

Program 8055 – Lift Station Rehabilitation



L66 (Savage) dry well

Description

Upgrades include reconstruction and replacement work for forcemains and lift stations.

Purpose and justification

Capacity and condition assessments are being conducted along with regulatory reviews to identify system-wide lift station upgrades. These upgrades extend the life of facilities, reduce the risk of spills, and improve the safety of staff who operate and maintain lift stations.

Program location

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

Active projects in program

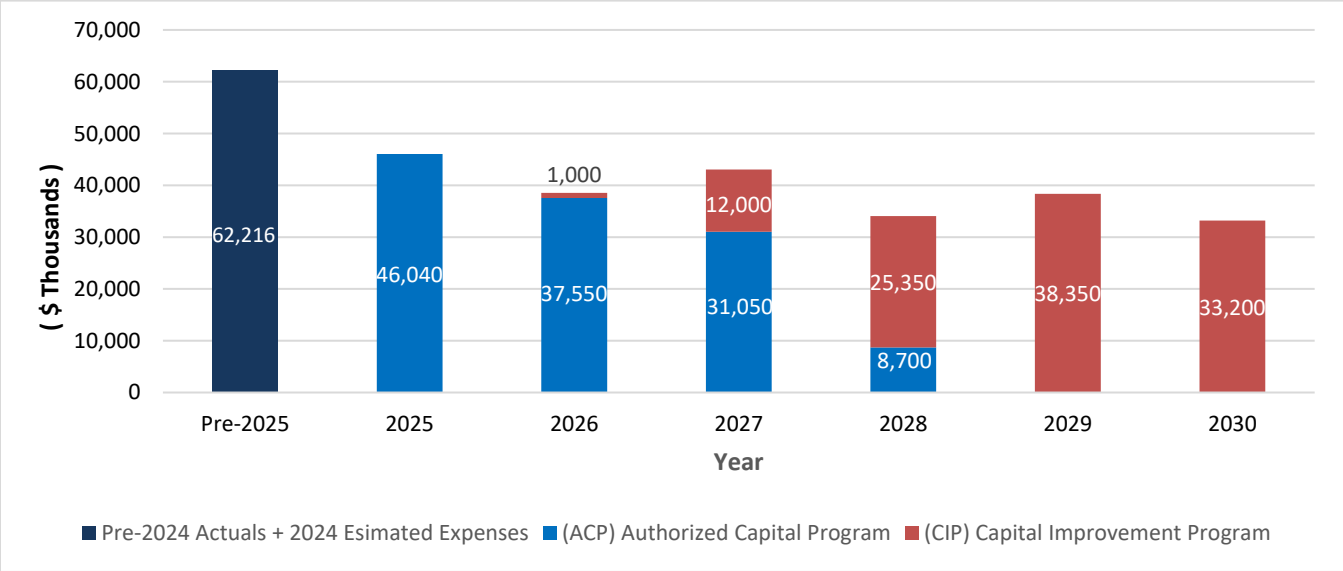
Project Number	Project Title
805500	Lift Station Rehabilitation (Parent Project)
805502	Lift Station Condition Assessments
805503	Lift Station L13 HVAC Improvements
805506	FM-Siphon-Rx-Outfall Inspection Phase 1
805511	Lift Stations L50 and L51 Generator Upgrades
805515	Lift Stations L35 and L42 Rehabilitation
805516	Lift Station L15 Rehabilitation
805564	Lift Station L66 Rehabilitation
805566	Lift Station Electrical Rehabilitation (L01, L02, L03, L31)
805568	Lift Station L71 System Improvements
805569	Lift Station L73 Odor Control Improvements
805576	Lift Station L29 Rehabilitation
805581	Anoka-Champlin Forcemain Improvements

Environmental Services 2025 through 2030 Capital Program

- Authorized Capital Program (ACP): \$108,256,444
- Capital Improvement Plan (CIP): \$61,390,000

Estimated program cash flow from 2025 through 2030

Note: the ACP is the total amount of all past and present authorizations including pre-2025 expenses.



Lift Station Condition Assessments

Program family 8055

Project #805502

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



Interceptor service worker inspects the Rosemount Lift Station (L74)

Project type

Condition Assessment

Objectives

Asset Preservation

Scope

Evaluate and report the condition of lift stations.

Project need

The condition assessments are needed to prioritize and plan lift station repairs and improvements.

