Program 8086 – North Area Interceptor Improvements

Lining work being performed on the 4-NS-525 Interceptor in Coon Rapids

Description

The interceptor systems in Blaine, Brooklyn Park, Champlin, Circle Pines, Coon Rapids, Forest Lake, Fridley, Hugo, Lexington, Lino Lakes, Maple Grove, Mounds View, Spring Lake Park, and other north-area communities need rehabilitation and/or replacement. The project will rehabilitate existing interceptor facilities, including gravity sewers, forcemains, lift stations, and meter stations.

Purpose and justification

Inspections of the interceptors that serve the North Metro Area have revealed corrosion damage. The corrosion is extensive and has resulted in significant damage to the interior concrete surfaces of the interceptors and maintenance structures.

Program location

The active projects within this program are in the following Council districts: 1, 2, 8, 9, 10, 11, 12, and 13.

New program addition

Category	Details
Scope	Capacity assessment, cleaning, rehabilitation, and replacement of over 60,000 feet of 8 to 96-inch interceptor pipe.
Assets	6901, 7034, 7132, 7651, 7707, 8041, 8656, 1-MA-418, 1-PM-466, 1-RV-430, 1-RV-433, 1-VH-422, 1-VH-423, 1-VH-423A, 1-WL-416, 2-NB-100, 4-BP-540, 4-NS-521, 4-NS-521A, 4-NS-523
Communities	Anoka, Brooklyn Park, Centerville, Fridley, Little Canada, Mounds View, New Brighton, Plymouth, Roseville, St. Louis Park, Vadnais Heights, White Bear Lake, White Bear Township
Added budget	$67,400,000
Construction years	2026 through 2031

Active projects in program

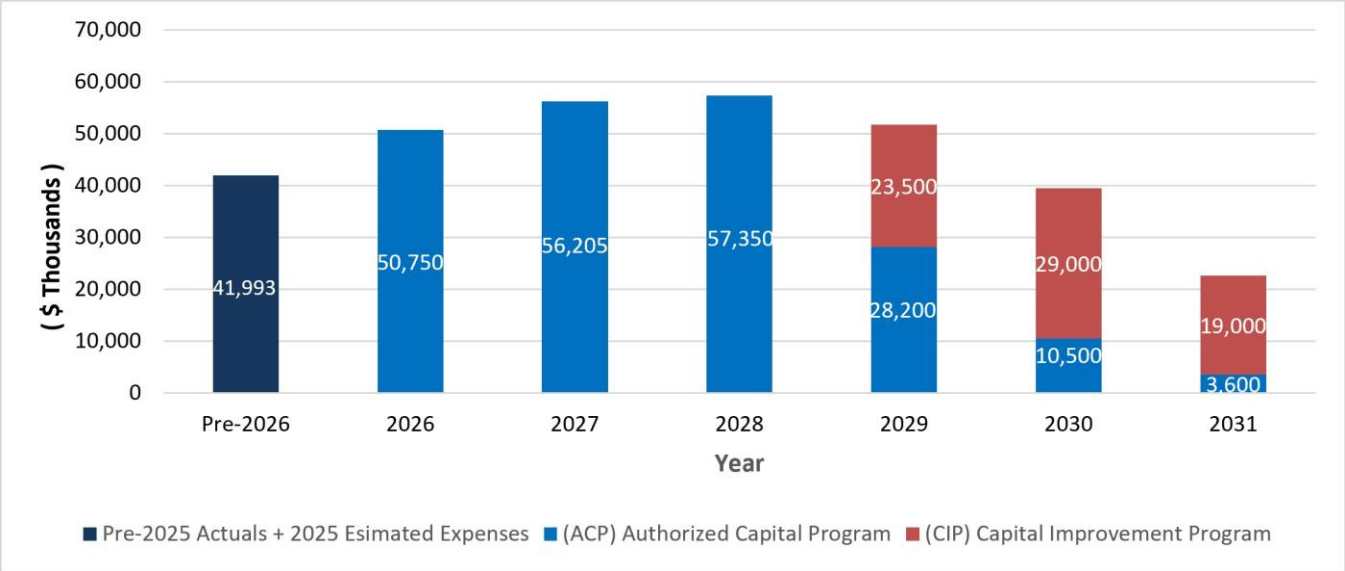
Project Number	Project Title
808600	North Area Interceptor (NAI) Rehabilitation (Parent Project)
808602	CAB Interceptor Improvements
808603/808627	Forest Lake Interceptor 7029 Rehabilitation
808604	Interceptor 7015-C Rehabilitation
808607	Fridley Liquid Waste Receiving Improvements
808609/808631	4-NS-525 Rehabilitation Phase 2
808611	1-RV-430 Rehabilitation
808612	4-NS-521 Rehabilitation
808613	Northeast Interceptor Hydraulic Modeling
808614	8151 and 7122 Siphon Rehabilitation
808616	Interceptor 1-CL-455 Rehabilitation
808617	9004-1 & 900415 Rehabilitation
808618	Interceptor 1-MW-410 Maintenance Hole Improvements
808619	Rogers Plant to Plant Sewer
808622	Maple Grove Interceptor Replacement
808624	New Rogers Lift Station
808626	Forcemain 7651 & 8041 Improvements
808687	Lake Elmo West Connection
808688	Lift Station L77 Improvements

