

Program 8090 – Interceptor Rehabilitation Program



Vactor truck used to clean debris from interceptors

Description

This program includes miscellaneous projects to rehabilitate failing facilities, address inflow and infiltration (I/I) sources, and address general needs of the interceptor system not programmed into a region- or facility-specific program. This program also includes additional condition assessment work to complement the internal inspections work completed by Operations, office space planning and design to accommodate all staff assigned to the Regional Maintenance Facility, and property transfer between Council and municipalities for public benefit.

Purpose and justification

Periodic condition assessments for interceptor facilities have revealed facilities requiring immediate projects. In addition, system-wide administrative and management work is needed to efficiently operate the interceptor system.

Program location

The active projects within this program are in the following Council districts: All

Active projects in program

Project Number	Project Title
809099	Funds for Future Interceptor Rehabilitation Projects (Parent Project)
809089	Special Interceptor Inspections
809093	Backup generator at Metro WWTP
809095	Regional Maintenance Facility (RMF) Expansion
809098	Maintenance Access Structure Rehabilitation - 2024
819011	Interceptor Chemical Odor Control
819016	Large Diameter Interceptor Cleaning – Phase 2

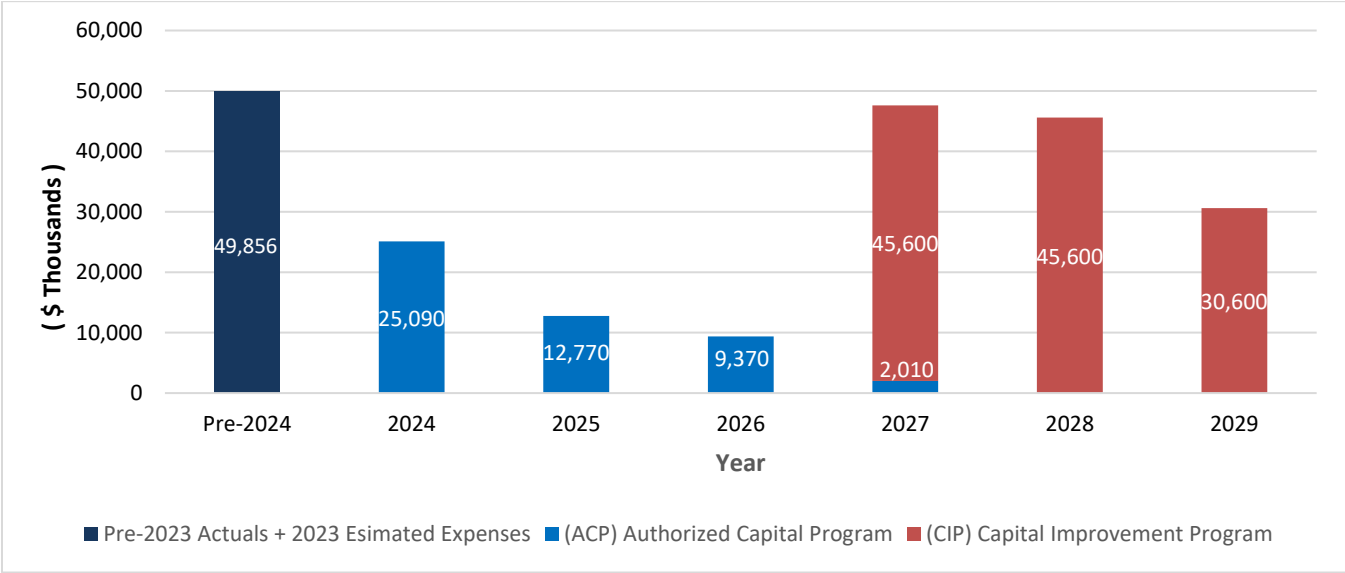
Project Number	Project Title
819017	7031/9003 Siphon Outlet Structure Improvements (MH-1 and South Junction Structure)
819018	Plymouth Forcemain Relocation at Douglas Drive
819019	Regional Vector Waste Facility Improvements
819020	Hopkins System Improvements, East Isles Forcemain – Contract G
819022	ES Interceptor Rehabilitation Project 6-MO-650, 8151, 7122, and 1-MN-310 (Sites 1 – 4)
819025	TH-13 – MnDOT Coordination

Environmental Services 2024 through 2029 Capital Program

- Authorized Capital Program (ACP): \$99,096,485
- Capital Improvement Plan (CIP): \$121,800,000

Estimated program cash flow from 2024 through 2029

Note: the ACP is the total amount of all past and present authorizations including pre-2024 expenses.



