MCES 2021 – 2026
CAPITAL PROGRAM

Lift Station L-71 – Located at 101 Beech Street N. Chaska

Approved December 9, 2020
The vision of Metropolitan Council Environmental Services is to be a valued leader and partner in water sustainability

Metropolitan Council Members

<table>
<thead>
<tr>
<th>Name</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlie Zelle</td>
<td>Chair</td>
</tr>
<tr>
<td>Judy Johnson</td>
<td>District 1</td>
</tr>
<tr>
<td>Reva Chamblis</td>
<td>District 2</td>
</tr>
<tr>
<td>Christopher Ferguson</td>
<td>District 3</td>
</tr>
<tr>
<td>Deb Barber</td>
<td>District 4</td>
</tr>
<tr>
<td>Molly Cummings</td>
<td>District 5</td>
</tr>
<tr>
<td>Linnea Atlas-Ingebretson</td>
<td>District 6</td>
</tr>
<tr>
<td>Robert Lilligren</td>
<td>District 7</td>
</tr>
<tr>
<td>Abdirahman Muse</td>
<td>District 8</td>
</tr>
<tr>
<td>Raymond Zeran</td>
<td>District 9</td>
</tr>
<tr>
<td>Peter Lindstrom</td>
<td>District 10</td>
</tr>
<tr>
<td>Susan Vento</td>
<td>District 11</td>
</tr>
<tr>
<td>Francisco J. Gonzalez</td>
<td>District 12</td>
</tr>
<tr>
<td>Chai Lee</td>
<td>District 13</td>
</tr>
<tr>
<td>Kris Fredson</td>
<td>District 14</td>
</tr>
<tr>
<td>Philip Sterner</td>
<td>District 15</td>
</tr>
<tr>
<td>Wendy Wulff</td>
<td>District 16</td>
</tr>
</tbody>
</table>

The Metropolitan Council is the regional planning organization for the seven-county Twin Cities area. The Council operates the regional bus and rail system, collects and treats wastewater, coordinates regional water resources, plans and helps fund regional parks, and administers federal funds that provide housing opportunities for low- and moderate-income individuals and families. The 17-member Council board is appointed by and serves at the pleasure of the governor.

On request, this publication will be made available in alternative formats to people with disabilities. Call Metropolitan Council information at 651-602-1140 or TTY 651-291-0904.
Table of Contents

About Metropolitan Council Environmental Services ............................................. 1
Extraordinary Facts by the numbers! ................................................................. 3
Capital Program .................................................................................................. 4
Capital Program Use of Funds ........................................................................... 8
MCES 2021 Capital Program ............................................................................ 10
MCES 2021 – 2026 Capital Program ................................................................. 11
MCES Long-Term Service Area Map ............................................................... 12
MCES 2021-2026 Capital Program Project Location Map .................................. 13
MCES Council Districts Map ........................................................................... 14
District 1 .......................................................................................................... 15
District 2 .......................................................................................................... 16
District 3 .......................................................................................................... 17
District 4 .......................................................................................................... 18
District 5 .......................................................................................................... 19
District 6 .......................................................................................................... 20
District 7 .......................................................................................................... 21
District 8 .......................................................................................................... 22
District 9 .......................................................................................................... 23
District 10 ....................................................................................................... 24
District 11 ....................................................................................................... 25
District 12 ....................................................................................................... 26
District 13 ....................................................................................................... 27
District 14 ....................................................................................................... 28
District 15 ....................................................................................................... 29
District 16 ....................................................................................................... 30
Appendix A: Project Summaries by Program – Treatment Plant ....................... 31
Appendix B: Project Summaries by Program - Interceptor ................................. 90
Metropolitan Council Environmental Services (MCES) is responsible for operating and maintaining the regional wastewater system which protects public health, protects the environment, and fosters the economic growth of the seven county Twin Cities Metropolitan Area. The regional wastewater system currently serves 110 communities and has an estimated replacement value of $7 Billion. The organization employs about 640 staff who are committed to clean water and a clean environment, both of which are essential to the quality of life for those who live and work in the region.

MCES consistently achieves near-perfect compliance with federal and state water discharge standards while holding rates 40% below the national average. MCES is committed to sustainable operations through energy efficiency, use of renewable energy resources, use of technology and reducing air pollutant emissions and resource recovery.
Environmental Services Organizational Chart

THE PUBLIC

Chair Charles Zelle and Metropolitan Council (16 members)
Appointed by the Governor

Regional Administrator
Mary Bogle (Acting)

Deputy Regional Administrator
Phil Walljasper (Acting)

Regional Administration (RA) Staff

Environmental Services Division
Leisa Thompson
General Manager

Community Development

Operations & Maintenance Services
Leisa Thompson (Acting)
Deputy General Manager

Wastewater Planning & Capital Project Delivery
Jeannine Clancy
Assistant General Manager

Metro Transit

Pretreatment & Finance
Ned Smith
Director

Water Resources Planning
Sam Paske (Acting)

Utility Management Systems
Sam Paske
Assistant General Manager

General Counsel
Ann Bloodhart
Environmental Services

moves and treats
250 million gallons of wastewater each day

serving 2.7 million people in 110 communities in the 7-county Twin Cities metro area.