Environmental Services 2026 through 2031 Capital Program

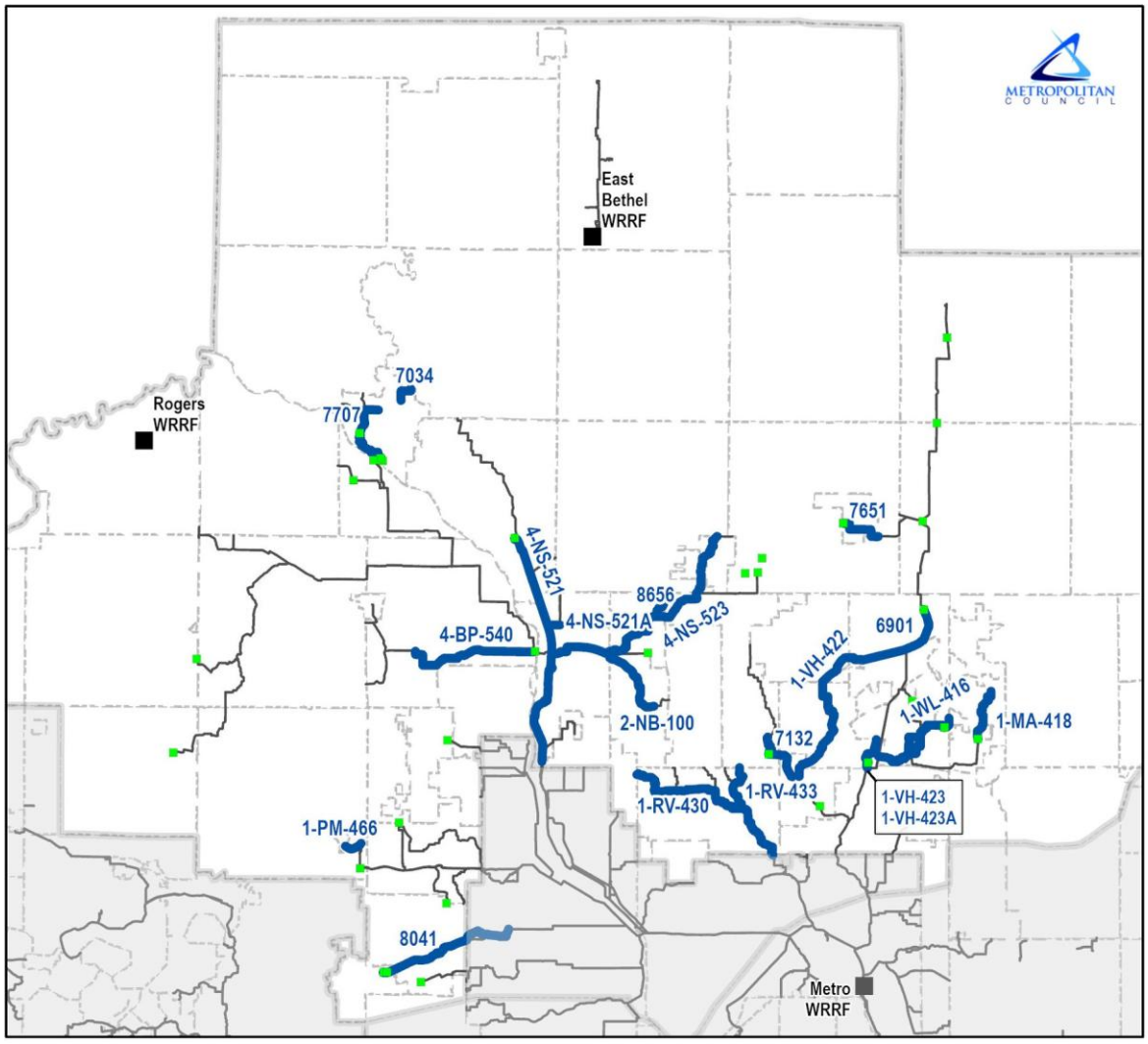
- Authorized Capital Program (ACP): $248,598,122
- Capital Improvement Plan (CIP): $ 71,500,000

Estimated program cash flow from 2026 through 2031

Note: the ACP is the total amount of all past and present authorizations including pre-2026 expenses.



North Area Program Map – New Projects



North Area New Project Locations

CAB Interceptor Improvements

Program family 8086 **Project #808602**

Project location: Council district #2, City of Brooklyn Park

Map of project #808602 in Brooklyn Park between 108th Avenue North and 88th Avenue North

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Rehabilitate or replace 1.9 miles of severely corroded 54-inch and 66-inch reinforced concrete pipe (RCP). Rehabilitation methods using cured-in-place pipe (CIPP) and upsizing section some sections from 66” to 72”. Reconstruct deteriorating the junction structure.

Project need
Condition assessments of the CAB Interceptor have identified areas of deteriorated pipe in need of rehabilitation. Additionally, a system evaluation has identified areas of the CAB Interceptor in need of expansion to provide additional capacity to support regional growth.

Planning: 2025 through 2026	Design: 2026 through 2027	Construction: 2027 through 2029

Financial analysis

2026 cash flow:	$200,000
Current ACP:	$897,000
2026 through 2031 cash flow:	$23,300,000
Total project cost:	$23,584,000

Forest Lake Interceptor 7029 Rehabilitation

Program family 8086 **Project #808603 & #808627**

Project location: Council district #11, City of Forest Lake

Map of Project #808603 north of 180th Street North in Forest Lake

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Metropolitan Council Environmental Services (ES) owns and operates the Forest Lake Interceptor from Lift Station L01 to L78 in White Bear Lake. This project scope will include rehabilitation of about 11,000 feet of 36-inch reinforced concrete pipe (RCP) sewer interceptor from 202nd Street to 180th Street and the cleaning-only of about 7,000 ft of 36-inch sewer interceptor north of 202nd Street to Lift Station L01. The project scope also includes the rehabilitation of twenty maintenance holes and the replacement of six maintenance holes.