Special Interceptor Inspections
Program family 8090

Project #809089

Project location: Project location varies across seven-county Twin Cities Metro Area



UTV equipped with tracks and CCTB equipment

Project type

Condition Assessment

Objectives

Asset Preservation

Scope

Work is identified each year during the planning for the sewer televising work that is to be completed. Work that cannot be handled in-house is contracted out. Less than 20% of the work in the last two years has been contracted.

Project need

ES maintains critical infrastructure throughout the greater metropolitan area, and not all of it is accessible by using the standard equipment that Interceptor Operations owns. Specialized equipment, permits, and coordination with the communities are needed to complete the work.



Planning: Ongoing



Design: N/A



Construction: N/A

Financial analysis

2024 cash flow:	\$20,000
Current ACP:	\$1,086,000
2024 through 2029 cash flow:	\$30,060,000
Total project cost:	\$46,086,000

Backup generator at Metro WWTP
Program family 8090

Project #809093

Project location: Council districts #12 and 13, City of South St. Paul, Metro WWTP



Backup generator at Metro WWTP

Project type

Lift Station Improvements

Objectives

Asset Preservation

Scope

Work includes removing unnecessary structures and materials from the site and constructing reliability improvements to electrical systems, biofilter and mechanical systems. This project also includes installation of a grinder at L74.

Project need

The Council approved reconveyance of a portion of the site to the City of South St. Paul. ES is obligated to clear the reconveyed land of pipes and structures in accordance with the draft acquisition agreement. In addition, the electrical, mechanical, and odor control improvements are needed to increase system reliability.



Planning: 2018



Design: 2019 through 2020



Construction: 2013 through 2023

Financial analysis

2024 cash flow:	\$750,000
Current ACP:	\$4,888,000
2024 through 2029 cash flow:	\$750,000
Total project cost:	\$4,888,000

Regional Maintenance Facility (RMF) Expansion

Program family 8090

Project #809095

Project location: Council district #15, City of Eagan, 3565 Kennebec Drive



Regional Maintenance Facility (RMF)

Project type

Building Improvements

Objectives

Quality Improvements

Scope

This project includes remodeling RMF to address the inadequate women’s locker room and bathrooms and expansion to include the Air Quality lab and accommodate current staffing along with planned growth. The building improvements will address ADA deficiencies. Finally, a large meeting room is being planned that could share space with other amenities for consistent use and serve as an emergency operations center.

Project need

RMF was constructed in 1986 with improvements made in 2012 for expansion to accommodate additional staff. Currently, several work areas require improvements, including Dispatch, Computer Room, and women’s facilities and improvements to comply with the ADA. Furthermore, ES is no longer going to be leasing space at Metro 94 for the Air Quality department and RMF has been identified as a preferred location.



Planning: 2019



Design: 2019 through 2022



Construction: 2022 through 2024

Financial analysis

2024 cash flow:	\$6,210,000
Current ACP:	\$26,311,000
2024 through 2029 cash flow:	\$6,410,000
Total project cost:	\$26,311,000

Maintenance Access Structure Rehabilitation - 2024
Program family 8090

Project #809098

Project location: Council District #6 and #8, City of Minneapolis



Map of maintenance access structure rehabilitations

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitate existing maintenance access structures to prevent failure, improve access, and minimize odor emissions.

Project need

Maintenance hole repairs are needed as inspections identify defects or access issues or odor complaints are received.