Project schedule:



Planning: 2018 through 2027



Design: N/A



Construction: N/A

Financial analysis

2025 cash flow:	\$300,000
Current ACP:	\$1,600,000
2025 through 2030 cash flow:	\$1,200,000
Total project cost:	\$2,171,000

Lift Station L13 HVAC Improvements
Program family 8055

Project #805503

Project location: Council district #15, City of Eagan



Map of project #805503 location near Nicols Road and Silver Bell Road in Eagan

Project type
Lift Station Improvements

Objectives
Asset Preservation and Quality Improvements

Scope
Design and construct odor control systems that reduce odors and preserve the function of the existing lift station including a study of hydrogen sulfide sources in the tributary area and options to mitigate them.

Project need
High hydrogen sulfide levels will continue to cause corrosion within the lift station that can compromise station reliability. In addition, odors from the lift station are leaving the lift station site. The odor and potential disruption of service to our customers does not meet the Council’s Level of Service goals.

Project schedule:



Planning: 2025 through 2026



Design: 2026 through 2027



Construction: 2028 through 2029

Financial analysis	
2025 cash flow:	\$500,000
Current ACP:	\$1,114,550
2025 through 2030 cash flow:	\$5,400,000
Total project cost:	\$5,450,000

FM-Siphon-Rx-Outfall Inspection Phase 1
Program family 8055

Project #805506

Project location: Districts #13, City of Saint Paul; #15, City of Eagan; #8, City of Golden Valley; and #11, City of Centerville



Project #805506 Inspection of the Seneca outfall.

Project type
Interceptor Condition Assessment

Objectives
Asset Preservation

Scope
Inspection of the Seneca outfall, 1-MS-100 siphon under Warner Road, lift station L41 forcemain (7114), and lift station 7651 forcemain (7651).

Project need
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.



Planning: 2022



Design: 2024



Construction: 2024 through 2029

Financial analysis

2025 cash flow:	\$2,500,000
Current ACP:	\$6,750,000
2025 through 2030 cash flow:	\$25,700,000
Total project cost:	\$34,517,000

Lift Stations L50 and L51 Generator Upgrades
Program family 8055

Project #805511

Project location: Council district #3, City of Minnetrista



Maps and Figures of Project #805511 Lift Stations 50 and 51 Generator Upgrades

Project type
Lift Station Improvements

Objectives
Quality Improvements

Scope
To upgrade electrical, instrumentation, and controls (EIC) equipment at the sites. This includes the purchase of new permanent generators at the sites along with five portable generators to use throughout the system to provide backup power generation at critical times.

Project need
This project is driven by a lack of system reliability. The existing L50 and L51 are serviced by portable generators and have poor access.

Project schedule:



Planning: N/A



Design: 2025



Construction: 2026 through 2027

Financial analysis
2025 cash flow:
Current ACP:
2025 through 2030 cash flow: Total
project cost:

\$200,000
\$786,000
\$6,700,000
\$6,708,000

Lift Stations L35 and L42 Improvements
Program family 8055

Project #805515

Project location: Council district #10 and #9, Cities of Mounds View and Anoka



Lift Station L35 wet well

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
The lift station improvements will include pump replacement, wet well rehabilitation, odor control upgrades, HVAC upgrades, and electrical upgrades for each of the two respective lift stations. The L35 Forcemain 4-NS-524 and L42 Forcemain 7707A will be assessed to confirm necessary forcemain and appurtenance improvements.

Project need
L35 was originally constructed in 1965 and hasn't received any significant improvements since then. L42 was evaluated in 2023. The primary findings of need are: no flow metering; no standardized flushing procedure; no VFD control for existing pumps; insufficient wet well volume for peak conditions; and existing air release valves are inoperable.

