



2019 Green Bonds Report for the City of Saint Paul

Series 2017C Sewer Revenue Bonds
Series 2018D Sewer Revenue Bonds
Series 2019F Sewer Revenue Bonds

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A Note from the Treasurer

Mayor Melvin
Carter and the
Saint Paul City
Council



recognize that climate change is a serious threat to the health, safety and quality of life for all residents. The City is developing a Climate Action and Adaptation plan with a focus on achieving carbon neutrality in city operations by 2030 and on strategies for the City to adapt to the changing climate. Additionally, in 2018 the City was selected as a winner of the Bloomberg Philanthropies American Cities Climate Challenge, a \$70M program to tackle climate change and promote sustainable future for residents.

One way the City is doing this is by viewing rain as a resource, not a waste product sent to the Mississippi River through stormwater drains and pipes. By looking at stormwater treatment in innovative ways at new development sites, such as CHS Field, the Snelling-Midway redevelopment surrounding Allianz Field and the future Ford site redevelopment, the City looks to create vibrant community-building amenities such as green space and water features for all residents and visitors to enjoy.

Since 2015, the City's Office of Financial Services Treasury Division has contributed to

the City's efforts on sustainability by giving investors the opportunity to invest directly in environmentally-oriented capital investments through the purchase of "Green Bonds". The City's \$8,700,000 Sewer Revenue Green Bonds, Series 2015B were the first sold in the State of Minnesota, as well as one of the first Green Bond issuances under \$10,000,000. The City has continued to issue Sewer Revenue Green Bonds subsequently every year. This innovative financing tool accomplished the annual goal of securing the lowest possible cost financing for these important projects, while also advancing the City's goals around sustainability.

In order to provide investors with ongoing information regarding the projects financed by the City's Green Bonds, the Treasury Division is providing the spending data on projects that have been funded by the City's Green Bonds, and the environmental impact the projects have made.

We hope that you find this report helpful and informative. Thank you for your interest and investment in the City's Green Bond program and sustainability in Saint Paul.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Solomon". The signature is fluid and cursive, written over a white background.

Michael Solomon,
Treasurer, Office of Financial Services

Annual Reporting Commitment

The City of Saint Paul (the “City”) intends to report on its Green Bond program at least annually, or until the proceeds of a series have been spent. The City’s Sewer Revenue Bonds, Sewer Revenue Bonds, Series 2017C; Sewer Revenue Bonds, Series 2018D; and Sewer Revenue Bonds, Series 2019F will be referred to herein as the “Green Bonds”.

In the process of issuing the Green Bonds, the City worked with its municipal advisor, Baker Tilly, LLP, to ensure that the program complies with the Green Bond Principles (the “Principles”) as outlined by the International Capital Market Association. The Principles are voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market. The Principles include the following four components:

1. Use of proceeds
2. Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

This report shows spending through year end December 31, 2018, and includes financing data for projects in 2019.

Use of Proceeds

The City’s annual capital improvement and maintenance plan places a priority on sanitary and storm sewer improvement projects for aging infrastructure that are most likely to allow for exfiltration of untreated wastewater from the infrastructure, inflow and infiltration of clean water into the system, and untreated storm water into the environment.

The City has determined that the projects funded by the Green Bonds meet two categories:

1. **Sustainable Waste Management** (e.g. reducing the exfiltration of contaminated wastewater into the ground or reducing the risk of sewage back-up into the environment)
2. **Sustainable Water Management** (e.g. reducing the amount of clean water entering sewer systems or improving/adding new water treatment systems)

The Green Bonds are secured solely by revenues of the City’s Sewer Utility. The table below gives an overview of the proceeds deposited and actual spending for the Green Bonds. Net Proceeds Deposited is the amount of the bond series deposited into the construction account. Actuals is the total amount of bond proceeds spent on expenses for the designated construction projects.

Bond Issuance	Net Proceeds Deposited	Actuals (YE 2018)	Ending Balance**
Sewer Revenue Bonds, Series 2017C	\$8,000,000	\$8,000,000	-
Sewer Revenue Bonds, Series 2018D	\$7,874,687	\$2,405,785	\$5,468,902
Sewer Revenue Bonds, Series 2019F	\$8,000,000*	-	\$8,000,000*

*The Series 2019F Bonds will be sold spring 2019. Preliminary, subject to change.