Planning: Yearly



Design: Yearly



Construction: Yearly

Financial analysis

2024 cash flow:	\$200,000
Current ACP:	\$600,000
2024 through 2029 cash flow:	\$1,200,000
Total project cost:	\$1,500,000

Interceptor Chemical Odor Control
Program family 8090

Project #819011

Project location: Multiple lift stations and meter stations throughout the seven-county Twin Cities Metro Area



L-24 Chemical Odor Control Tank and Pumping System

Project type

Odor Control Improvements

Objectives

Asset Preservation

Scope

Work will be performed under a design, build, operate contract where ES will own all equipment (except for hydrogen sulfide monitoring equipment) and a vendor will operate, maintain, monitor, report, and supply chemical. This includes installing chemical deliver equipment and new HDPE tanks at most sites. The work includes operation of the systems for approximately 7 years with up to two 5-year extensions.

Project need

ES currently has 16 operational chemical dosing odor control sites, including meters and lift stations. These sites are critical to reducing odor releases impacting communities and reducing corrosion within the interceptor system.



Planning: 2019 through 2020



Design: 2020 through 2022



Construction: 2022 through 2023

Financial analysis

2024 cash flow:	\$2,400,000
Current ACP:	\$7,212,000
2024 through 2029 cash flow:	\$2,400,000
Total project cost:	\$7,212,000

Large Diameter Interceptor Cleaning – Phase 2
Program family 8090

Project #819016

Project location: Council districts #6, 7, 8, 13, and 14, Cities of Minneapolis and Saint Paul, Neighborhoods of St. Anthony West, Prospect Park, Downtown, Marcy Holmes, North Loop, Summit Hill



Contractor's cleaning equipment layout

Project type
Interceptor Improvements

Objectives
Asset Preservation

Scope
Clean seven separate segments of Interceptors 1-MN-300, 1-MN-310, 1-MN-320, 1-SP-250, and 1-MS-100. These are deeper or larger tunnels that cannot otherwise feasibly be completed by Council Operations staff.

Project need
Interceptors need to be cleaned to restore original design capacity and minimize the potential for service interruptions.



Planning: 2020 through 2021



Design: 2020 through 2021



Construction: 2021 through 2026

Financial analysis

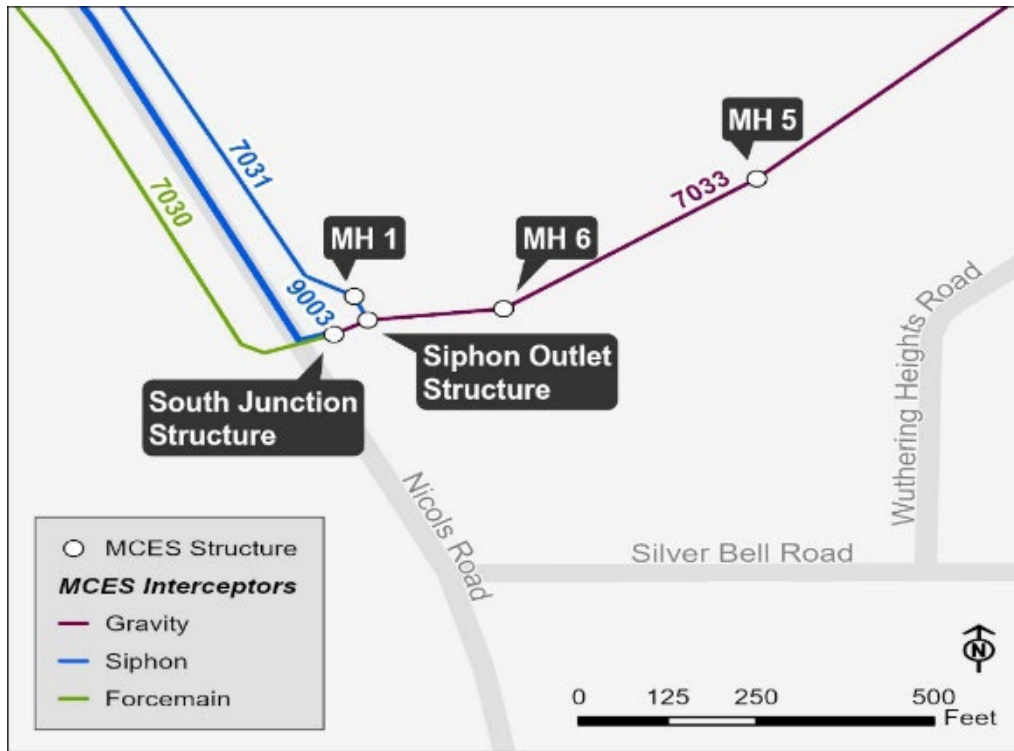
2024 cash flow:	\$3,000,000
Current ACP:	\$14,712,000
2024 through 2029 cash flow:	\$11,010,000
Total project cost:	\$14,712,000

