

## Program 8028 Blue Lake Interceptor Improvements



### 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. Where cost effective, some lift stations will be replaced by deep gravity sewers using tunnel construction methods. The remaining lift stations will be rehabilitated and/or replaced as necessary. Single forcemains will be upgraded to dual forcemains where criteria supports this strategy. Gravity sewers will be rehabilitated as necessary. River crossings will be inspected and rehabilitated as necessary. The major project areas are Victoria, Excelsior, Mound and Orono. The gravity sewers are located in Chanhassen 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 sewer shed 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: 3, 4

### Active Projects in Program:

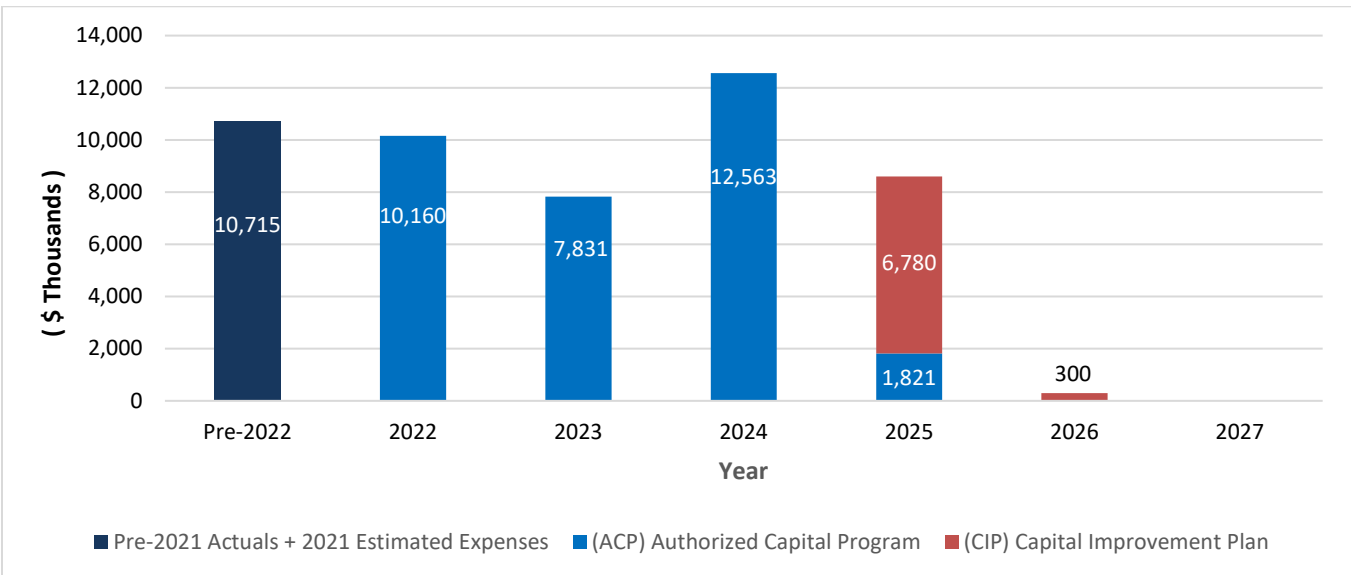
| Project Number | Project Title                         |
|----------------|---------------------------------------|
| 802800         | Lake Minnetonka Area (Parent Project) |
| 802831         | Lift Station L46 and L49              |

|        |   |
|--------|---|
| 802834 | L48 Rehab and 6-DH-645 FM replacement               |
| 802856 | Excelsior Area Lift Station L-20                    |
| 802863 | 8567 Channel Crossings Replacement                  |
| 802871 | Shorewood Interceptor 7017 Rehab                    |
| 802883 | Chanhassen Interceptor 8253-328 Rehabilitation      |
| 802886 | Interceptor 7113 Replacement at Tanager Lake Bridge |
| 802888 | Cooperative Agreements – Blue Lake System           |
| 802897 | Orono 7113 FM Replacement                           |

### MCES 2022 – 2027 Capital Program:

|  |   |
|--|---|
| <b>Authorized Capital Program (ACP)</b><br><b>\$43,090,000</b> | <b>Capital Improvement Plan (CIP)</b><br><b>\$7,080,000</b> |
|--|---|