**Bonds will be drawn down to a de minimis amount.

The City has established processes and procedures to ensure the segregation of all bond proceeds from other city funds. In accordance with the Green Bond resolutions and IRS regulations, the proceeds from the Green Bonds have been deposited into segregated project accounts to be drawn upon to finance the costs of the individual projects.

Project Selection

The City owns and maintains approximately 804 miles of sanitary sewer and 450 miles of storm sewer, located in public streets, alleys, or easements. Most of the sanitary sewer system was constructed during the period 1887 to 1958, meaning that most of the system is at least 50 years old and nearly half of it is 75-125 years old.

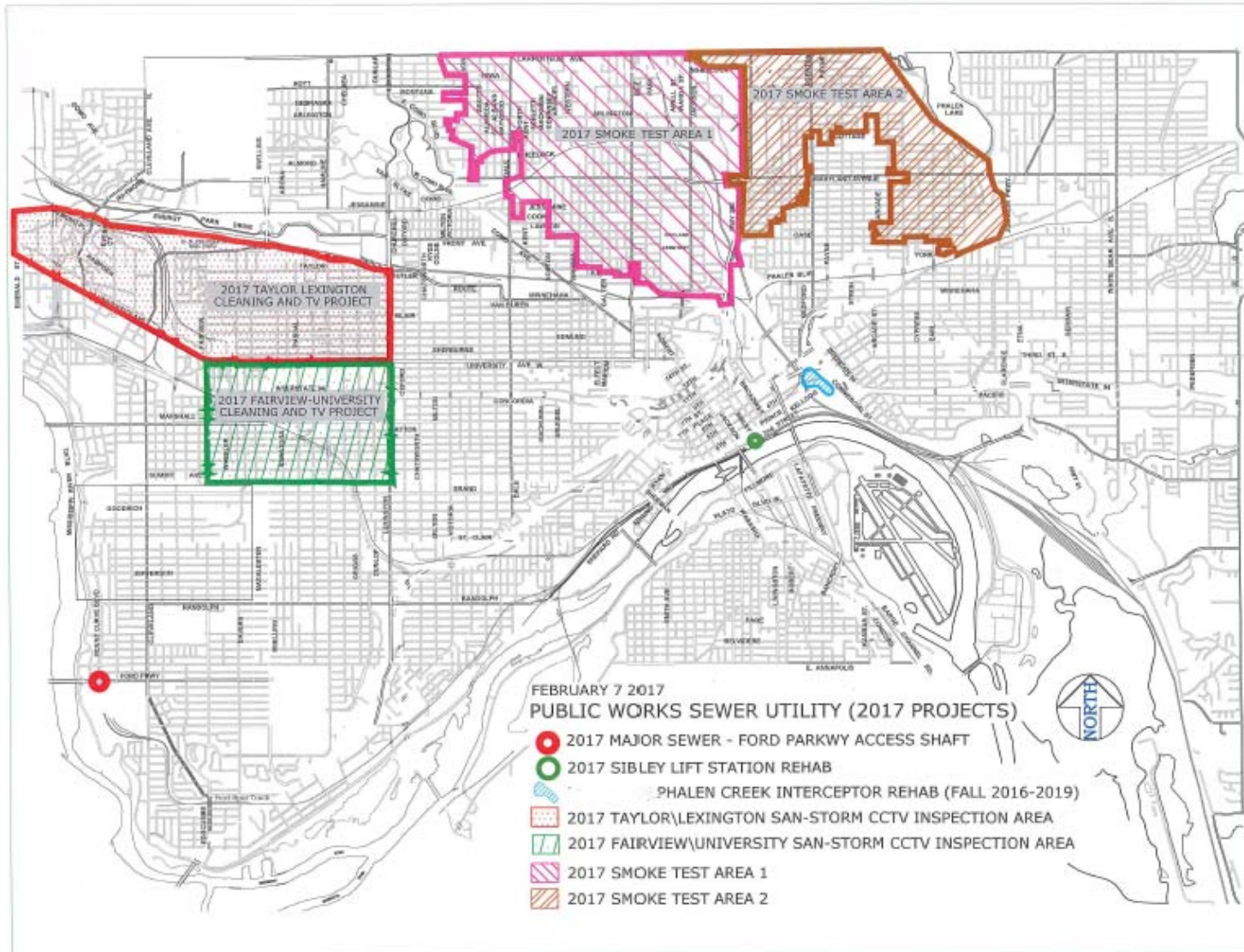
Projects are identified via a variety of testing processes and procedures, such as safety testing, video monitoring and manual inspections—portions of which were also financed by the bonds. Testing lasts about 30 minutes, and simulated smoke may be seen coming from manhole covers, storm drains, roof vents and building foundations. The sanitary sewer cleaning and televising program has a goal to clean and inspect approximately 80 miles of sanitary sewers, including manholes, each year. The program helps to evaluate pipes so that any necessary maintenance, repair or replacement can be scheduled to minimize unexpected problems and emergency repairs.