This project will include a dual barrel temporary conveyance system with temporary easements required for construction staging and access.

Project need
Interceptor 7029 was constructed in 1970 to convey flow from the City of Forest Lake. A condition assessment was completed in 2018 of the 36-inch RCP. The worst condition was between MH-99 and L02, where a 1,000-foot segment was identified as condition 4.5, and the remaining 7,000 feet as condition 4.

Project schedule:

Planning: 2023	Design: 2023 through 2025	Construction: 2026 through 2028

Financial analysis

2026 cash flow:	$200,000
Current ACP:	$20,430,000
2026 through 2031 cash flow:	$23,300,000
Total project cost:	$23,584,000

Interceptor 7015-C Rehabilitation

Program family 8086 **Project #808604**

Project location: Council district #2, City of Brooklyn Park, Interceptor 7015-C

Map of Project #808604 east of Bass Creek Park in Brooklyn Park

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Site 3 of the North Area Improvements. This project includes rehabilitation and/or replacement of approximately 10 feet of interceptor that was not lined during the 2007 rehabilitation project and rehabilitation of five structures. An extensive temporary conveyance system will be needed to repair this section.

Project need
Interceptor 7015-C in Brooklyn Park is a 36-inch reinforced concrete pipe (RCP) constructed in 1970 and lined in 2007. A five-to-ten-foot section of pipe was found unlined on the downstream end of Section 124009 near maintenance hole (MH) 45. Prior to lining, the condition of the pipe was 4.5.

Project schedule:

Planning: 2024	Design: 2025 through 2026	Construction: 2027

Financial analysis

2026 cash flow:	$1,500,000
Current ACP:	$717,700
2026 through 2031 cash flow:	$1,900,000
Total project cost:	$2,231,000

Fridley Liquid Waste Receiving Improvements

Program family 8086 **Project #808607**

Project location: Council district #2, City of Fridley

Fridley Liquid Waste Receiving Facility

Project type
Interceptor Improvements

Objectives
Asset Preservation, Quality Improvements

Scope
The loadout bay discharge pipe elevation needs to be lowered to allow customers to hook up more efficiently, provide larger rock traps, and allow replacement of existing flow meters. Access improvements are necessary to allow large tanker trucks into the bay. The maintenance structure that is used to dump during outages needs to be upgraded to include a grit chamber. An exterior vactor waste receiving area is being added to this site.

Project need
There are several deficiencies and issues with the receiving, process, and treatment at the Fridley Liquid Waste Receiving Facility. Several upgrades are necessary for this to be successfully used as a regional liquid waste receiving and maintenance facility.

Project schedule:

Planning: 2022 through 2023	Design: 2023 through 2026	Construction: 2027 through 2028

Financial analysis

2026 cash flow:	$200,000
Current ACP:	$1,500,000
2026 through 2031 cash flow:	$9,800,000
Total project cost:	$9,970,000

4-NS-525 Rehabilitation Phase 2

Program family 8086 **Project #808609 & #808631**

Project location: Council district #9, City of Coon Rapids

Map of Project #808631 in City of Coon Rapids

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
The scope of work on this project will include rehabilitation of 7,800 linear feet of 48-inch reinforced concrete pipe (RCP) and 28 structures.

Project need
Condition assessments revealed poor condition pipe and maintenance structures.

Planning: 2023 through 2024	Design: 2025 - 2026	Construction: 2026 through 2028

Financial analysis

2026 cash flow:	$1,000,000
Current ACP:	$15,500,000
2026 through 2031 cash flow:	$14,300,000
Total project cost:	$14,300,000

1-RV-430 Rehabilitation

Program family 8086 **Project #808611**

Project location: Council district #10, City of Roseville

Map of project #608611 location near Highway 36 in Roseville

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
1-RV-430 in Roseville will be rehabilitated using cured-in-place pipe (CIPP) lining. Structures along the corridor are also planned to be rehabilitated as needed.

Project need
The section of 1-RV-430 that is planned to be rehabilitated has been identified to be condition-4 pipe during CCTV inspections. Because of this it is critical that the pipe is rehabilitated to avoid potential failure.

Planning: 2024 through 2025	Design: 2025 through 2026	Construction: 2026 through 2027