### Estimated Program Cash Flow 2022 - 2027:

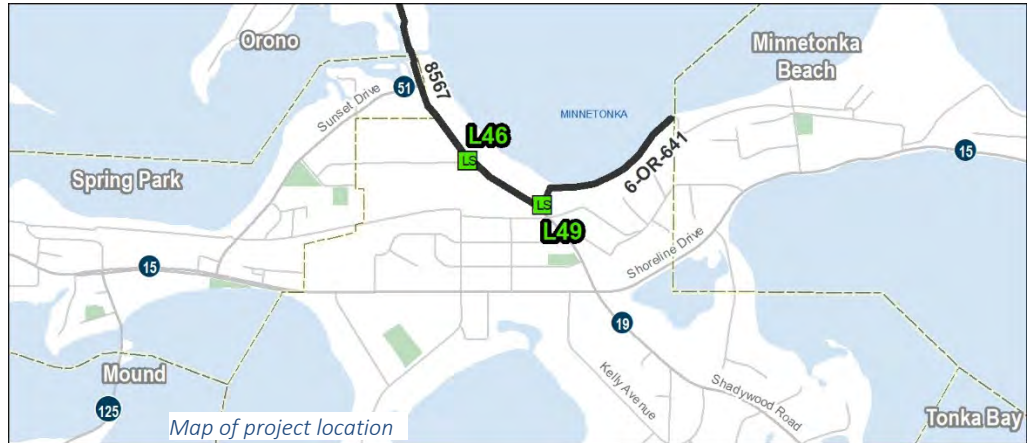


Note: The ACP is the total amount of all past and present authorizations including Pre-2022 Expenses.

Program Family: 8028  
Project # 802831

# Orono Lift Stations L46 and L49 Improvements

Project Location:  
Council District # 3  
City Orono



|                                   |  |
|-----------------------------------|--|
| <b>PROJECT TYPE:</b>              | Lift Station Improvements  |
| <b>OBJECTIVES:</b>                | Preservation and Quality Improvement   |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Comply with Permits, Minimize Impacts, Lead by Example, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, Coordinate with Others and Preserve Assets   |
| <b>SCOPE:</b>                     | Replace L49 at neighboring property, and fully rehabilitate L46 through replacement of pumps and mechanical equipment, and site improvements for safety.   |
| <b>PROJECT NEED:</b>              | Both L46 and L49 were included in recent condition assessments and were the subject of a 2009 study evaluating needed improvements. L49 is at the end of its useful life and has inadequate capacity to meet current peak flow rates. Its 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, as well as site improvements to protect existing equipment from traffic. |

## PROJECT SCHEDULE



Planning  
2019-2020



Design  
2020-2022



Construction  
2023-2024

## FINANCIAL ANALYSIS

|                             |                            |                                      |                                   |
|-----------------------------|----------------------------|--------------------------------------|-----------------------------------|
| 2022 Cash Flow<br>\$160,000 | Current ACP<br>\$4,186,000 | 2022 – 2027 Cash Flow<br>\$3,869,000 | Total Project Cost<br>\$4,186,000 |
|-----------------------------|----------------------------|--------------------------------------|-----------------------------------|