7031/9003 Siphon Outlet Structure Improvements (MH-1 and South Junction Structure)

Program family 8090

Project #819017

Project location: Council district #15, City of Eagan, North of intersection of Nicols Road and Silver Bell Road



Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Replacement of maintenance structure (MH1) and the South Junction Structure to reduce the potential for structure failure. Internal lining of interceptor 7030, and a small portion of interceptor 7033 near MH 6.

Project need

Condition assessment has identified the tail house and surrounding structures as being in poor condition. The project is needed for operator safety, to preserve assets, and to maintain system flexibility.



Planning: 2021 through 2022



Design: 2022 through 2023



Construction: 2024 through 2026

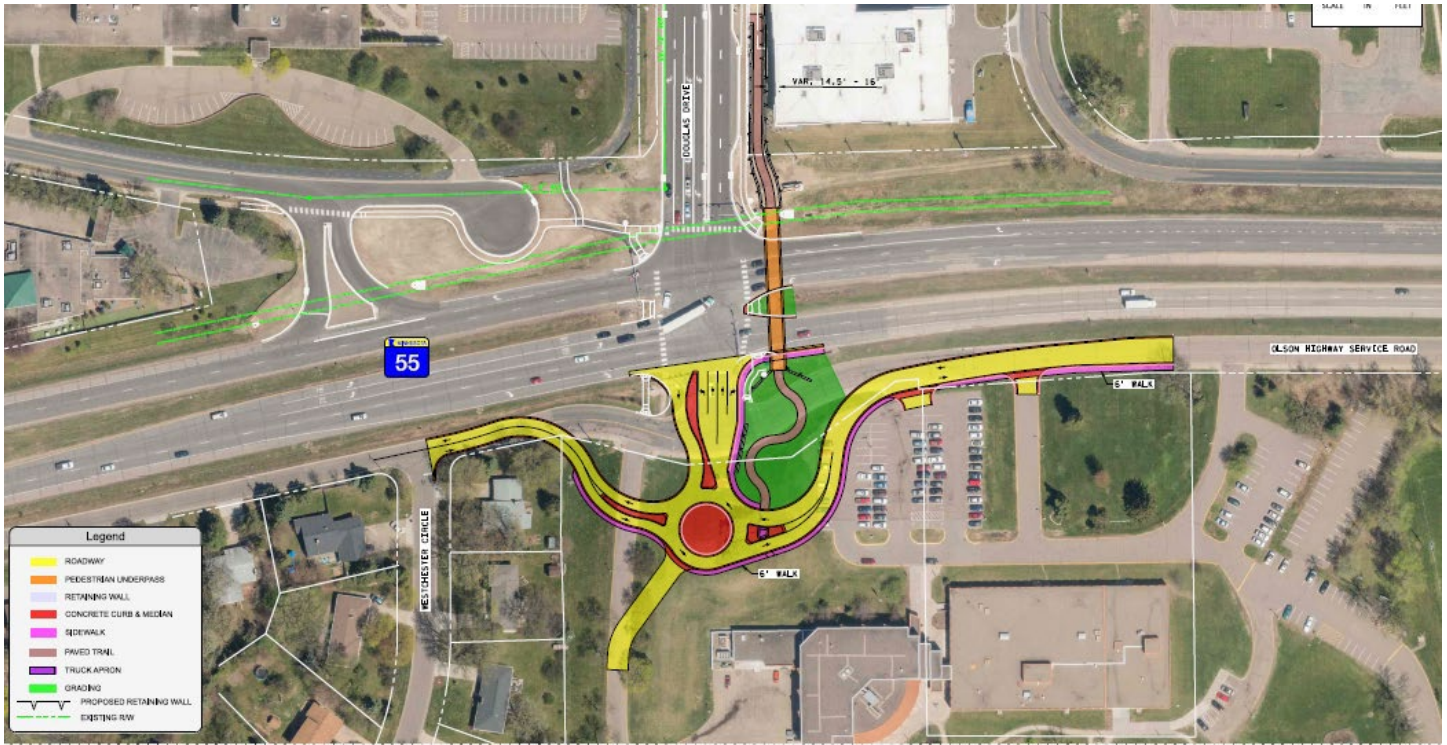
Financial analysis

2024 cash flow:	\$3,000,000
Current ACP:	\$5,706,000
2024 through 2029 cash flow:	\$5,300,000
Total project cost:	\$5,706,000

Plymouth Forcemain Relocation at Douglas Drive
Program family 8090

Project #819018

Project location: Council districts #6 and 8, City of Golden Valley, Highway 55 and Douglas Drive



Map of Project 819018 location near Highway 55 and Douglas Drive in Golden Valley

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

This project realigns the existing parallel 30-inch and 42-inch forcemains.

Project need

The City of Golden Valley is working to improve pedestrian access in the project area, and the ability for pedestrians to cross Highway 55. The proposed pedestrian tunnel requires that the existing forcemains be lowered. One of the forcemain pipes is over 50 years old and at the end of its useful life.



Planning: 2021



Design: 2022 through 2023



Construction: 2024

Financial analysis

2024 cash flow:	\$1,000,000
Current ACP:	\$3,066,000
2024 through 2029 cash flow:	\$1,000,000
Total project cost:	\$3,066,000

Regional Vector Waste Facility Improvements
Program family 8090

Project #819019

Project location: Council districts #1 to 16, Regional project



Vector truck discharging into a waste receiving facility

Project type

Study

Objectives

Asset Preservation and Quality Improvements

Scope

Study the need for regional vector waste facilities. Implementation of improvements, if any, would be completed under a separate project.

Project need

Metro Plant is the only regional vector waste receiving facility in operation. Consequently, no regional vector waste disposal facility is available when river flooding closes access to the plant. Additionally, lack of a disposal facility can interrupt customer’s cleaning operations and potentially result in illicit dumping into the regional conveyance system.



