

## Program 8028 – Blue Lake Interceptor Improvements



Contractor installation of 7071 Forcemain

### Description

This project provides improvements to meet the long-term conveyance capacity, reliability, and rehabilitation/replacement needs of the Blue Lake Interceptor System. This system includes gravity sewers, 29 lift stations, and forcemains from each lift station. The major project areas are located in Victoria, Excelsior, Orono, and Deephaven.

### Purpose and justification

Evaluation of the Blue Lake Area Interceptor System indicates that the existing facilities cannot convey all the wastewater that will ultimately be generated from within the Blue Lake sewershed due to growth. In addition, many of the sewers, lift stations, and associated forcemains need to be rehabilitated to ensure system reliability and to address odor and corrosion control.

### Program location

The active projects within this program are in the following Council districts: 1, 3, and 4

### Active projects in program

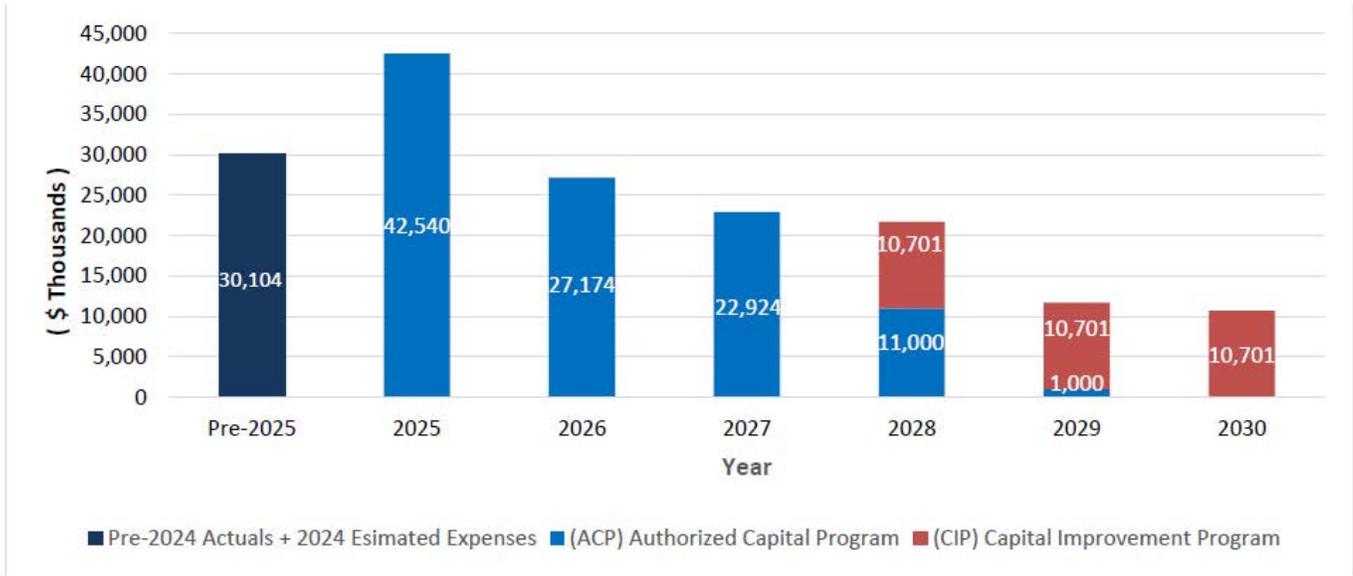
Project Number	Project Title
802800	Lake Minnetonka Area (Parent Project)
802803	8352 Forcemain Improvements
802806	Interceptor 8253-327 Forcemain Improvements
802809	Shakopee Interceptors 9206-1 and 7120 Rehabilitation
802831	Orono Lift Stations L46 and L49 Improvements
802835	L48 Rehabilitation and 6-DH-645 Forcemain Replacement
802856	Excelsior Area Lift Station L20
802863	Orono 8567 Channel Crossings Replacement
802897	Orono Interceptor 7113 Forcemain Replacement
802819	Long Lake 8352A Gravity Capacity Improvements