That wastewater moves through privately owned and city sewer pipes into
640 miles of regional interceptor sewer mains

ranging in size from 9 inches to 14 feet in diameter and in age from 140 years old to brand new!

The wastewater also passes

224 meters measuring how much water is flowing through the pipes.

61 lift stations pumping water from lower elevation to higher elevation so gravity can help us move it.

9 treatment plants cleaning the water before it is returned to the environment.

Metropolitan Council Environmental Services
390 Robert Street North
Saint Paul, MN 55101-1805
metro.org
Capital Program

Capital Program Overview
The Environmental Services Capital Program is a component of the Metropolitan Council’s unified budget plan. The Environmental Services Division plans capital spending for new treatment plants, interceptors and/or improvements to the metropolitan wastewater system. The capital program provides capital investments to preserve and rehabilitate existing wastewater infrastructure, meet more stringent water and air quality regulations, and expand the system capacity to meet regional growth needs. The Capital Program is prepared, reviewed, and approved on a yearly basis to consider the new programs and/or adjustments to the plan. The Capital Program and key projects are presented to customers at the budget workshops held annually.

From 1970 to 2013, capital investment focused primarily on developing an efficient and effective wastewater system to meet the needs of a growing region. These investments included interceptor system capacity expansion and extension to serve the long-term service area (2040 and beyond), as well as consolidating, expanding capacity, and completing quality upgrades to the regional wastewater treatment plants. Between 2014 and 2020, capital investments shifted primarily to preserving the valuable regional wastewater infrastructure. The 2021-2026 program continues to have a strong emphasis on asset preservation and includes capacity improvements to support a thriving region. Noteworthy capacity projects and asset preservation projects in the plan include expansion of solids processing at the Metro Plant, a new wastewater treatment plant at Hastings, the new Crow River wastewater treatment plant and lift station L32A in Fridley.

Empire WWTP Phase I and Misc. Improvements – Empire Township, MN
Water Resources Policy Plan and the Customer Level of Service are the foundation for the Capital Program.
**Authorized Capital Program (ACP)** - The ACP provides multi-year authorization to spend on program costs where funding has been secured and the Council has given final approval to proceed. It is the total amount of all past and present approvals from the Council.

The 2021 ACP consists of the previously approved ACP; plus, the authorization of new programs; authorization adjustments to existing programs; and the deletion of completed and closed-out programs. The changes are summarized below.

**Summary of Authorized Capital Program (ACP) Changes**

<table>
<thead>
<tr>
<th>Previous Authorized Capital Program (ACP)</th>
<th>$1,000,185,537</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustments to Existing Projects</td>
<td>$(6,785,710)</td>
</tr>
<tr>
<td>Closed Projects</td>
<td>$(183,128,303)</td>
</tr>
<tr>
<td>New Projects</td>
<td>$222,399,000</td>
</tr>
<tr>
<td>Total All Changes</td>
<td>$32,484,987</td>
</tr>
</tbody>
</table>

**Approved 2020 ACP**

<table>
<thead>
<tr>
<th>Approved 2020 ACP</th>
<th>$1,032,670,524</th>
</tr>
</thead>
</table>

**Capital Improvement Plan (CIP)** - The CIP is the six-year capital investment plan. The Council has not given final approval to these investments. These proposed investments and the year that it is anticipated that the Council will be asked to move them into the ACP is summarized below. Note: Year's 2021-2023 have been fully authorized.
Capital Program – The Capital Program consists of the ACP plus the CIP. Table 10 from the Metropolitan Council’s 2020 Unified Budget summarizes the MCES 2021 - 2026 Capital Program:

### TABLE 10

<table>
<thead>
<tr>
<th>METROPOLITAN COUNCIL</th>
<th>CAPITAL PROGRAM</th>
<th>ENVIRONMENTAL SERVICES</th>
<th>TABLE 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized Capital Program (ACP)</td>
<td>Capital Improvement Plan (CIP)</td>
<td>ACP + CIP Combined</td>
<td>(in 000’s)</td>
</tr>
<tr>
<td>2020 Amended Changes Proposed</td>
<td>2021 2022 2023 2024 2025 2026 Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Treatment Plant Projects
- **8059 - Metro Rehabilitation & Facilities Improve**: 110,417, -1,647, 110,417, - - - - - - 110,417
- **8062 - Metro Solids Improvements**: 94,101, 74,645, - - - - - - 168,746
- **8074 - Empire Plant Solids Improvements**: 33,336, 23,305, - - - - - - 56,642
- **8075 - Seneca Solids Processing Improvements**: 20,523, -566, 20,960, - - - - - - 20,960
- **8078 - Regional Plant Improvements**: 31,085, 15,118, 46,203, - - - - - - 66,203
- **8089 - MMWTP Asset Renewal**: 72,999, 49,142, 122,141, - - - - - - 175,641
- **8061 - Wastewater Reclamation Facilities**: 9,530, -2,755, 6,775, - - - - - - 6,775
- **8067 - Blue Lake Solids Processing**: 5,046, -3,100, 1,946, - - - - - - 1,946
- **8068 - Hastings WWTP**: 3,000, -1,000, 2,000, - - - - - - 2,000
- **8100 - Industrial Pretreatment Incentive Program**: 17,578, -4,821, 12,957, - - - - - - 12,957