Planning: 2023



Design: 2024 through 2025



Construction: 2026 through 2027

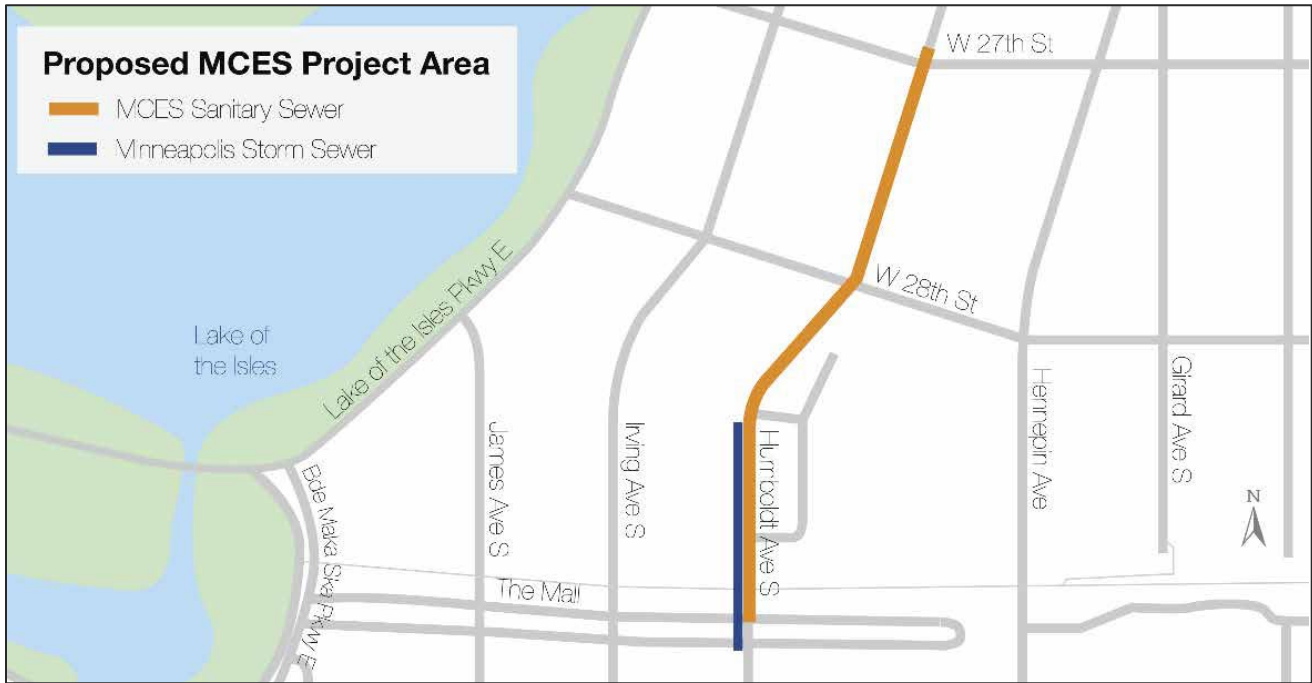
Financial analysis

2024 cash flow:	\$100,000
Current ACP:	\$209,000
2024 through 2029 cash flow:	\$100,000
Total project cost:	\$209,000

Hopkins System Improvements, East Isles Forcemain – Contract G
Program family 8090

Project #819020

Project location: Council district #6, City of Minneapolis



Map of Project #819015 location north of The Mall along Humboldt Avenue South in Minneapolis

Project type

Interceptor Improvements

Objectives

Asset Preservation and Quality Improvements

Scope

The project includes replacement of 1500 lineal feet of 30-inch concrete forcemain with two 24-inch diameter forcemains on Humboldt Avenue between the Midtown Greenway and 27th Street. Cooperative construction with the city of Minneapolis to complete local improvements in the area.

Project need

Without a redundant forcemain, inspecting the existing 24-inch concrete forcemain is difficult and there is significant potential for corrosion given the pipe material and age. An upstream section of the forcemain collapsed in 2000. The vortex drop structure between the forcemain and interceptor 1-MN-330 at 27th Street and Humboldt Avenue South is severely corroded is at risk of failure.



Planning: 2018



Design: 2019 through 2020



Construction: 2021 through 2023

Financial analysis

2024 cash flow:	\$1,900,000
Current ACP:	\$2,433,000
2024 through 2029 cash flow:	\$2,300,000
Total project cost:	\$2,433,000

ES Interceptor Rehabilitation – Site 1 – 6-MO-650
Program family 8090

Project #819022

Project location: Council district #3, City of Mound, Interceptor 6-MO-650



Map of Project #819022 Site 1 along Shoreline Drive in Mound

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitation of 2,600 LF of 8-inch and 10-inch forcemain. Rehabilitation of about 500 ft of 24-inch RCP pipe at Auditors Road and Shoreline Drive.

Project need

Routine condition assessments have identified interceptors at this site as poor condition pipes. 6-MO-650 has experienced recent breaks in the forcemain due to its age. The gravity section of pipe has sag in the pipe. Hennepin County is planning a road reconstruction project on Shoreline Dr. This project needs to be completed before the road reconstruction.