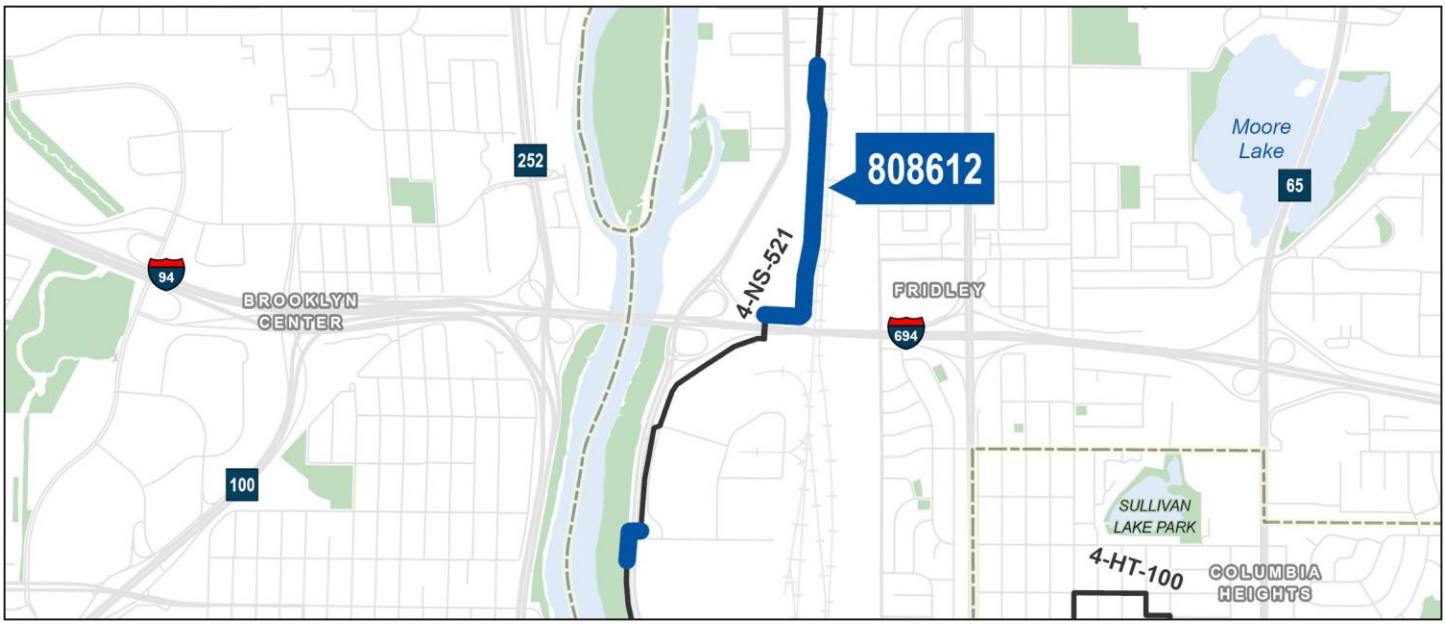
Financial analysis

2026 cash flow:	$300,000
Current ACP:	$2,160,500
2026 through 2031 cash flow:	$10,700,000
Total project cost:	$11,038,000

4-NS-521 Rehabilitation

Program family 8086 **Project #808612**

Project location: Council district #2, City of Fridley



Map of project #808612 location near Interstate 694 in Fridley.

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Two sections of 4-NS-521 in Fridley will be rehabilitated using cured-in-place pipe (CIPP) lining. Structures along the corridor are also planned to be rehabilitated as needed.

Project need
The two sections of 4-NS-521 that are planned to be rehabilitated have been identified as condition-4 pipe during CCTV inspections. Because of this it is critical that the pipe is rehabilitated to avoid potential failure.

Planning: 2023 through 2024	Design: 2026 through 2027	Construction: 2027 through 2028