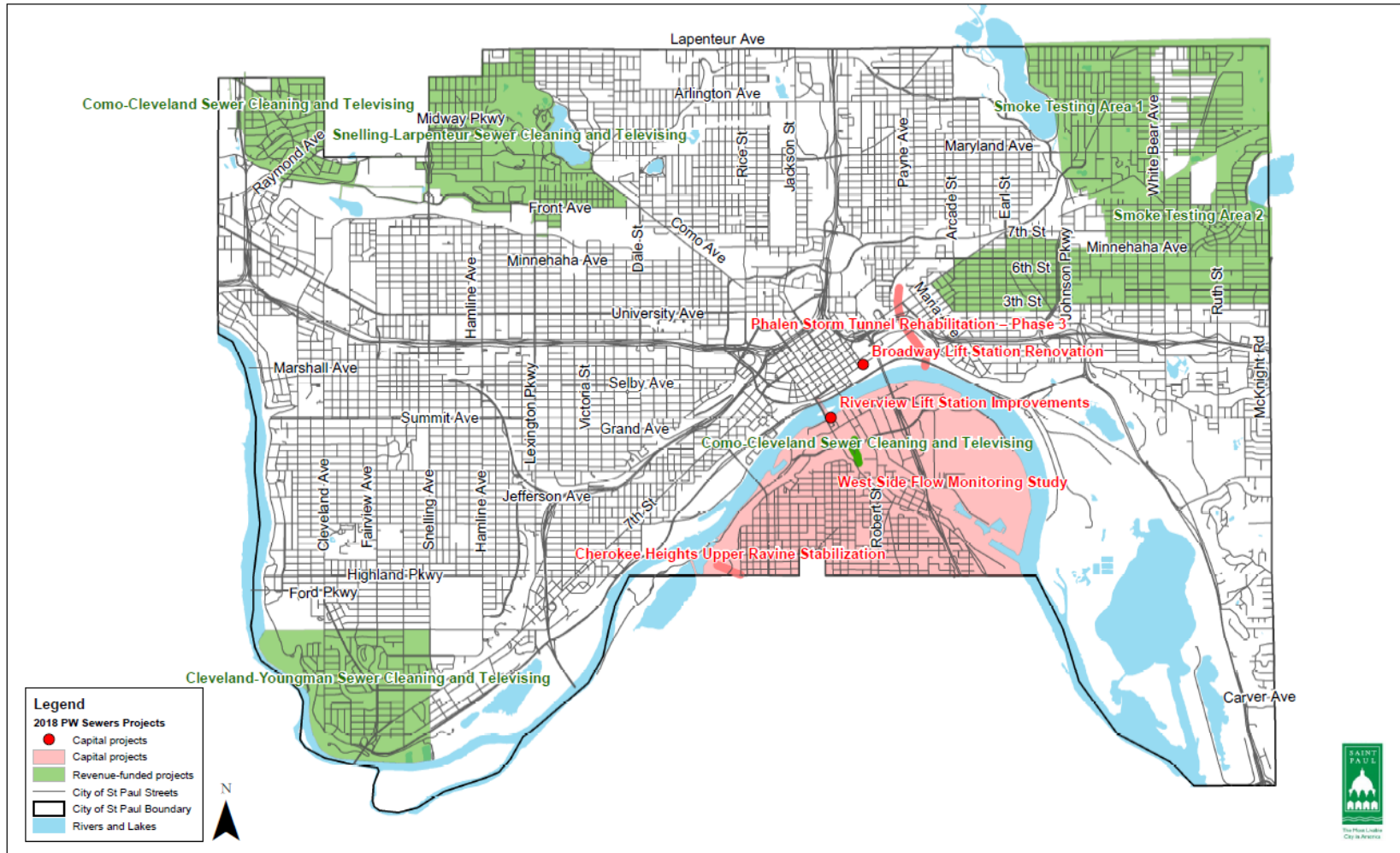
The projects financed include major sanitary sewer repairs and rehabilitation work as well as storm water tunnel rehabilitation and treatment improvements. The objectives of these projects include the proper segregation of wastewater from the environment, reduction of clean water entering the sanitary sewer system and the reduction of polluted storm water entering the environment, especially local bodies of water.