### Environmental Services 2025 through 2030 Capital Program

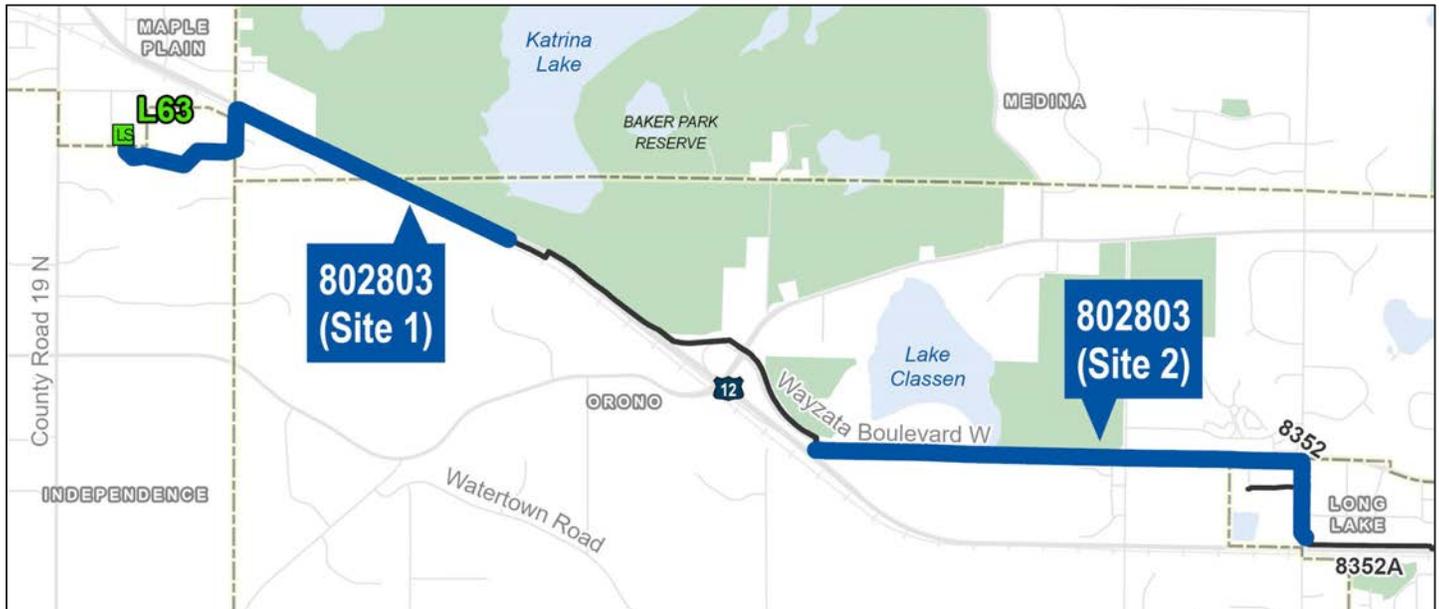
- Authorized Capital Program (ACP): \$134,741,938
- Capital Improvement Plan (CIP): \$32,103,000

### 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.



Project location: Council districts #1 and #3, Cities of Maple Plain, Orono, Medina, and Long Lake



Map of Project #802801 Site 2 locations in north Orono and southwest Medina

**Project type**

Interceptor Improvements

**Objectives**

Asset Preservation

**Scope**

Project includes rehabilitation and/or replacement of approximately 4.1 miles of forcemain due to deterioration of pipe walls along with installation of redundant forcemain to provide system reliability.

**Project need**

Forcemain 8352 was constructed in 1985 as a single-barrel, 12-inch ductile iron pipe which runs approximately 5.1 miles from L63 in the City of Maple Plain to the discharge MH-172 in Long Lake. A one-mile segment of the forcemain at the intersection of MN Highway 12 and County Road 6 was replaced in 2011 with dual barrel 14-inch HDPE pipes. Forcemain 8352 was evaluated using ultrasonic testing in 2021 and determined to have wall thickness loss. This reduction in wall thickness will require rehabilitation to extend forcemain service life. Reliability and future flow needs will be evaluated as part of this project.

**Project schedule:**



Planning: 2022 through 2025



Design: 2025 through 2027



Construction: 2028 through 2030

**Financial analysis**

2025 cash flow:	\$100,000
Current ACP:	\$3,100,000
2025 through 2030 cash flow:	\$20,600,000
Total project cost:	\$21,000,000

Project location: Council district #3, Cities of Shorewood and Chanhassen



Map of Project #802806 location north of Lake Minnewashta

**Project type**

Interceptor Improvements

**Objectives**

Asset Preservation and Quality Improvements

**Scope**

Rehabilitate existing forcemain due to pipe corrosion and increase system reliability by installing a second redundant forcemain.

**Project need**

Forcemain 8253-327 was built in 1988 and runs from L21 in the City of Shorewood to the discharge approximately 3 miles to the east. An external ultrasonic thickness gauge survey conducted in 2021 found locations of pipe loss. Additional planning will be conducted to recommend reliability improvements.

**Project schedule:**



Planning: 2022 through 2024



Design: 2025 through 2026



Construction: 2027 through 2028

**Financial analysis**

2025 cash flow:	\$200,000
Current ACP:	\$750,000
2025 through 2030 cash flow:	\$25,000,000
Total project cost:	\$25,000,000

Project location: Council district #4, City of Shakopee



Map of project #802809 location near Quarry Lake Park in Shakopee

**Project type**

Interceptor Rehabilitation

**Objectives**

Asset Preservation

**Scope**

Provide cured-in-place pipe (CIPP) lining to over 3,500 linear feet of 72-inch Interceptor 7120 and 31 linear feet to 72-inch Interceptor 9206-1. The work also includes rehabilitating maintenance structures and a junction box along the interceptor.