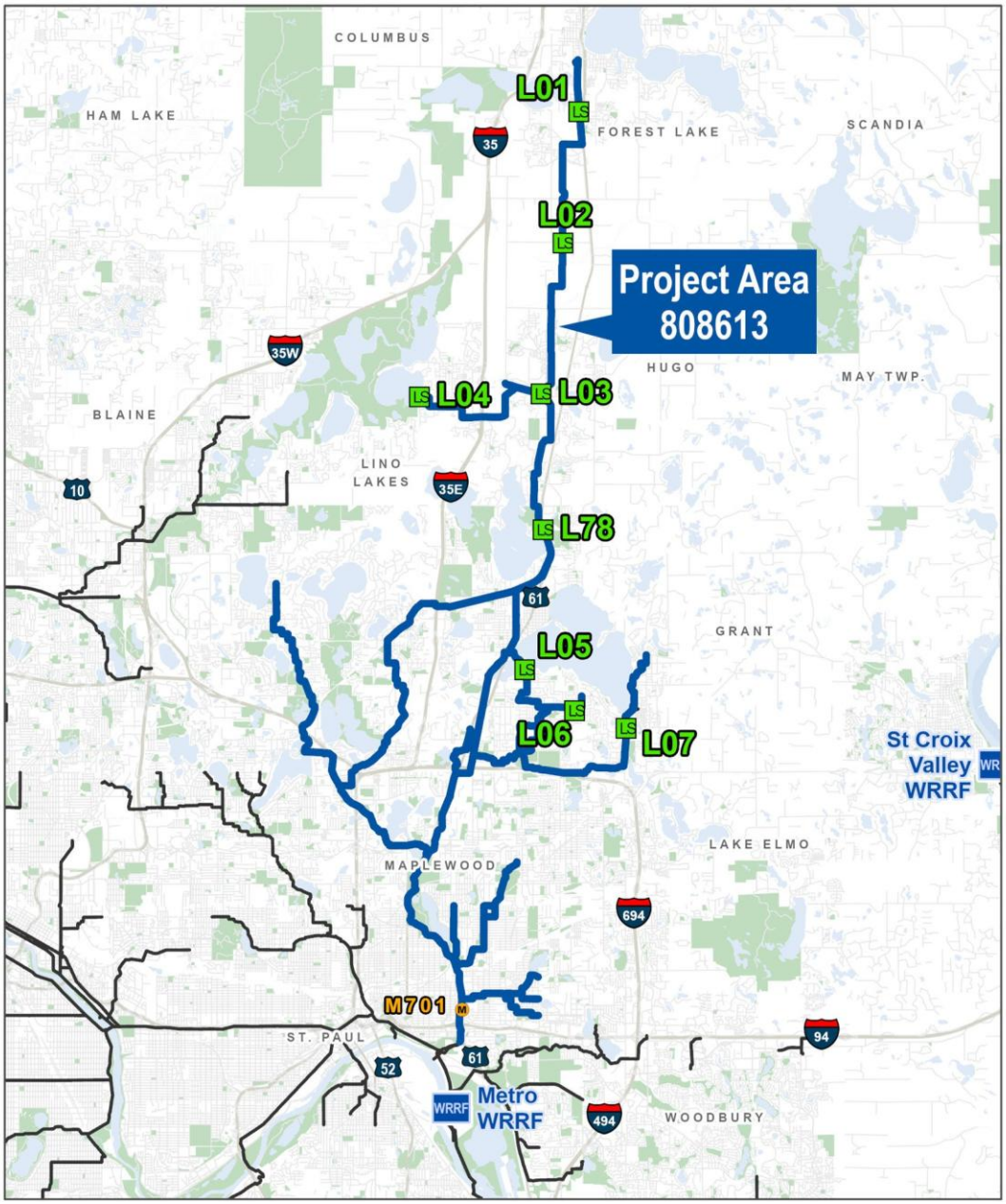
Financial analysis

2026 cash flow:	$500,000
Current ACP:	$4,373,500
2026 through 2031 cash flow:	$33,500,000
Total project cost:	$34,471,000

Northeast Interceptor Hydraulic Modeling

Program family 8086 **Project #808613**

Project location: Council district #10, 11, and 13, Cities in the vicinity of the Northeast Interceptor Area



Map of the Northeast Interceptor study area

Project type
Interceptor Hydraulic Model - Study

Objectives
Asset Preservation

Scope
This project is to build and calibrate a hydraulic model of the Northeast Interceptor from M-701 in Saint Paul to Forest Lake. The model will be calibrated for dry weather flow and wet weather flow, run future flow scenarios, and summarize findings and recommendations for 20-year and ultimate planning horizons.

Northeast Interceptor Hydraulic Modeling (continued)
Project #808613

Project need
This effort will help meet the overall project goals and outcomes to:

- Better understand capacity constraints, if any, and assess options to improve operations to mitigate those constraints.
- Develop informed decisions for investing, operating, and maintaining the conveyance system.
- Identify and assess areas with high rates of inflow and infiltration (I/I) and highest risk of sanitary sewer overflow.
- Develop strategies to reduce I/I contribution to wastewater flows to recover system capacity, maximize conveyance, and utilize storage in the existing ES system.
- Develop feasible alternatives for multiple future scenarios – including evaluation of cost-effectiveness – for capital projects for any of the goals above.

Planning: 2024 through 2026	Design: TBD	Construction: N/A

Financial analysis

2026 cash flow:	$200,000
Current ACP:	$865,000
2026 through 2031 cash flow:	$600,000
Total project cost:	$870,000

8151 and 7122 Siphon Rehabilitation

Program family 8086 **Project #808614**

Project location: Council district #3, City of Maplewood

Project #808614 – Site 1 in Maplewood in Keller Park on Interceptor 8151 and Site 2 in Maplewood along Highway 61 and Beam Ave North.

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Site 1 – 8151 - Due to the deterioration of the concrete in the pipe and structures, the project will include rehabilitation of the two 24-inch and one 42-inch ductile iron pipes using a cured-in-place pipe (CIPP) liner. The headhouse and tail house structure will include rehabilitation of the deteriorated concrete surface and installing protective coating system. New gates/valves will also be designed to better separate the flows between the siphon pipes and to allow better hydraulic performance.

Site 2 – 7122 – Project will include extension of the air jumper structures to maintain flow in the system and for proper access for cleaning and inspection. The flow control system for isolating pipe will also be added for adequate cleaning and televising.

Project need
Both the 8151 and 7122 sites are aging and require repair due to past pipe failures. 8151 condition assessment indicates that the head house and tail house structures are also in poor condition and should be rehabilitated to address age-related deterioration, improve access, and facilitate easier cleaning and future inspections. 7122 Air Jumper structures lack proper flow control to divert flow from one pipe to another and for isolating pipe for cleaning and inspection. Also, the hydraulics of the flow coming in are not proper and improvements to the structure would be needed to achieve proper self-cleaning velocities.

Planning: 2022 through 2023	Design: 2024 through 2026	Construction: 2026 through 2027