The projects selected are located in many areas across the City, as shown on the project area maps that follow.

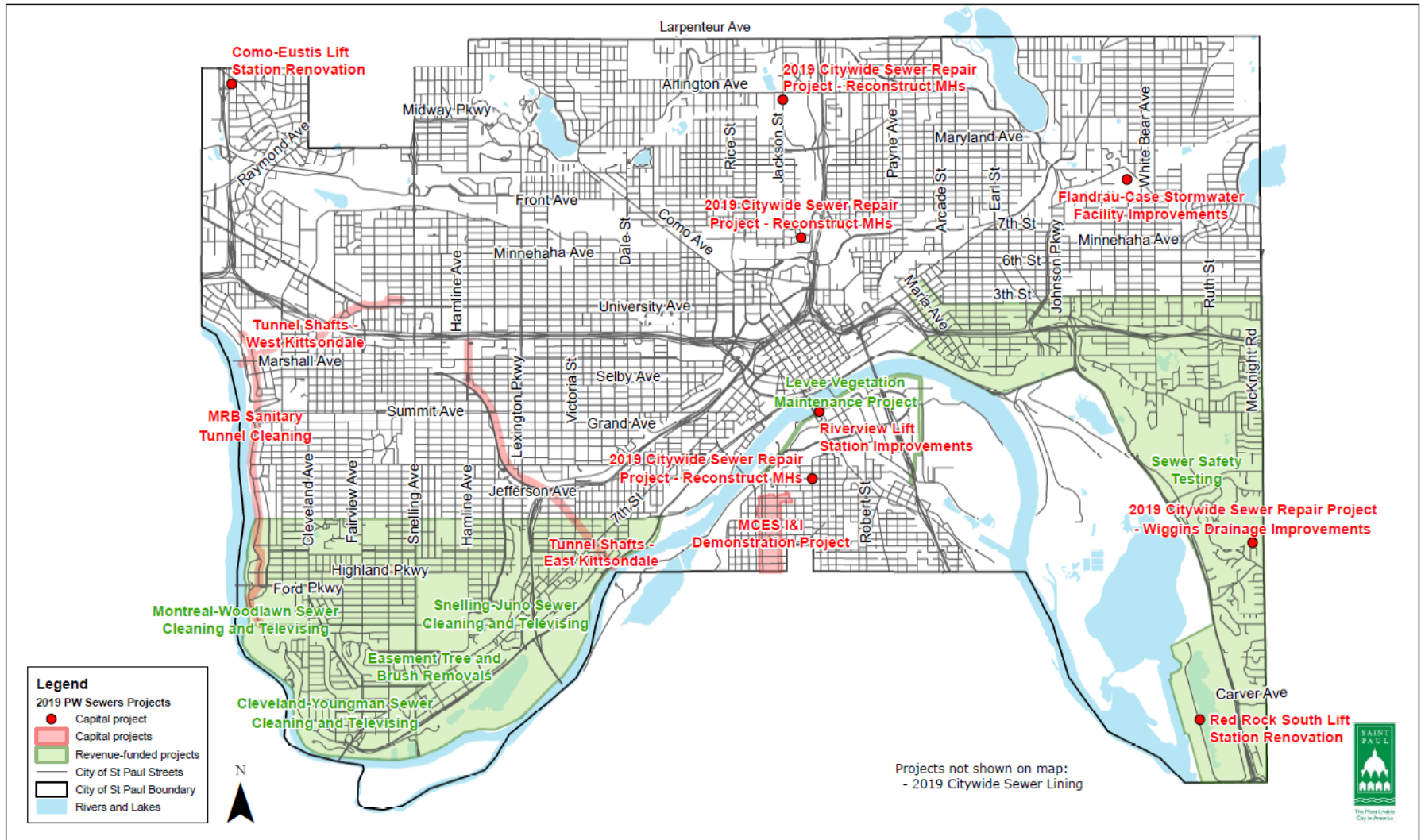
2017 Sewer Utility Projects



2018 Sewer Utility Projects