**Project need**

A 2020 condition assessment revealed that Interceptor 7120 had a condition rating of 4 and Interceptor 9206-1 had a condition rating of 5.

**Project schedule:**



Planning: 2024



Design: 2024 through 2025



Construction: 2026 through 2027

**Financial analysis**

2025 cash flow:	\$150,000
Current ACP:	\$1,050,000
2025 through 2030 cash flow:	\$5,950,000
Total project cost:	\$5,950,000

**Orono Lift Stations L46 and L49 Improvements**  
**Program family 8028**

**Project #802831**

Project location: Council District #3, City of Orono



Map of Project #802831 location along Shadywood Road in Orono

**Project type**

Lift Station Improvements

**Objectives**

Quality Improvements

**Scope**

Replace L49 at neighboring property and fully rehabilitate L46 through replacement of pumps, mechanical equipment, and site improvements for safety.

**Project need**

A 2009 study evaluating L46 and L49 revealed L49 is at the end of its useful life and has inadequate capacity to meet current peak flow rates. Its current location is also difficult to access for maintenance. Land has been purchased adjacent to the existing lift station to provide easier access. L46 requires pump and valve replacement, electrical panel upgrades, and site improvements to protect existing equipment from traffic.

**Project schedule:**



Planning: 2019 through 2020



Design: 2020 through 2023



Construction: 2024 through 2026

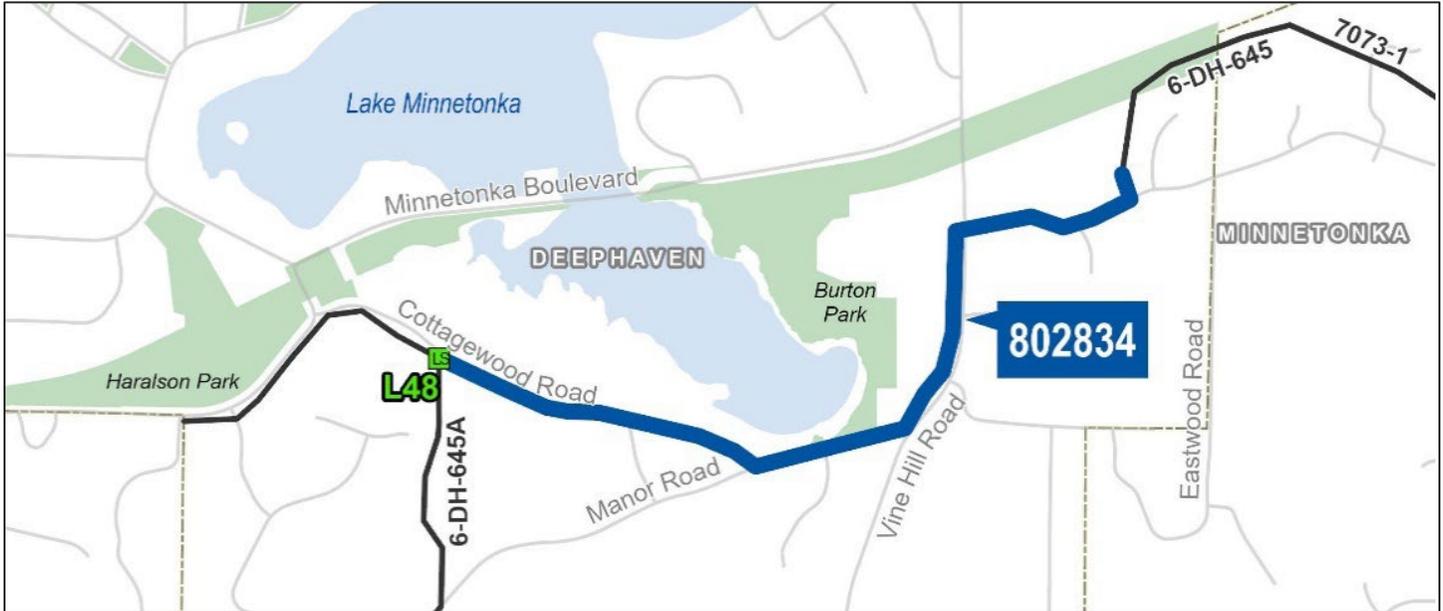
**Financial analysis**

2025 cash flow:	\$3,600,000
Current ACP:	\$6,500,000
2025 through 2030 cash flow:	\$5,450,000
Total project cost:	\$6,500,000

**L48 Rehabilitation and 6-DH-645 Forcemain Replacement**  
**Program family 8028**

**Project #802834**

Project location: Council district #3, City of Deephaven



Map of Project #802834 location in the Burton Park area in Deephaven

**Project type**

Lift Station and Interceptor Improvements

**Objectives**

Asset Preservation

**Scope**

The rehabilitation of L48 will include a new valve vault, pumps and valves, electrical and site work, forcemain replacement, and replacement of the gravity discharge pipe.

