Program 8076
Minneapolis Interceptor Rehabilitation

Description:
This Program provides funding to address capital improvements for the interceptors that serve Minneapolis and the surrounding areas.

Purpose and Justification:
The project provides for the implementation of improvement and renewal projects needed to provide continued service to the metropolitan region and capacity to accommodate projected growth of the region.

Program Location:
The planned and active projects within this program are in Council Districts 6, 7, and 8.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
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<tbody>
<tr>
<td>807600</td>
<td>Minneapolis Interceptor System Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>807626</td>
<td>West Meters Odor Management Facility Improvements</td>
</tr>
<tr>
<td>807629</td>
<td>Emergency Relief Structure R04 and 1-MN-344 Tunnel Improvements</td>
</tr>
<tr>
<td>807635</td>
<td>Golden Valley and Minneapolis Interceptor Rehabilitation</td>
</tr>
<tr>
<td>807636</td>
<td>Blue Line LRT Impacts</td>
</tr>
<tr>
<td>807643</td>
<td>Minneapolis East Interceptor (MEI) Diversion Structure Rehabilitation</td>
</tr>
<tr>
<td>807646</td>
<td>Interceptor 1-MN-302 Rehabilitation at Hwy 88 Crossing</td>
</tr>
<tr>
<td>807647</td>
<td>Lake Street Siphon Inspection</td>
</tr>
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MCES 2020 – 2025 Capital Program:

<table>
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<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
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<tr>
<td>$108,397,110</td>
<td>$52,900,000</td>
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Estimated Program Cash Flow 2020 - 2025:

Note: The ACP is the total amount of all past and present authorizations including Pre-2020 Expenses.
West Meters Odor Management Facility Improvements

3D design rendering of Odor Control Building (OCB)

Project Location:
Council District # 8
City of Minneapolis
2932 West River Pkwy

Program Family: 8076
Project # 807626

PROJECT TYPE: Interceptor
OBJECTIVES: Improve
CUSTOMER LEVEL OF SERVICE: Minimize Impacts and Be A Good Neighbor

SCOPE:
Extend carbon tank stacks and install velocity enhancing cones to optimize dispersion. Install an anemometer to better track stack emissions. Install permanent doors on the gate chambers, remove the existing door separating the access tunnels, and reroute air supply fan ductwork from the chambers to the tunnels. Convert the existing carbon tanks from single to multiple beds. Remove existing maintenance hole hex covers with bolt down gasketed covers. Remove and replace the section of West River Parkway to accommodate heavy equipment needed for facility maintenance.

PROJECT NEED:
An evaluation of system operations, plume modeling, and monitoring of air pressures and odors in the interceptors leading to the facility indicated the improvements described above will further mitigate odors.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
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<tbody>
<tr>
<td>2019</td>
<td>2020</td>
<td>2020</td>
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FINANCIAL ANALYSIS

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<td>$9,923,303</td>
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ERS04 and 1-MN-344 Tunnel Rehabilitation

PROJECT LOCATION:
- Council District # 8
- City of Minneapolis
- Minnehaha Park, Longfellow Gardens

PROJECT TYPE: Interceptor
OBJECTIVES: Preserve
CUSTOMER LEVEL OF SERVICE: Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers and Coordinate With Others
SCOPE: This project involves replacing Regulator 04 with an Emergency Overflow Structure, rehabilitating the four vortex drop shafts on tunnel 1-MN-340 and slip lining tunnel 1-MN-344 with fiberglass pipe.
PROJECT NEED: The sandstone tunnel was constructed in 1936. The interior concrete wall of the tunnel is deteriorating and needs repair.

PROJECT SCHEDULE

Planning 2013-2017
Design 2017-2019
Construction 2019-2020

FINANCIAL ANALYSIS

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Golden Valley and Minneapolis Interceptor Rehabilitation

Program Family: 8076
Project # 807635

Project Location:
Council District # 6 & 7
City of Golden Valley &
City of Minneapolis
Olson Memorial Hwy

PROJECT TYPE: Interceptor
OBJECTIVES: Preserve
CUSTOMER LEVEL OF SERVICE: Minimize Impacts and Preserve Assets
SCOPE: Rehabilitate 1,500 LF of 36-inch RCP and 2,000 LF of 42-inch RCP with cured-in-place pipe.
PROJECT NEED: Severely corroded pipes in Minneapolis and Golden Valley are in need of rehabilitation. This project includes CIPP lining of approximately 1,555 linear feet of 36-inch and 1,940 linear feet of 42-inch diameter sewer pipe in Bassett’s Creek Park and Theodore Wirth Park.