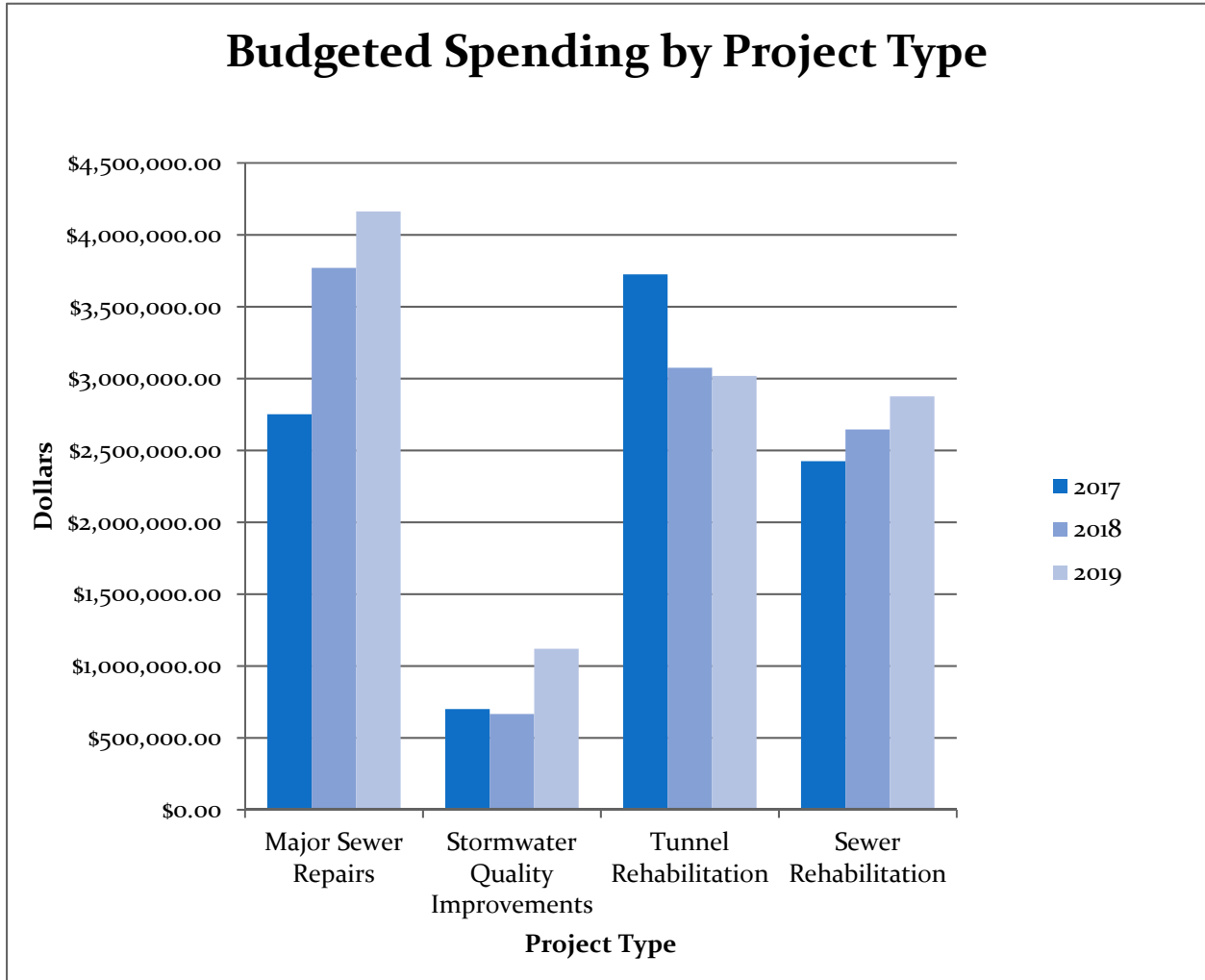


2019 Sewer Utility Projects



Project Spending and Environmental Impacts

The Green Bonds were anticipated to be spent on the project categories shown on the chart below.