Planning: 2022



Design: 2023



Construction: 2023 through 2025

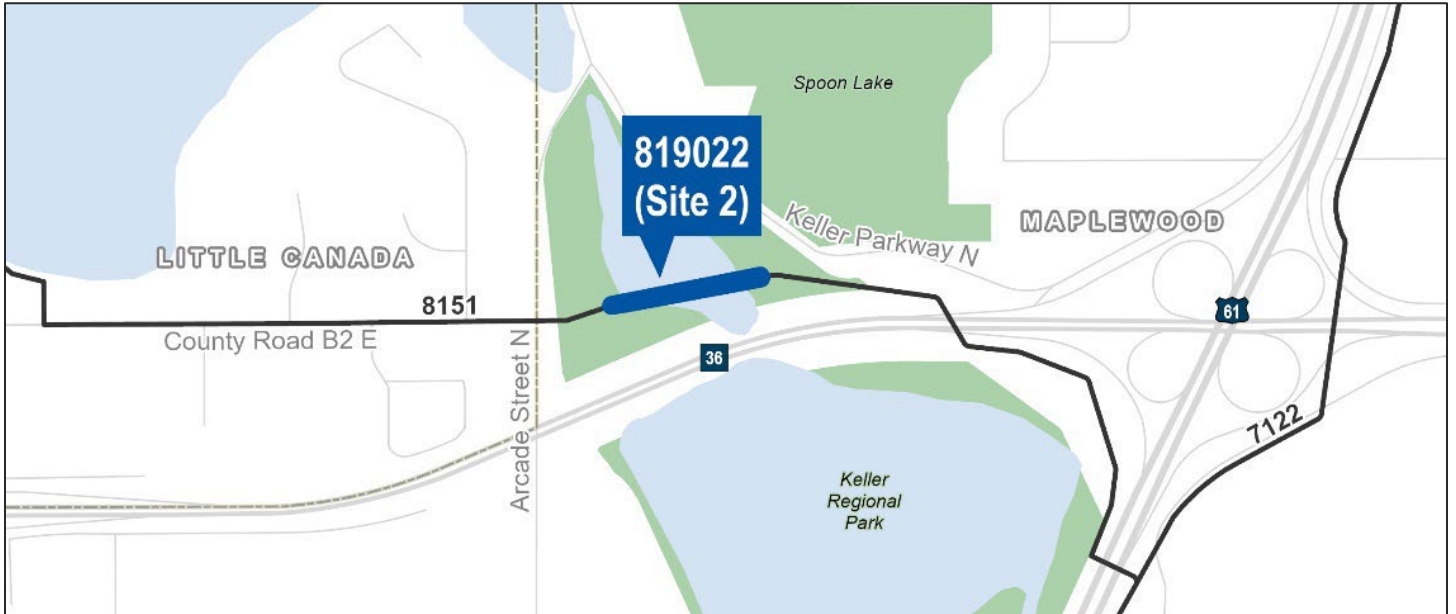
Financial analysis

2024 cash flow:	\$1,020,000
Current ACP:	\$3,228,000
2024 through 2029 cash flow:	\$3,120,000
Total project cost:	\$5,118,000

ES Interceptor Rehabilitation – Site 2 – Interceptor 8151 Siphon at Keller Lake
Program family 8090

Project #819022

Project location: Council district #13, City of Maplewood, Interceptor 8155



Map of Project #819022 Site 2 north of Highway 36 and west of Highway 61 in Maplewood

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitation of 3 siphon pipes (two 24-inch DIP and a 42-inch DIP) under Keller Lake. Rehabilitation of the headhouse and tail house structures. New gates/valves to improve hydraulic performance.

Project need

Routine condition assessments have identified interceptors at this site as poor condition pipes with extensive corrosion in two of the three pipes.