Project schedule:



Planning: 2025



Design: 2026 through 2027



Construction: 2028 through 2030

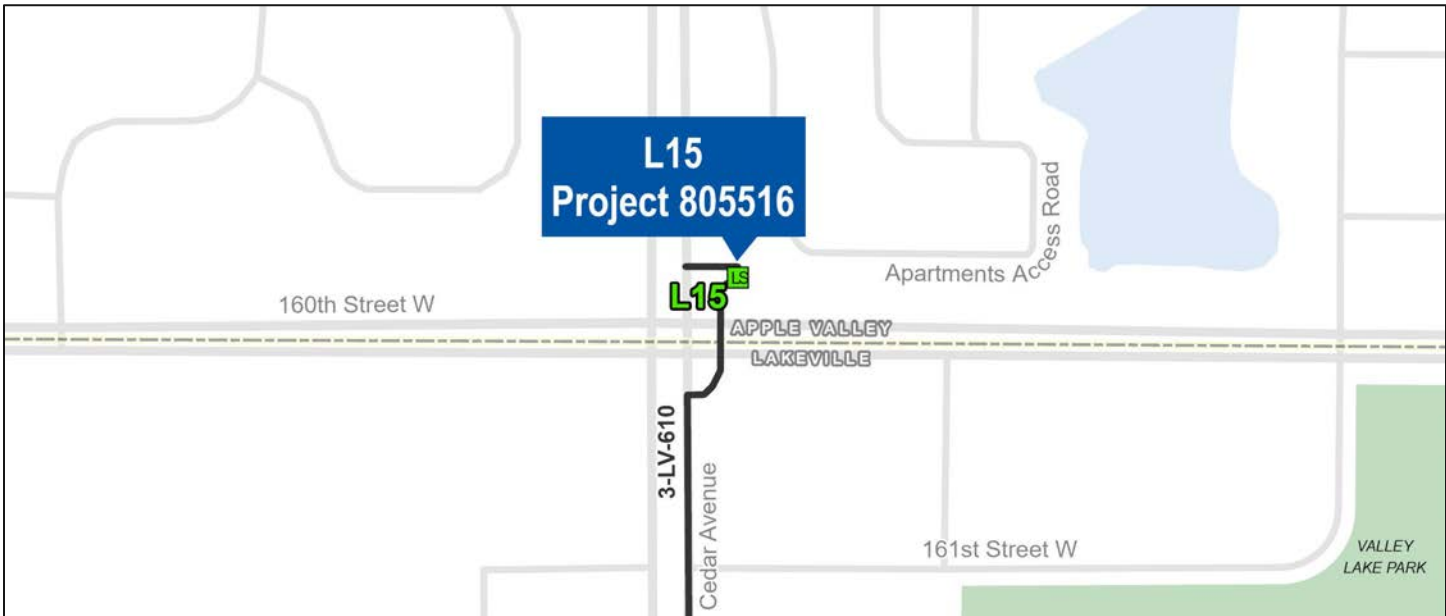
Financial analysis

2025 cash flow:	\$500,000
Current ACP:	\$300,000
2025 through 2030 cash flow:	\$29,500,000
Total project cost:	\$35,500,000

Lift Station L15 Rehabilitation
Program family 8055

Project #805516

Project location: Council district #15, City of Apple Valley



Project #805516 L15 location in Apple Valley near the intersection of 160th Street West and Cedar Avenue

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
There are many updates needed to corroded equipment and concrete walls. There is outdated HVAC, mechanical, and electrical equipment that needs to be replaced.

Project need
L15 has outdated and deteriorating mechanical, HVAC, and electrical equipment that needs to be replaced and improved.

Project schedule:



Planning: 2025



Design: 2025 through 2027



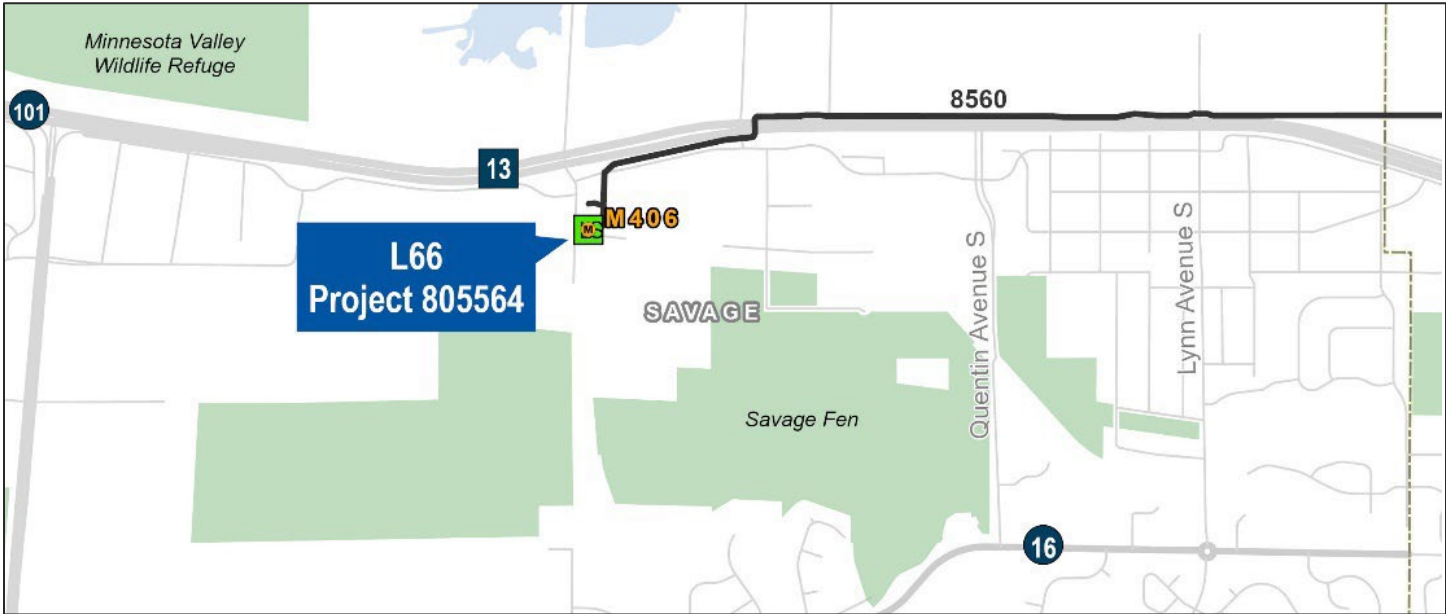
Construction: 2027 through 2029

Financial analysis	
2025 cash flow:	\$100,000
Current ACP:	\$1,950,000
2025 through 2030 cash flow:	\$15,300,000
Total project cost:	\$16,300,000

Lift Station L66 Rehabilitation
Program family 8055

Project #805564

Project location: Council district #16, City of Savage



Map of project #805564 location south of Highway 13 and north of Savage Fen in Savage

Project type

Lift Station Improvements

Objectives

Asset Preservation and Quality Improvements

Scope

The lift station rehabilitation will include HVAC upgrades, a carbon tank, a new generator, wet well rehabilitation, pump replacement, and electrical upgrades.

Project need

Wet well rehabilitation is needed due to the substantial concrete deterioration. The station also needs new pumps to accommodate for projected 2040 flows. The HVAC is not up to code and needs replacement.

Project schedule:



Planning: N/A



Design: 2017 through 2025



Construction: 2025 through 2027

Financial analysis

2025 cash flow:	\$2,500,000
Current ACP:	\$11,512,000
2025 through 2030 cash flow:	\$11,250,000
Total project cost:	\$11,512,000

Lift Station Electrical Rehabilitation (L01, L02, L03, L31)
Program family 8055

Project #805566

Project location: Council districts #11, Cities of Forest Lake and Hugo, and #12, City of St. Paul Park



Existing motor control centers (MCCs) at lift station L31.

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
At lift stations sites L01 (Forest Lake), L02 (Hugo), L03 (Hugo), and L31 (St. Paul Park), replace MCC (Motor Control Center), add new enclosures, replace main breakers, replace manual transfer switches with automatic transfer switches, and install permanent generators in outdoor enclosures.

Project need
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by ES engineering, electrical, and ISBU staff. Each site is identified as a site needing rehabilitation as soon as possible. The sites have many components in poor shape or obsolete.

Project schedule:



Planning: 2022 through 2023



Design: 2023 through 2025



Construction: 2025 through 2026

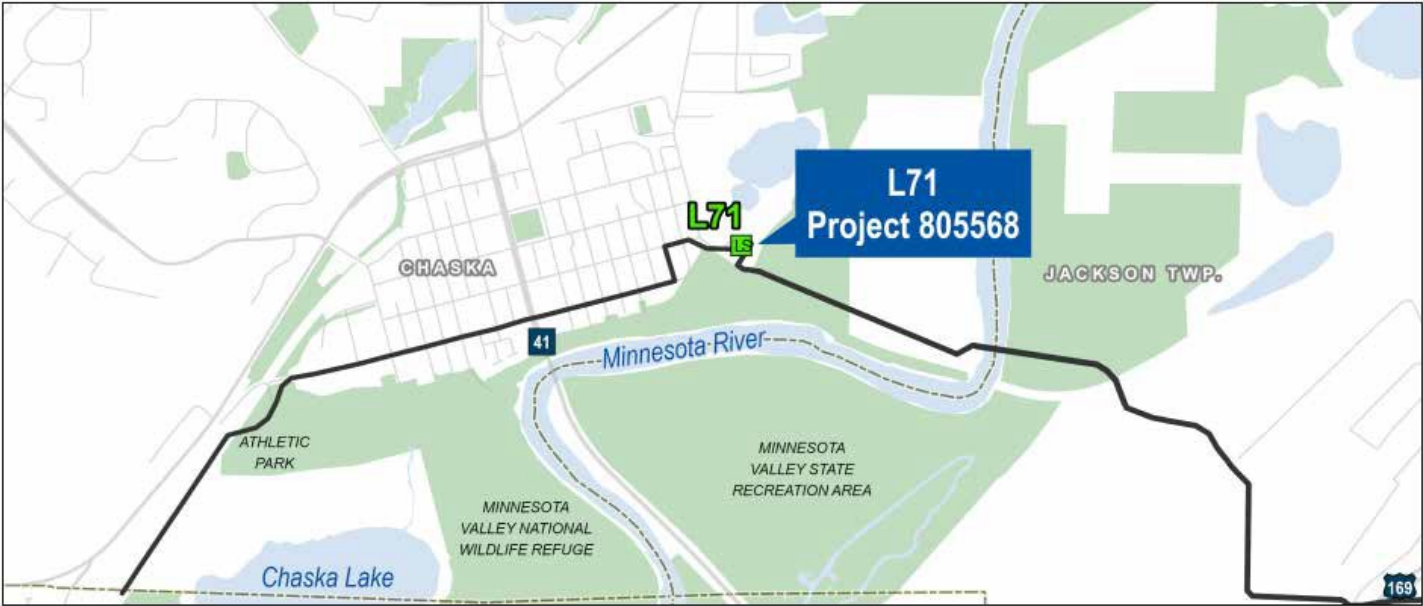
Financial analysis

2025 cash flow:	\$500,000
Current ACP:	\$1,350,000
2025 through 2030 cash flow:	\$4,100,000
Total project cost:	\$4,968,000

Lift Station L71 System Improvements
Program family 8055

Project #805568

Project location: Council district #4, City of Chaska, 600 4th Street East and eastward into Shakopee



Project #805568 L71 location north of the Minnesota River in Chaska

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
Ongoing investigations of upstream contributions and results of pump testing and odor treatment will be evaluated to determine the scope of work. Preliminary indications are that fats, oils, and greases (FOG) pre-treatment, forcemain modifications, and odor control will be needed.

Project need
L71 receives high-strength wastewater containing significant volumes of fats, oils, and greases. The FOGs impact lift station and forcemain operations. This has resulted in decreased capacity and creates odors.

Project schedule:



Planning: 2023 through 2024



Design: 2025



Construction: 2026 through 2027

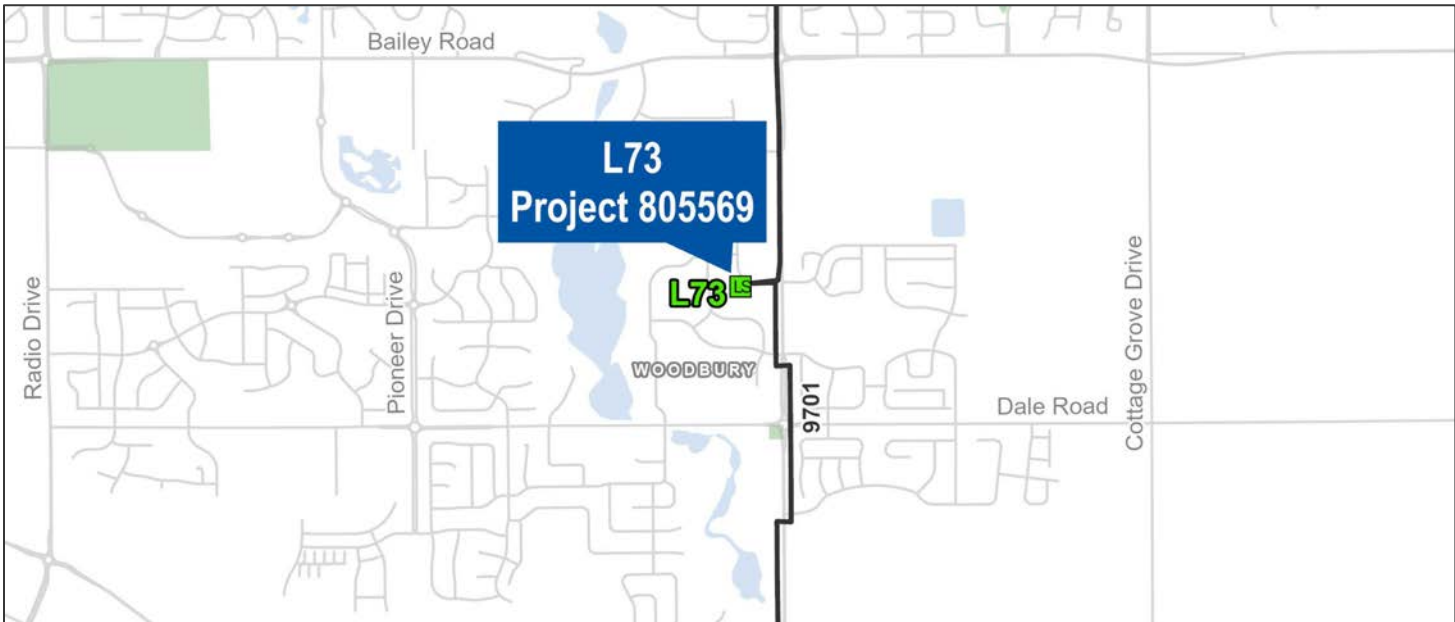
Financial analysis

2025 cash flow:	\$150,000
Current ACP:	\$600,000
2025 through 2030 cash flow:	\$24,150,000
Total project cost:	\$24,356,000

Lift Station L73 Odor Control Improvements
Program family 8055

Project #805569

Project location: Council district #12, City of Woodbury



L73 location north of Dale road in Woodbury

Project type
Lift Station Improvements

Objectives
Quality Improvements

Scope
Replace an existing biofilter odor control system with a carbon odor control unit.

Project need
Improvements are needed to better control odor emissions from the lift station following development of neighboring properties.



Planning: 2023



Design: 2024



Construction: 2025

Financial analysis	
2025 cash flow:	\$1,400,000
Current ACP:	\$2,798,000
2025 through 2030 cash flow:	\$1,650,000
Total project cost:	\$2,798,000

Lift Station L29 Rehabilitation
Program family 8055

Project #805576

Project location: Council district #1, City of Plymouth



Project #805576 location in Plymouth

Project type

Lift Station Improvements

Objectives

Asset Preservation and Quality Improvements

Scope

A planning study is reviewing capacity, current condition, and system reliability for both the lift station and associated forcemain.

Project need

Operational issues and a lack of redundancy in the station pumping equipment have presented issues for maintenance of the lift station. Condition assessments or the over 50-year-old forcemain piping are necessary to maintain reliability.

Project schedule:



Planning: 2024 through 2025



Design: 2025 through 2026



Construction: 2026 through 2028

Financial analysis

2025 cash flow:	\$600,000
Current ACP:	\$2,800,000
2025 through 2030 cash flow:	\$1,200,000
Total project cost:	\$2,800,000

Anoka-Champlin Forcemain Improvements
Program family 8055

Project #805581

Project location: Council districts #2 and 9, Cities of Anoka and Champlin, north and south sides of the Mississippi River at Highway 169



Project #805581 location on either side of the Mississippi River in Anoka and Champlin

Project type
Lift Station and Interceptor Improvements

Objectives
Asset Preservation and Quality Improvements

Scope
Results of pump testing will be evaluated to determine the scope of work. Preliminary indications are that a second forcemain will be needed.

Project need
L33, L42, L67, and their respective forcemains are interconnected. Forcemain 8751, downstream of all three lift stations, is an aging single 24-inch barrel. Air release valves on the forcemain are inoperable and are impacting the forcemain capacity. The forcemain and air releases cannot be inspected or repaired without major temporary conveyance.

Project schedule:



Planning: 2023 through 2024



Design: 2025



Construction: 2026 through 2027

Financial analysis

2025 cash flow:	\$2,000,000
Current ACP:	\$3,004,000
2025 through 2030 cash flow:	\$17,000,000
Total project cost:	\$17,182,000