PROJECT SCHEDULE

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<tr>
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Minneapolis East Interceptor (MEI) Diversion Structure Rehabilitation

Program Family: 8076  
Project # 807643

Project Location:  
Council District # 8,14  
City of Minneapolis  
City of St. Paul  
6 locations

PROJECT TYPE: Interceptor

OBJECTIVES: Improve

CUSTOMER LEVEL OF SERVICE: Comply With Permits and Meet Capacity Needs

SCOPE: Rehabilitate Minneapolis East Interceptor (MEI) Sites 1, 11, 15, 18, 20, and 26 by removing existing deteriorated hydraulic gates and replacing them with stop logs; removing and replacing vault hatches; improving ventilation, ladders, and grating for worker safety; and repairing deteriorated concrete. MEI Site 1 meters and hydraulic power units will be removed and replaced. Improvements will be made to the “pipe-in-pipe” at Site 11 so a segment of Interceptor 1-MN-302 can be re-conveyed to the city of Minneapolis and Interceptor 8255A can be abandoned.

PROJECT NEED: The facilities were built in the early 1980’s and need rehabilitation.

PROJECT SCHEDULE

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<thead>
<tr>
<th>Planning</th>
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<tbody>
<tr>
<td>2017</td>
<td>2018-2020</td>
<td>2020-2022</td>
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Project Location:
Council District # 8
City of Minneapolis
Stinson and Hwy 88

Program Family: 8076
Project # 807646

1-MN-302 Hwy 88 Crossing Rehabilitation

PROJECT TYPE: Interceptor
OBJECTIVES: Preserve
CUSTOMER LEVEL OF SERVICE: Meet Capacity Needs, Comply With Permits and Preserve Assets
SCOPE: Slip line 750 linear feet of 33” to 36” existing CMP and RCP with 20” HDPE or fusible PVC. Abandon 3 existing maintenance holes. Rehabilitate 3 existing maintenance holes using FRP inserts.
PROJECT NEED: 1-MN-302 was built in 1941 and spot repaired in 1957 and 1970. The repairs are now failing. The interceptor needs rehabilitation to reduce risk of failure which could potentially damage other infrastructure.

PROJECT SCHEDULE

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Minneapolis Joint Sewer Study

Project Location:
Council District #'s 6, 7, & 8
City of Minneapolis
Various Sites

Program Family: 8076
Project # 807650

PROJECT TYPE: Interceptor

OBJECTIVES: Preserve, Expand and Improve

CUSTOMER LEVEL OF SERVICE: Comply with Permits, Lead by Example, Meet Capacity Needs, Communicate Information, Engage Customers, Coordinate with Others, and Preserve Assets

SCOPE: Multi-year joint study with the city of Minneapolis to collect sanitary flow data at various locations throughout the City. Data will be used for I/I evaluation, hydraulic modeling and prioritizing future system improvements in both the local and regional collection systems.

PROJECT NEED: Some of the oldest regional assets are in Minneapolis with some interceptors dating back to the 1880’s and reflect a once combined storm/sanitary collection system. Growth within, and outside of Minneapolis needs to be accommodate through much of the regional system within the City. This coupled with I/I impacts on system flow identified a need to evaluate long-term system capacity needs and the ability of the system to accommodate it.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
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1-MN-310 4th St Access Shafts and Tunnel Repair

**Project Location:**
Council District # 7
City of Minneapolis
4th Street between Hennepin & Marquette Ave

**Program Family:** 8076  
Project # 807665

**Project Type:** Interceptor

**Objectives:** Preserve and Improve

**Customer Level of Service:** Preserve Assets and Coordinate with Others

**Scope:**
Install 12' diameter access shafts. Stabilize the sandstone tunnel crown. Remove loose, fallen sandstone. Repair interceptor defects. Fill the tunnel void.

**Project Need:**
1-MN-310 was constructed in 1885 within an open sandstone tunnel using a granite paving block invert, limestone block walls, and an unreinforced cast-in-place concrete arch. The sandstone tunnel is sloughing or slabbing off and the loose, fallen sandstone is imposing a load on the interceptor crown and washing into the interceptor through construction joints, holes and fractures with infiltrating groundwater. To maintain the integrity and reliability of the system and prevent loss of service and potential damage to the environment due to pipe failure, the tunnel crown needs to be stabilized, the interceptor repaired, and the void filled. This project is being done in advance of the 4th street reconstruction project being planned by the City of Minneapolis.

**Project Schedule**
- Planning: 2018
- Design: 2018
- Construction: 2019-2020

**Financial Analysis**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>Current ACP</th>
<th>2020 – 2025 Cash Flow</th>
<th>Total Project Cost</th>
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Minneapolis Odor Control Study – Phase 1

Project Location:
Council District # 6,7,8
City of Minneapolis
Various Sites

Program Family: 8076
Project # 807670

PROJECT TYPE: Interceptor
OBJECTIVES: Improve
CUSTOMER LEVEL OF SERVICE: Minimize Impacts, Be A Good Neighbor, Communicate Information
SCOPE: Model air flows and deploy field instruments to verify modeling and evaluate systems in the City of Minneapolis and surrounding area at the direction of the MCES Odor Management Team.
PROJECT NEED: Consistent improvement of odor mitigation efforts is required to meet MCES level of service goals.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
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<tbody>
<tr>
<td>2018-2020</td>
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