Program Family: 8028  
Project # 802834

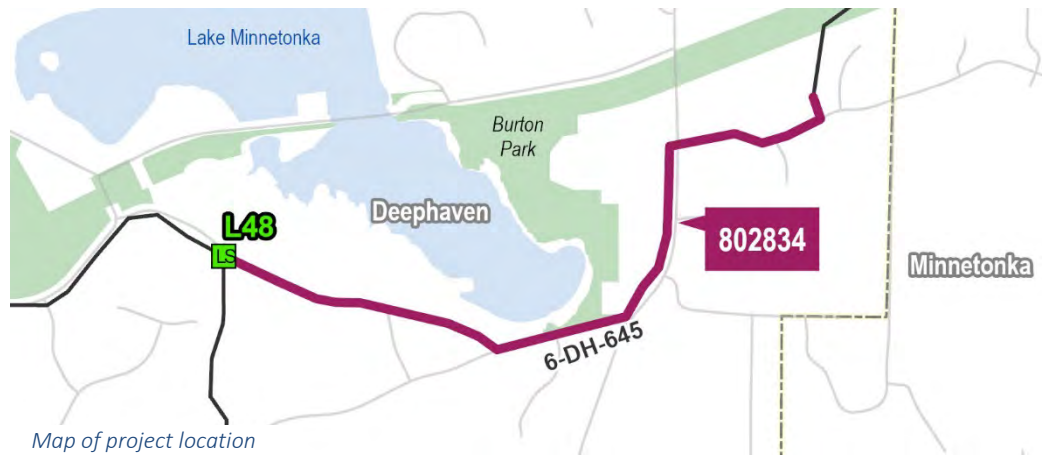
## L48 Rehabilitation and 6-DH-645 Forcemain Replacement

Project Location:

Council District # 3

City of Deephaven

Cottagewood Rd. /  
Burton Park



|                                   |   |
|-----------------------------------|---|
| <b>PROJECT TYPE:</b>              | Lift Station Rehabilitation and Forcemain Replacement   |
| <b>OBJECTIVES:</b>                | Preservation  |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Lead by Example, Be A Good Neighbor, Meet Capacity Needs and Preserve Assets  |
| <b>SCOPE:</b>                     | 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.  |
| <b>PROJECT NEED:</b>              | The 16 ft 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 and is 50 years old. It is reaching the end of its service life. |

### PROJECT SCHEDULE



Planning

N/A



Design

2021-2022



Construction

2023-2025

### FINANCIAL ANALYSIS

|                                    |                                    |  |   |
|------------------------------------|------------------------------------|--|---|
| <b>2022 Cash Flow</b><br>\$464,000 | <b>Current ACP</b><br>\$ 5,855,000 | <b>2022 – 2027 Cash Flow</b><br>\$ 5,433,000 | <b>Total Project Cost</b><br>\$ 5,855,000 |
|------------------------------------|------------------------------------|--|---|



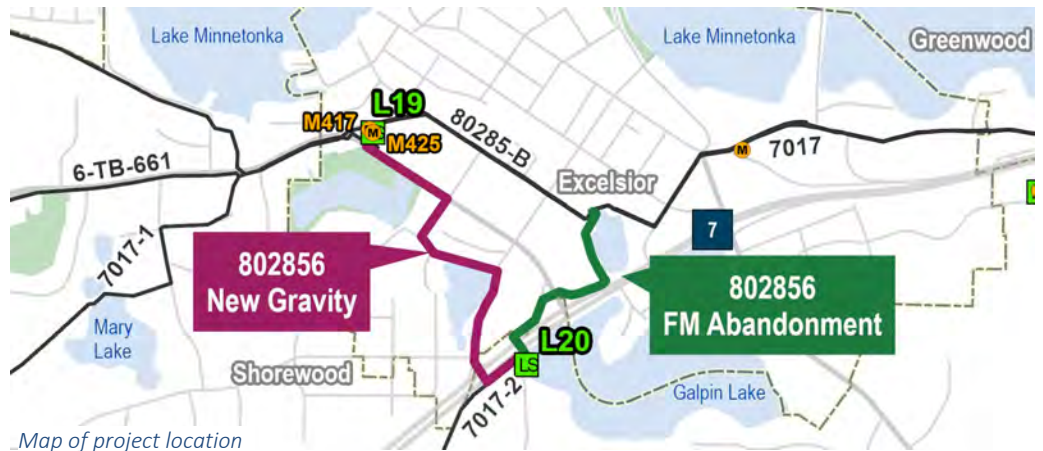
Program Family: 8028  
Project # 802856

## Excelsior Area Lift Station L20

Project Location:

Council District # 3

City of Excelsior



|                                   |  |
|-----------------------------------|--|
| <b>PROJECT TYPE:</b>              | Interceptor System Improvements  |
| <b>OBJECTIVES:</b>                | Preservation and Quality Improvement   |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Comply with Permits, Minimize Impacts, Be A Good Neighbor, Engage Customers and Coordinate with Others   |
| <b>SCOPE:</b>                     | Remove existing lift station L20 and install a gravity pipe to lift station L19.   |
| <b>PROJECT NEED:</b>              | 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