Actual project spending and environmental impacts are shown through April 1, 2019, in the tables below.

Major Sewer Repairs

Bond Issue	Project	Actuals	Project Status	Project Description & Environmental Impact
2017C	Coordination with City Street Projects	\$1,110,134	Complete	Replace brick sanitary manholes with new pre-cast concrete, replace broken City sewer piping and outside drops, abandon un-used City sewers to preserve street pavement life, reduce amount of clear water entering sewer systems, reduce sewage back-up risks.
2017C	2017 Ford Parkway Sanitary Access	\$741,111	Complete	Construct 60 foot sanitary over flow shaft next to drill hole manhole, and construct additional sanitary manhole to improve access for inspection and maintenance purposes; and reduce risk of sewage back-ups.
2017C	Citywide Sewer Repair Project	\$338,376	Complete	Reconstruct broken City sewers and manholes to reduce sewage exfiltration into the ground, and reduce sewage back-up risks.
2017C	Sibley Lift Station Rehab Project	\$500,651	Complete	Replace deteriorated control cabinet, process piping and valves, and electrical components; Install safety grates on wet well hatches; Relocate electrical power and controls to higher river flood elevation to reduce sewage back-up risks and improve the ability to maintain sewer service during Mississippi River flooding events.
2018D	Coordination with City Street Projects	\$281,104	In Progress	Replace brick sanitary manholes with new pre-cast concrete, replace broken City sewer piping and outside drops, abandon un-used City sewers, ad increase storm sewer mainline sizes to preserve street pavement life, reduce amount of clear water entering sewer systems, reduce sewage back-up risks, reduce street flooding risks.
2018D	Broadway Lift Station Renovation	\$1,013,384	In Progress	Replace control cabinet, process piping and valves, pumps, and electrical components; Install safety grates on wet well hatches; Relocate electrical equipment and controls to higher river flood elevation; Install natural gas backup power generator. These changes will reduce sewage back-up risks and improve ability to maintain sewer service during Mississippi River flooding events.
2018D	Citywide Sewer Repair Project	\$57,561	Project Cancelled	Re-construct broken City sewers and manholes to reduce sewage exfiltration into the ground, and reduce sewage back-up risks.

Bond Issue	Project	Actuals	Project Status	Project Description & Environmental Impact
2019F	Coordination with City Street and County Road Reconstruction Projects	-	Not Started	Replace and rehabilitate brick manholes, replace broken City sewer piping, and replace private sanitary sewer services within public right-of-way to preserve street pavement life, reduce amount of clear water entering sanitary sewer systems, reduce sewage back-up risks, reduce street flooding risks, and to reduce sewage exfiltration into the ground.
2019F	Como-Eustis Lift Station Renovation Project	-	Not Started	Replace control cabinet, process piping and valves, pumps, and electrical components; install safety grates on wet well hatches; and install natural gas backup power generator. This will reduce sewage back-up risks and increase pump station reliability.
2019F	Red Rock Lift Station Renovation Project	-	Not Started	Replace control cabinet, process piping and valves, pumps, and electrical components; install safety grates on wet well hatches; and install natural gas backup power generator. This will reduce sewage back-up risks and increase pump station reliability.
2019F	2019 Citywide Sewer Repair Project	-	Not Started	Reconstruct broken City sewers and manholes to reduce sewage exfiltration into the ground, and reduce sewage back-up risks.