**Project need**

The 16-foot-deep buried valves are broken outside of the station. A buried temporary conveyance system was installed to convey around the broken valves. The forcemain was built in 1970, is over 50 years old, and is reaching the end of its service life.

**Project schedule:**



Planning: N/A



Design: 2021 through 2022



Construction: 2023 through 2026

**Financial analysis**

2025 cash flow:	\$6,000,000
Current ACP:	\$7,367,000
2025 through 2030 cash flow:	\$7,500,000
Total project cost:	\$8,558,000

**Excelsior Area Lift Station L20**  
**Program family 8028**

**Project #802856**

Project location: Council district #3, City of Excelsior



Map of Project #802856 in Excelsior showing new and rehabilitated gravity sewer and forcemain abandonment

**Project type**

Interceptor Improvements

**Objectives**

Asset Preservation and Quality Improvements

**Scope**

Remove existing lift station L20 and install a gravity pipe to lift station L19.

**Project need**

The existing L20 was constructed in 1970 and is at the end of its service life. The 2021 Lake Minnetonka Facility Plan determined that L20 should be abandoned and replaced with a gravity pipe connection to L19.

**Project schedule:**



Planning: 2008 through 2019



Design: 2019 through 2022



Construction: 2023 through 2026

**Financial analysis**

2025 cash flow:	\$2,000,000
Current ACP:	\$14,300,000
2025 through 2030 cash flow:	\$2,250,000
Total project cost:	\$13,037,000

**Orono 8567 Channel Crossings Replacement**  
**Program family 8028**

**Project #802863**

Project location: Council district #3, City of Orono



Map of Project #802863 location at the Hendrickson and Noerenberg Bridges in Orono

**Project type**

Interceptor Improvements

**Objectives**

Asset Preservation and Quality Improvements

**Scope**

To minimize future risk, a redundant parallel HDPE pipe is proposed at each channel crossing. Directional drilling will be used to complete the redundant pipe along with new connection structures.

**Project need**

In 2022, Hennepin County replaced the Noerenberg and Hendrickson bridges on North Shore Drive. Interceptor Forcemain 8567 was suspended on the bridges and partially relocated under the Lake Minnetonka channels. This project will finish the relocation, installing a parallel crossing on each channel and four structures.

**Project schedule:**



Planning: 2020



Design: 2021



Construction: 2022 through 2027

**Financial analysis**

2025 cash flow:	\$500,000
Current ACP:	\$6,000,000
2025 through 2030 cash flow:	\$3,050,000
Total project cost:	\$3,760,000

# Orono Interceptor 7113 Forcemain Replacement

Program family 8028

Project #802897

Project location: Council district #3, City of Orono



Map of Project #802897 location along Shadywood Road in Orono

## Project type

Interceptor Improvements

## Objectives

Asset Preservation and Quality Improvements

## Scope

Construction of a redundant forcemain along 7113 and the HCRAA trail corridor and rehabilitation of the existing forcemain.

## Project need

Forcemain 7113 was built in 1979 and runs from L59 in the City of Orono to the junction with forcemain 7113A approximately 3 miles to the east. Forcemain 7113 is approaching the end of its service life and needs replacement or rehabilitation. A new redundant forcemain is proposed to increase reliability and allow the existing forcemain in Shoreline Drive to be inspected and rehabilitated or replaced.

## Project schedule:



Planning: 2019 through 2022



Design: 2022 through 2025



Construction: 2026 through 2029

## Financial analysis

2025 cash flow:	\$600,000
Current ACP:	\$3,070,000
2025 through 2030 cash flow:	\$27,100,000
Total project cost:	\$29,000,000

**Long Lake 8352A Capacity Improvements**  
**Program family 8028**

**Project #802819**

Project location: Council district #3, City of Long Lake



Map of project #802819 location running parallel to MnDOT Highway 12 in Long Lake.

**Project type**

Interceptor Improvements

**Objectives**

Expansion

**Scope**

Construction of new gravity pipe to provide future capacity and reliability of the system

**Project need**

The project will evaluate capacity and rehabilitation/replacement alternatives of approximately 7,000 linear feet of 12- 18- and 24-inch DI gravity pipe between MH 171 and the L60 Lift Station.



Planning: 2025 through 2026



Design: 2026 through 2027



Construction: 2027 through 2028

**Financial analysis**

2025 cash flow:	\$150,000
Current ACP:	\$2,940,000
2025 through 2030 cash flow:	\$12,100,000
Total project cost:	\$12,100,000