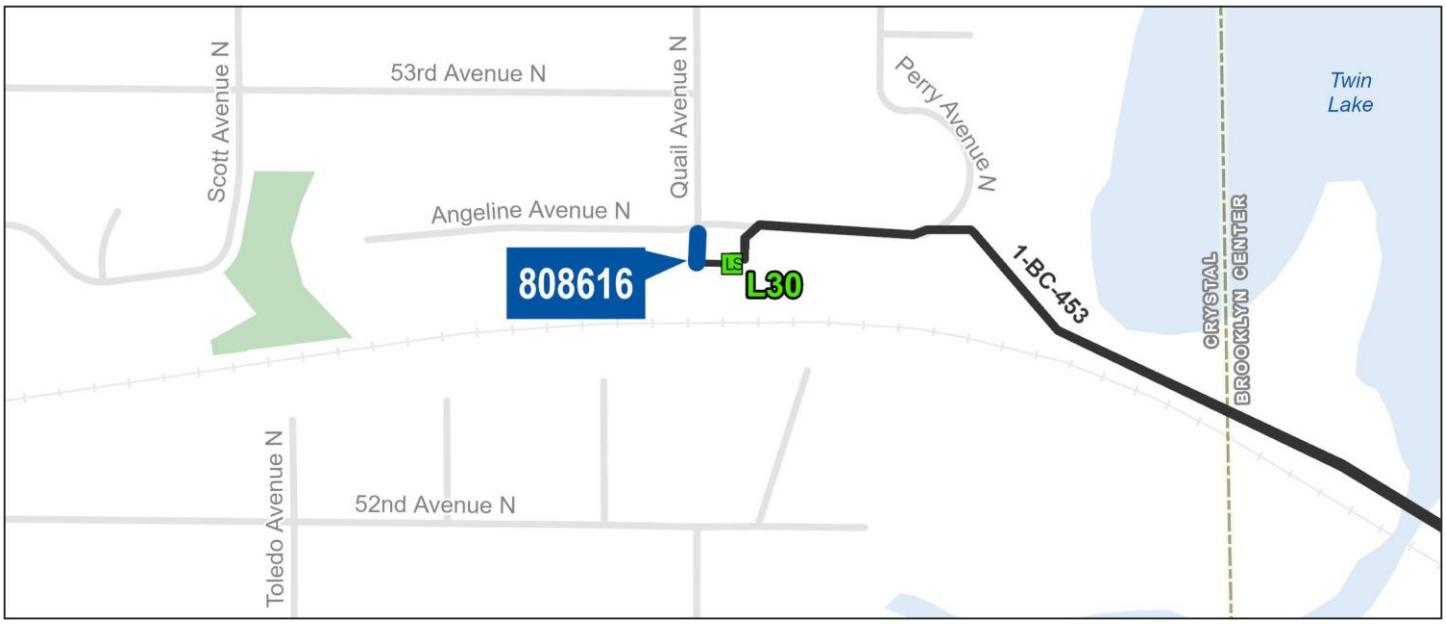
Financial analysis

2026 cash flow:	$4,000,000
Current ACP:	$5,706,000
2026 through 2031 cash flow:	$7,800,000
Total project cost:	$8,210,000

Interceptor 1-CL-455 Rehabilitation

Program family 8086 **Project #808616**

Project location: Council district #8, City of Crystal, Interceptor 1-CL-455



Map of Project #808616 near Angeline Avenue North and Quail Avenue North in Crystal

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Rehabilitate a section of pipe between Shaft 1 and MH-100 by abandoning the existing pipe and installing a new pipe in the new location. Two maintenance hole structures will also be rehabilitated, and one structure will be added.

Project need
Condition assessment of pipe shows the pipe in this section as poor condition and a sag in the pipe. There is severe grease build-up from the city pipe coming in, and a need for frequent cleaning.

Project schedule:

Planning: 2023	Design: 2024 through 2025	Construction: 2026

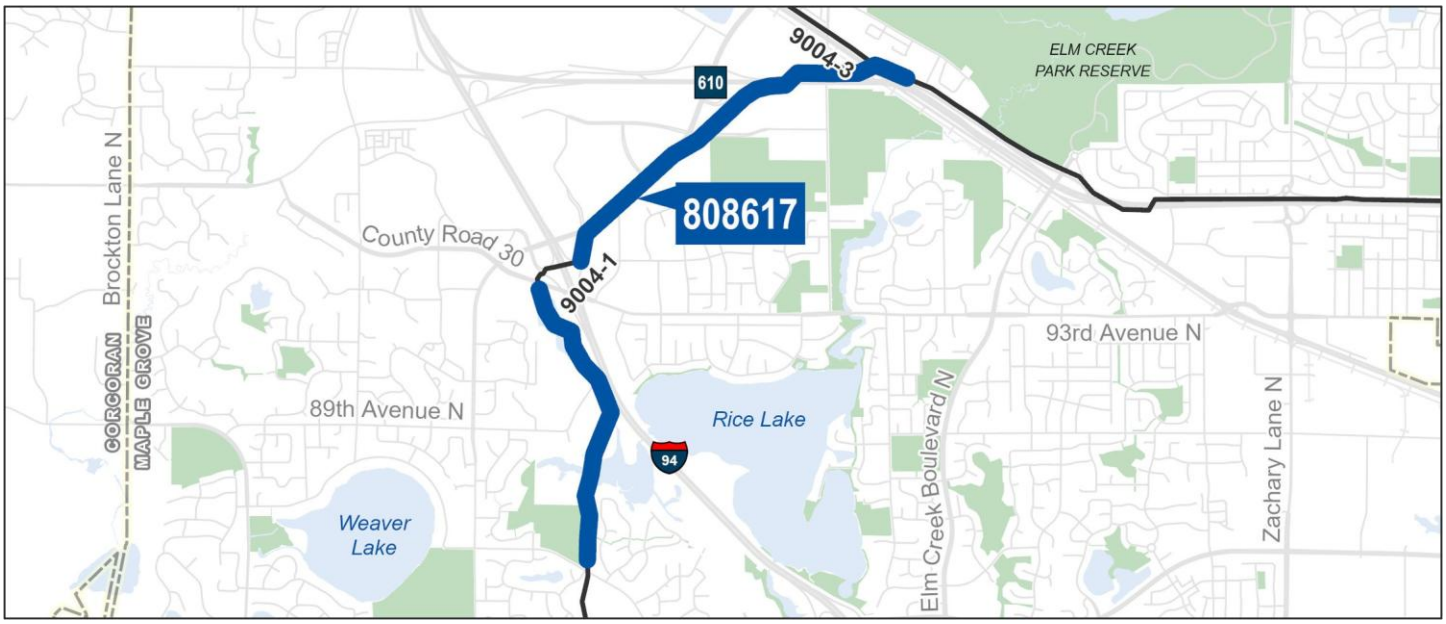
Financial analysis

2026 cash flow:	$1,000,000
Current ACP:	$2,899,500
2026 through 2031 cash flow:	$1,900,000
Total project cost:	$2,108,000