2008-2019



Design

2019-2021



Construction

2022-2024

### FINANCIAL ANALYSIS

|                                      |                                    |   |   |
|--------------------------------------|------------------------------------|---|---|
| <b>2022 Cash Flow</b><br>\$5,000,000 | <b>Current ACP</b><br>\$10,001,000 | <b>2022 – 2027 Cash Flow</b><br>\$9,358,000 | <b>Total Project Cost</b><br>\$10,001,000 |
|--------------------------------------|------------------------------------|---|---|

Program Family: 8028  
Project #802863

# 8567 Channel Crossings Replacement

Project Location:  
Council District # 3  
City: Orono  
North Shore Drive



|                                   |  |
|-----------------------------------|--|
| <b>PROJECT TYPE:</b>              | Interceptor Replacement  |
| <b>OBJECTIVES:</b>                | Preservation and Quality Improvement   |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Minimize Impacts, Lead by Example, Be A Good Neighbor, Engage Customers, Coordinate with Others and Preserve Assets  |
| <b>SCOPE:</b>                     | In 2022, Hennepin County plans to replace the Noerenberg and Hendrickson bridges on North Shore Drive. Interceptor Forcemain 8567 is suspended on the bridges and needs to be relocated under the Lake Minnetonka channels before or during the County project.  |
| <b>PROJECT NEED:</b>              | Replace the existing 12-inch DIP Hendrickson and 16-inch DIP Noerenberg bridge crossings with buried channel crossings. Directionally drilled dual HDPE pipes are proposed. To lessen the potential need for land acquisition, this work will be scheduled when North Shore Drive is closed for bridge work. |

## PROJECT SCHEDULE



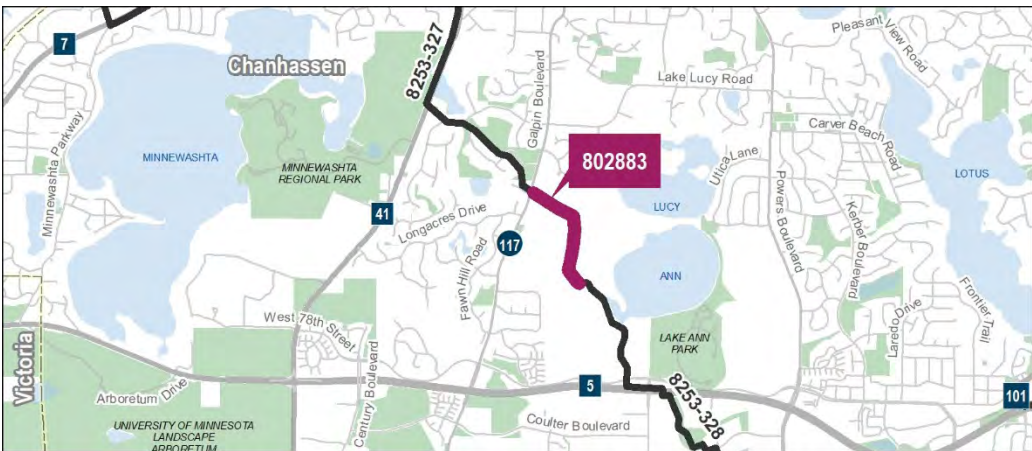
## FINANCIAL ANALYSIS

|                |             |                       |                    |
|----------------|-------------|-----------------------|--------------------|
| 2022 Cash Flow | Current ACP | 2022 – 2027 Cash Flow | Total Project Cost |
| \$1,241,000    | \$1,905,000 | \$1,716,000           | \$1,905,000        |

Program Family: 8028  
Project # 802883

# Chanhassen Interceptor 8253-328 Rehabilitation

Project Location:  
Council District # 3  
City of Chanhassen  
West of Lake Lucy