Stormwater Quality Improvements

Bond Issue	Project	Actuals	Project Status	Project Description & Environmental Impact
2017C	Pond Cleaning and Repair Project	\$735,193	Complete	Clean and repair city storm water ponds and ditches.
2018D	Cherokee Heights Upper Ravine Stabilization Project	\$400,538	In Progress	Stabilize about 500-feet of ravine by regrading and armoring with riprap. Install pretreatment structures to collect gross pollutants from public streets. This will reduce the amount of polluted storm water from entering the Mississippi River.
2019F	Suburban Pond Cleaning Project	-	Not Started	Clean Suburban Pond at storm outfall locations to reduce risk of street flooding and preserve storm sewer capacity, and reduce transport of storm sediments further downstream.

2019F	Flandrau Stormwater Quality Improvements	-	Not Started	Modify existing stormwater ponding facility, including: increase storage capacity and construct iron enhanced sand filter. This will help preserve capacity of downstream storm sewer system and improve water quality benefits of stormwater ponding facility.
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Sewer Tunnel Rehabilitation

Bond Issue	Project	Actuals	Project Status	Project Description & Environmental Impact
2017C	Phase 2 Phalen Creek Storm Tunnel Rehab	\$3,161,164	Complete	Rehab sections of Phalen storm tunnel originally constructed in the 1890s. Reinforced concrete liner to be installed to replace deteriorated tunnel roof and invert. Also, manhole and access shaft to be constructed for future inspection and maintenance activities to extend service life, improve access for inspections/maintenance, reduce risk of sewage back-ups, reduce risk of tunnel collapse.
2018D	Phalen Creek Interceptor Rehab, Phase 3	\$200,582	In Progress	Rehab sections of Phalen storm tunnel originally constructed in the 1890s. Replace about 400-feet of brick invert with reinforced concrete invert, Seal tunnel liner cracks and fractures, Concrete patching and repairs, Repair defective manholes. This will extend service life, improve access for inspections/maintenance, reduce risk of sewage back-ups, reduce risk of tunnel collapse.
2018D	St. Peter-Rondo Storm Tunnel Rehab	\$109,221	Complete	Repair and stabilize broken St Albans branch tunnel liner by installing stainless steel plating and grouting of voids behind tunnel liner. This will stop ground water and soil materials from entering and further destabilizing the storm tunnel. Also sealed and plugged leaking tunnel liner cracks and holes to mitigate further risks and before the repairs become more expensive.
2019F	MRB Sanitary Tunnel Cleaning Project	-	Not Started	Remove sanitary sewage sediments from deep tunnel to further inspect tunnel and help preserve capacity. This will remove sanitary sediments to preserve capacity and an inspection will determine tunnel condition.
2019F	Tunnel Shaft Project	-	Not Started	Construct large tunnel access shafts to facilitate future tunnel repairs will extend service life, improve access for future inspections/repairs, reduce risk of tunnel collapse and sewer back-ups.

Sewer Rehabilitation

Bond Issue	Project	Actuals	Project Status	Project Description & Environmental Impact
2017C	Ashland-Central Sewer Lining Project	\$964,228	In Progress	Lining of aging and defective Sewer pipes with cured in place pipe lining to extend sewer service life, reduce amount of sewage exfiltration into ground, reduce risk of sewer back-ups, reduce amount of clear water (rain & ground water) entering the sanitary sewer system that does not need to be treated by wastewater treatment plant (thereby reduces treatment costs).
2017C	2017 Manhole Rehabilitation	\$450,000	Project Cancelled	Rehabilitation to provide permanent seal against corrosion, infiltration and exfiltration.
2018D	Citywide Sewer Lining Projects	\$343,395	In Progress	Lining of aging and defective Sewer pipes with cured in place pipe lining will extend sewer service life, reduce amount of sewage exfiltration into ground, reduce risk of sewer back-ups, reduce amount of clear water (rain & ground water) entering the sanitary sewer system that does not need to be treated by wastewater treatment plant (thereby reduces treatment costs).
2019F	2019 Citywide Sewer Lining Project	-	Not Started	Lining of aging and defective Sewer pipes with cured in place pipe lining will extend sewer service life, reduce amount of sewage exfiltration into ground, reduce risk of sewer back-ups, reduce amount of clear water (rain & ground water) entering the sanitary sewer system that does not need to be treated by wastewater treatment plant (thereby reduces treatment costs).

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The material provided in this report is intended to be informational reporting of project spending of the City of Saint Paul's Green Bonds and is not intended to provide investment advice or professional assessment of project impacts.