9004-1 & 900415 Rehabilitation

Program family 8086 **Project #808617**

Project location: Council district #1, City of Maple Grove



Map of Project #808617 along Maple Grove Parkway North in Maple Grove

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Rehabilitate 410 feet of severely corroded 48-inch reinforced concrete pipe (RCP).

Project need
Condition assessment of the interceptor has identified it as being severely corroded. Rehabilitation of the interceptor is needed to prevent further deterioration and potential failure.

Project schedule:

Planning: 2027	Design: 2027 through 2028	Construction: 2028 through 2030

Financial analysis

2026 cash flow:	$200,000
Current ACP:	$0
2026 through 2031 cash flow:	$2,400,000
Total project cost:	$2,500,000

Interceptor 1-MW-410 Maintenance Hole Improvements

Program family 8086 **Project 808618**

Project location: Council district 12, City of Maplewood

Photo of typical root intrusion and concrete maintenance hole cracking.

Project type
Interceptor

Objectives
Asset Preservation

Scope
Rehabilitate approximately 20 maintenance holes.

Project need
Continued root intrusion and concrete deterioration will eventually lead to failure unless repairs are made.

Planning: 2025 through 2026	Design: 2026 through 2027	Construction: 2027 through 2029

Financial analysis

2026 cash flow:	$2,000,000
Current ACP:	$800,000
2026 through 2031 cash flow:	$2,200,000
Total project cost:	$2,500,000

Rogers Plant to Plant Sewer

Program family 8086 **Project #808619**

Project location: Council district #1, City of Rogers

Map of project #808624 location near Interstate 94 and Highway 101 in Rogers

Project type
Interceptor Improvements

Objectives
System Expansion

Scope
The scope of the project is to build a new sanitary sewer to convey flow from the existing Rogers Wastewater Treatment Facility (WWTF) site to the Crow River Water Resource Recovery Facility (WRRF). The new sewer must be completed by 2029, as the Crow River WRRF will be ready by 2030.

Project need
Environmental Services purchased the existing Rogers Wastewater Treatment Facility in 2016. The site was purchased because the plant cannot be expanded as needed to meet future expected capacity and anticipated changes in regulatory requirements.

Planning: 2025	Design: 2025 through 2027	Construction: 2027 through 2029

Financial analysis

2026 cash flow:	$600,000
Current ACP:	$2,539,000
2026 through 2031 cash flow:	$9,600,000
Total project cost:	$10,200,000

Maple Grove Interceptor Replacement

Program family 8086 **Project #808622**

Project location: Council district #1, City of Maple Grove

Map of Project #808622 location east of Highway 101 and north of Highway 10 in Maple Grove

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Areas of Interceptor 900416 have been identified with varying degrees of deflection. The interceptor will be evaluated to determine which sections require rehabilitation or replacement.

Project need
To maintain the integrity of the system and to prevent potential damage to the environment due to pipe failure, sections of the interceptor must be repaired or replaced.

Project schedule:

Planning: 2019 through 2021	Design: 2021 through 2026	Construction: 2026 through 2027

Financial analysis

2026 cash flow:	$2,000,000
Current ACP:	$11,857,000
2026 through 2031 cash flow:	$13,200,000
Total project cost:	$14,005,000

New Rogers Lift Station

Program family 8086 **Project #808624**

Project location: Council district #1, City of Rogers

Map of project #808624 location near Interstate 94 and Highway 101 in Rogers

Project type
New Lift Station

Objectives
System Expansion

Scope
The scope of the project is to build a 1.5 MGD submersible lift station to convey flow from the lift station to the new gravity trunk sewer, which ultimately flows to the Crow River Water Resource Recovery Facility (WRRF). The new lift station must be completed by 2029, as the Crow River WRRF will be ready by 2030.

Project need
Environmental Services purchased the existing Rogers Wastewater Treatment Facility in 2016. The site was purchased because the plant cannot be expanded as needed to meet future expected capacity and anticipated changes in regulatory requirements.

Planning: 2025	Design: 2025 through 2027	Construction: 2027 through 2029

Financial analysis

2026 cash flow:	$250,000
Current ACP:	$2,300,000
2026 through 2031 cash flow:	$9,950,000
Total project cost:	$10,050,000

Forcemain 7651 & 8041 Improvements

Program family 8086 **Project 808626**

Project location: Council districts 8, 11, 15, 16; Cities of Apple Valley, Centerville, Hugo, Lakeville, Lino Lakes, St. Louis Park

Photo of forcemain corrosion

Project type
Interceptor

Objectives
Asset Preservation

Scope
Remove and replace forcemain 7651 and rehabilitate access structures on Interceptors 8041 and 9106.