Planning: 2022



Design: 2023



Construction: 2024 through 2025

Financial analysis

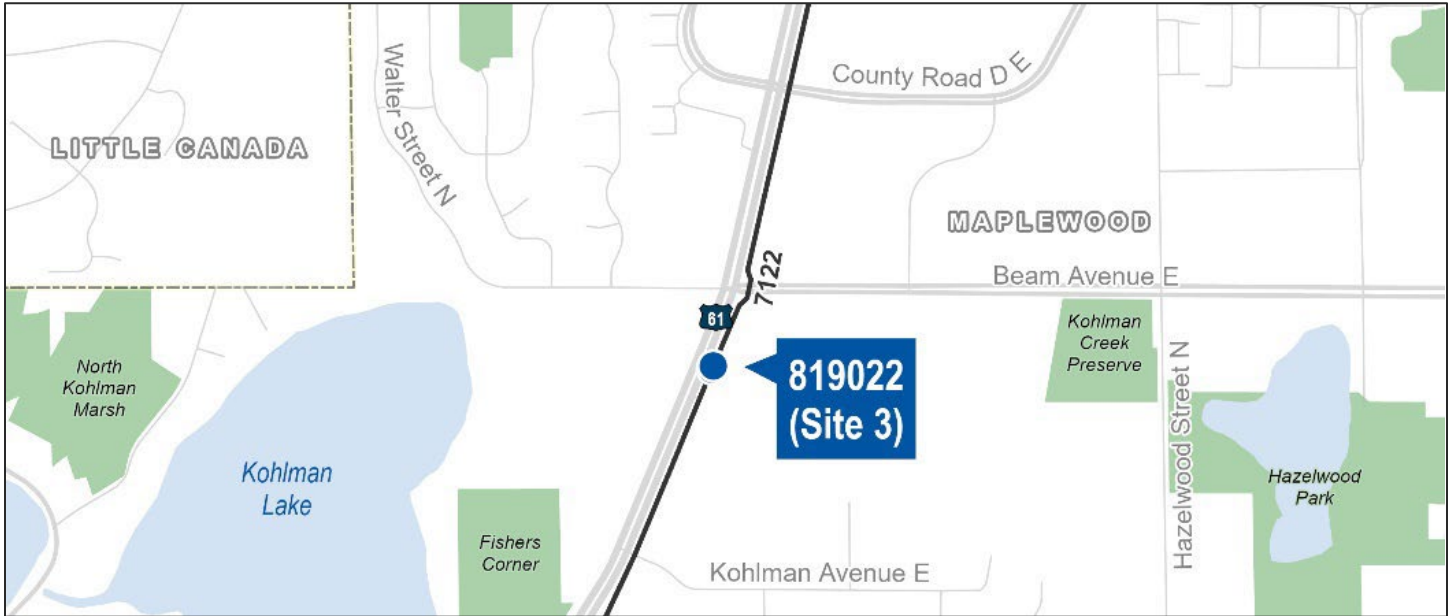
2024 cash flow:	\$306,000
Current ACP:	\$968,000
2024 through 2029 cash flow:	\$936,000
Total project cost:	\$1,600,000

ES Interceptor Rehab – Site 3 – Interceptor 7122 Storm Sewer Crossing

Program family 8090

Project #819022

Project location: Council district #13, City of Maplewood, Interceptor 7122



Map of Project #819022 Site 3 along Highway 61 in Maplewood

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Inspection and cleaning of interceptor 7122 low head crossing and air jumpers.

Project need

The interceptor needs to be cleaned and inspected to check the condition of the pipe. Temporary conveyance is required to do the work.



Planning: 2022



Design: 2023



Construction: 2024 through 2025

Financial analysis

2024 cash flow:	\$510,000
Current ACP:	\$1,614,000
2024 through 2029 cash flow:	\$1,560,000
Total project cost:	\$2,605,000

ES Interceptor Rehab – Site 4 – 1-MN-310 Siphon Structures at Basset Creek

Program family 8090

Project #819022

Project location: Council district #7, City of Minneapolis, Interceptor 1-MN-310



Map of Project #819022 Site 4 along 2nd Street North in Minneapolis

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitation of 2-36-inch diameter CIP pipes and cast-in place concrete headhouse and tail house structures. New access structures to improve maintenance.

Project need

Routine condition assessments have identified interceptor as poor condition pipes with significant loss of concrete with rebar exposed in the structures.



Planning: 2022



Design: 2023



Construction: 2024 through 2025

Financial analysis

2024 cash flow:	\$2,448,000
Current ACP:	\$7,747,000
2024 through 2029 cash flow:	\$7,488,000
Total project cost:	\$12,030,000

Project location: Council district #16, City of Savage



Map of Project #819025 along Highway 13 in Savage

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

This project realigns the existing forcemain route to move it from under MnDOT’s proposed entrance ramps and frontage roads.

Project need

MnDOT’s TH 13 project includes constructing an overpass with entrance and exit ramps to improve traffic safety at the intersections of Highway 13 and Dakota Ave and Highway 13 and Yosemite Ave. The existing forcemains need to be relocated to ensure continued maintenance without disrupting the proposed Highway improvements. The work will be completed as a part of a MnDOT Construction Contract.



Planning: 2021



Design: 2021 through 2022



Construction: 2022 through 2023

Financial analysis

2024 cash flow:	\$100,000
Current ACP:	\$3,844,000
2024 through 2029 cash flow:	\$100,000
Total project cost:	\$3,844,000