Map of project location

|                                   |   |
|-----------------------------------|---|
| <b>PROJECT TYPE:</b>              | Interceptor Rehabilitation  |
| <b>OBJECTIVES:</b>                | Preservation  |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Comply with Permits, Minimize Impacts, Communicate Information, Engage Customers, Coordinate with Others and Preserve Assets  |
| <b>SCOPE:</b>                     | Rehabilitation of approximately 2,900 feet of concrete gravity sewer, ranging in size from 30-inch to 42-inch and installation of 10 fiberglass manhole inserts. MCES has a cooperative construction agreement to rehabilitate 1100 LF of 12" concrete gravity pipe owned by the City with the MCES construction project. The owner of the property along the alignment of the proposed rehabilitation has an approved preliminary plat and approved phase 1 site development plan. Rehabilitation either before or in conjunction with the development of the property will simplify construction and reduce construction costs. |
| <b>PROJECT NEED:</b>              | The concrete sewer pipe has significant section loss of the interior wall. Delays in rehabilitating this pipe could result in a collapse of the sewer.  |

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

|                             |                            |                                    |                                   |
|-----------------------------|----------------------------|------------------------------------|-----------------------------------|
| 2022 Cash Flow<br>\$650,000 | Current ACP<br>\$4,900,000 | 2022 – 2027 Cash Flow<br>\$650,000 | Total Project Cost<br>\$4,900,000 |
|-----------------------------|----------------------------|------------------------------------|-----------------------------------|

Program Family: 8028  
Project # 802886

# Orono Interceptor 7113 Improvements

Project Location:  
Council District # 3  
City of Orono



|                                   |   |
|-----------------------------------|---|
| <b>PROJECT TYPE:</b>              | Interceptor System Improvements at Tanager Bridge   |
| <b>OBJECTIVES:</b>                | Preservation and Quality Improvement  |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Minimize Impacts, Engage Customers, Coordinate with Others and Preserve Assets  |
| <b>SCOPE:</b>                     | Replace existing forcemain at Tanager bridge with new forcemain alignment due to bridge replacement. Associated Hennepin County Project.  |
| <b>PROJECT NEED:</b>              | 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. Reconstruction of the Tanager Lake bridge by Hennepin County presents an opportunity to replace the old forcemain 7113 and remove any conflicts from bridge construction. |

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

|                                    |                                   |   |  |
|------------------------------------|-----------------------------------|---|--|
| <b>2022 Cash Flow</b><br>\$762,000 | <b>Current ACP</b><br>\$1,214,000 | <b>2022 – 2027 Cash Flow</b><br>\$762,000 | <b>Total Project Cost</b><br>\$1,214,000** |
|------------------------------------|-----------------------------------|---|--|

\*\*Estimated. MCES share of project costs are currently being negotiated with Hennepin County. MCES cost participation is 50% of total FM relocation cost.



Program Family: 8028  
Project # 802897

# Orono Interceptor 7113 Forcemain Replacement

Project Location:  
Council District # 3  
City of Orono



*Photo of existing Dakota Rail Trail Corridor*

|                                   |   |
|-----------------------------------|---|
| <b>PROJECT TYPE:</b>              | Interceptor System Improvements   |
| <b>OBJECTIVES:</b>                | Preservation and Quality Improvement  |
| <b>CUSTOMER LEVEL OF SERVICE:</b> | Comply with Permits, Minimize Impacts, Be A Good Neighbor, Engage Customers and Coordinate with Others  |
| <b>SCOPE:</b>                     | Replacement of existing forcemain from Lift Station L59 to junction with forcemain 7113A with a new forcemain. The new forcemain will follow the HCRRRA trail corridor to avoid County Road 15 and the Lake Minnetonka shoreline.   |
| <b>PROJECT NEED:</b>              | 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 the forcemain in Shoreline Drive to be inspected and rehabilitated or replaced. |

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

|                             |                            |                                       |                                    |
|-----------------------------|----------------------------|---------------------------------------|------------------------------------|
| 2022 Cash Flow<br>\$485,000 | Current ACP<br>\$8,930,000 | 2022 – 2027 Cash Flow<br>\$14,767,000 | Total Project Cost<br>\$15,410,000 |
|-----------------------------|----------------------------|---------------------------------------|------------------------------------|