reduce flooding, reduce erosion and increase water quality. These sections of greenways are in the Spring Harbor Watershed Study, which will be completed in 2020 and will provide alternatives for the greenway and channel repairs.

In addition to helping with flood mitigation, routine maintenance of greenways, ponds and rain gardens will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL. Shoreline maintenance locations are unknown at this time and unallocated funds will be available to complete routine maintenance to ensure our shoreline integrity.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**2023 Projects**

Project name	Est Cost	Location
Greenway - Starkweather - Olbrich/Cottage Grove Rd	\$300,000	3402 Atwood Ave
Greenway - East Starkweather/East Towne/Parkside Drive	\$300,000	4201 Lien Road
Greenway - Baker / Camelot	\$350,000	5899 Taychopera Road and 1842 Camelot Drive
Greenway - Pilgrim Park	\$300,000	2401 McKenna Blvd
Unallocated Pond	\$95,000	Location TBD
Unallocated Dredge	\$300,000	Location TBD
Unallocated Shoreline	\$50,000	Location TBD
Unallocated Rain Gardens	\$35,000	various locations TBD
Other Water Quality BMP - Hawks Landing Sediment Traps	\$25,000	Hawks Landing Golf Course

Insert item

**Explain the justification for selecting projects planned for 2023:**

In addition to helping with flood mitigation, routine maintenance of greenways, ponds and rain gardens will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL. Shoreline maintenance locations are unknown at this time and unallocated funds will be available to complete routine maintenance to ensure our shoreline integrity.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**2024 Projects**

Project name	Est Cost	Location
Greenway - East Mendota-Whitacre	\$290,000	7410 Whitacre Road
Unallocated Greenway	\$100,000	Location TBD
Unallocated Pond	\$50,000	Location TBD
Unallocated Dredge	\$300,000	Location TBD
Unallocated Shoreline	\$50,000	Location TBD
Unallocated Rain Gardens	\$50,000	various locations TBD
Other Water Quality BMP - Hawks Landing Sediment Traps	\$25,000	Hawks Landing Golf Course

Insert item

**Explain the justification for selecting projects planned for 2024:**

In addition to helping with flood mitigation, routine maintenance of greenways, ponds and rain gardens will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL. Shoreline maintenance locations are unknown at this time and unallocated funds will be available to complete routine maintenance to ensure our shoreline integrity.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**2025 Projects**

Project name	Est Cost	Location
Greenway - North Penito Creek - Rustic Woods	\$750,000	2202 S. Thompson Drive
Pond - Atlas Pond at Argosy and Atlas	\$350,000	506 Atlas Avenue
Unallocated Dredge	\$300,000	Location TBD
Unallocated Rain Gardens	\$25,000	various locations TBD
Other Water Quality BMPs	\$23,000	various locations TBD

Insert item

**Explain the justification for selecting projects planned for 2025:**

In addition to helping with flood mitigation, routine maintenance of greenways, ponds and rain gardens will remove and reduce Total Phosphorus and Total Suspended Solids will have a direct correlation to water quality and will help meet our goals and mandates of the Rock River TMDL. Shoreline maintenance locations are unknown at this time and unallocated funds will be available to complete routine maintenance to ensure our shoreline integrity.

The City's WDNR/EPA stormwater discharge permit calls for the dredging of stormwater management ponds and is required under Chapter NR 528, Wis. Adm. Code, *Management of Accumulated Sediment from Storm Water Management Structures*.

**Operating Costs**

What are the estimated annual operating costs associated with the projects planned within this program?

Personnel



# of FTEs	Annual Cost	Description
0	0	Operational costs for improvements to the stormwater quality systems should not increase or add the need for full time staff. As the overall system expands with new development additional employees may be necessary to maintain the system, however this program is for repairs and maintenance of existing facilities. The exception is for new rain gardens or other stormwater quality devices that will be installed, however those facilities are not anticipated to require any additional staffing as the rain gardens are maintained under a maintenance contract and the number of additional stormwater quality devices or BMPs are not anticipated to have an impact on staffing needs.

**Non-Personnel**

Major	Amount	Description
	0	Mowing and general maintenance of facilities are already covered under the existing operating budget. Upgrading existing facilities will help lessen repairs and will help to keep the facilities on a more routine and managable maintenance schedule. Additional funds may be required for the administration of the rain garden and invasive maintenance contract.

Insert item

Save

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**Notes**

Notes:

Save and Close