Project need
Forcemain 7651 has completely failed and lift station L4 has no redundant forcemain. Forcemain 8041 connections to City of Minneapolis and St. Louis Park are needed to isolate piping for future maintenance. Continued corrosion of piping in forcemain 9106 access structures may lead to failure.

Planning: 2026 through 2027	Design: 2027 through 2028	Construction: 2028 through 2029

Financial analysis

2026 cash flow:	$100,000
Current ACP:	$1,250,000
2026 through 2031 cash flow:	$12,500,000
Total project cost:	$12,500,000

Lake Elmo West Connection

Program family 8086 **Project #808687**

Project location: Council Districts #12 and 13; Cities of Lake Elmo, Oakdale, and Woodbury

Project #808687 location along Hudson Road between I-694 and I-94

Project type
Interceptor Improvements

Objectives
System Expansion

Scope
Provide regional sewer service to southwestern Lake Elmo through a gravity interceptor extension from 1-WO-500. Includes the upgrade of an existing interceptor sewer crossing Interstate 94 to accommodate current and future growth in the service area.

Project need
This project will provide interceptor facilities to convey wastewater from southwestern Lake Elmo and eastern Oakdale to the Metro WRRF in Saint Paul. The project is needed to support growth in this eastern portion of the metropolitan area.

Planning: 2020	Design: 2021 through 2023	Construction: 2024 through 2026

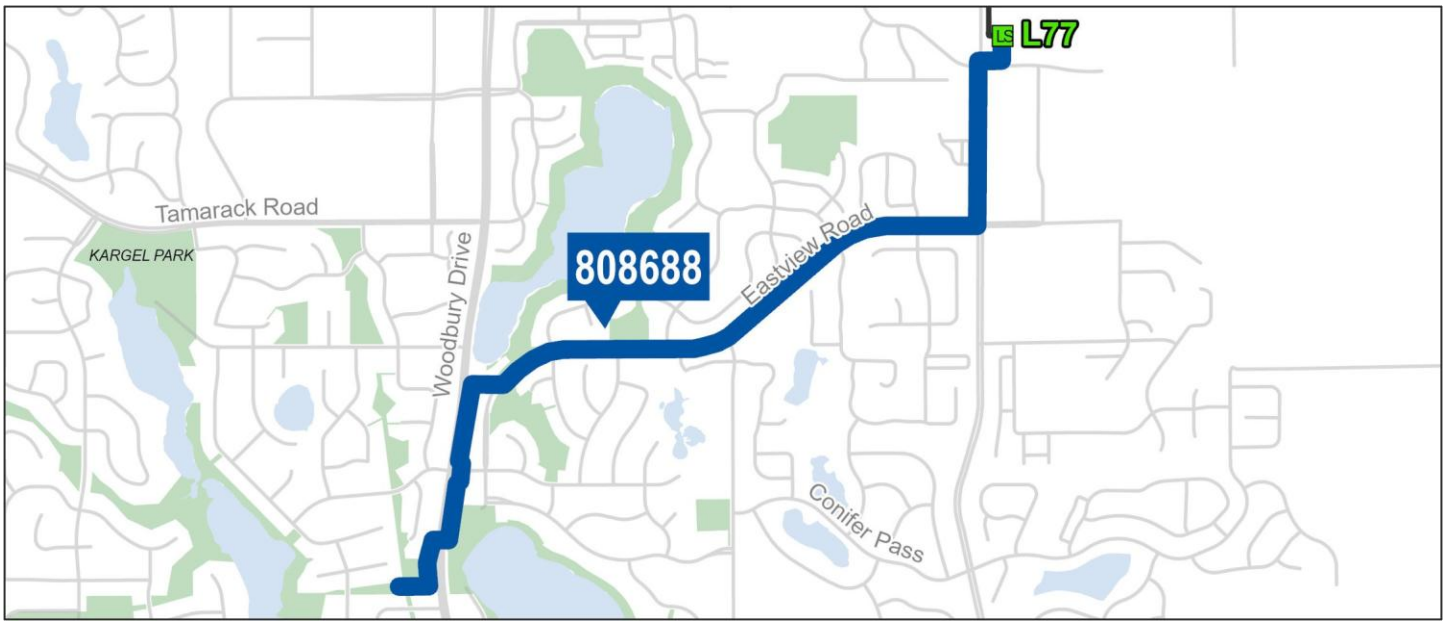
Financial analysis

2026 cash flow:	$19,000,000
Current ACP:	$35,527,000
2026 through 2031 cash flow:	$19,500,000
Total project cost:	$35,591,000

Lift Station L77 Improvements

Program family 8086 **Project #808688**

Project location: Council Districts #11 and 12, City of Woodbury



Project #808688 location along Eastview Road in Woodbury.

Project type
Lift Station and Interceptor Improvements

Objectives
System Expansion and Quality Improvements

Scope
Expand L77 lift station and connect to a larger forcemain. Work includes the addition of an emergency generator for the lift station.

Project need
Growth in northeastern Woodbury and southeastern Lake Elmo necessitates an expansion of pumping capacity at the L77 lift station. The forcemain was constructed earlier by the City of Woodbury during road improvements to serve flows from the L77 lift station, and an agreement entered into with the city for purchase of the infrastructure for regional use.

Planning: 2020 through 2021	Design: 2022 through 2023	Construction: 2024 through 2026

Financial analysis

2026 cash flow:	$4,200,000
Current ACP:	$7,324,000
2026 through 2031 cash flow:	$4,200,000
Total project cost:	$5,322,000