**TOTAL Treatment Plant Projects**: 406,204, 148,524, 556,728, - - - - - - 761,588

#### Interceptor Projects
- **8031 - Blue Lake System Improvements**: 34,055, 58,519, - - - - - - 92,574
- **8031 - Hopkins System Improvements**: 29,321, -16,114, 10,207, - - - - - - 10,207
- **8061 - Lift Station Improvements**: 22,770, 8,727, 32,537, - - - - - - 32,537
- **8065 - Metro Improvements**: 13,047, 5,576, 18,623, - - - - - - 18,623
- **8057 - Golden Valley Area Improvements**: 13,023, -13,023, - - - - - - 13,023
- **8055 - SWC Interceptor - Lake Elmo Connections**: 8,585, 4,859, 13,444, - - - - - - 13,444
- **8070 - MPLS Interceptor System Rehabilitation**: 108,397, -25,495, 28,949, - - - - - - 38,949
- **8077 - Northeast Area Interceptor Imp**: 145, -450, 450, - - - - - - 450
- **8079 - Brooklyn Park LS/FM Improvements**: 17,641, -17,641, - - - - - - 17,641
- **8082 - Seneca Interceptor System Rehabilitation**: 11,953, -11,726, 237, - - - - - - 237
- **8081 - Maple Plain LS/FM Rehabilitation**: 5,000, -5,000, - - - - - - 5,000
- **8061 - St Bonifacius LS/FM Rehabilitation**: 27,408, -2,247, 25,161, - - - - - - 25,161
- **8061 - Waconia LS/FM Rehabilitation**: 10,380, 2,200, 12,580, - - - - - - 12,580
- **8055 - Bloomington System Improvements**: 15,242, 1,792, 17,035, - - - - - - 17,035
- **8065 - Elm Creek - Corcoran/Rogers Connections**: 3,539, -570, 2,969, - - - - - - 2,969
- **8065 - North Area Interceptor Rehabilitation**: 30,703, -4,007, 31,296, - - - - - - 31,296
- **8068 - St Paul Interceptor System Rehabilitation**: 79,408, -32,706, 46,702, - - - - - - 46,702
- **8060 - Interceptor Rehabilitation - Program**: 27,682, 16,740, 44,422, - - - - - - 44,422
- **8062 - MPLS Interceptor 1-MN-340 Rehabilitation**: 3,400, 14,100, 17,500, - - - - - - 17,500
- **8063 - Brooklyn Park-Champlin Interceptor Rehabilitation**: 54,410, -18,233, 36,177, - - - - - - 36,177
- **8064 - Brooklyn Park L32**: 12,921, 2,588, 15,509, - - - - - - 15,509
- **8065 - Coon Rapids-Fridley Area Interceptor Renewal**: -450, 450, - - - - - - 450
- **8066 - North Area Interceptor Impact**: -940, 1,540, - - - - - - 1,540

**TOTAL Interceptor Projects**: 591,821, -118,026, 473,855, - - - - - - 473,855

**Total Es Capital Program**: 1,000,186, 32,485, 1,632,671, - - - - - - 1,632,671

---

Note: Program 8063 has recently been renamed to “East Area Interceptor Improvements”
Capital Program Use of Funds

The three objectives of the capital program are:

- **Asset Preservation** – Preserve the existing MCES infrastructure investment through rehabilitation and replacements.

- **System Expansion** - Expand the system capacity through treatment plant and interceptor expansions and interceptor extensions in order to meet the needs of a growing region.

- **Quality Improvements** - Improve the quality of service by responding to more stringent regulations, improving safety, reusing wastewater, increasing system reliability, and conserving and generating energy.

As indicated below, most of the funds are used for the preservation of the existing MCES infrastructure investment. The breakdown by objectives for the 2021 ACP and the Total Capital Program are as follows:

**Capital Program (ACP) Objectives**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preserve 65%</td>
<td>Interceptors 46%</td>
</tr>
<tr>
<td>Improve 14%</td>
<td>Plants 54%</td>
</tr>
<tr>
<td>Expand 21%</td>
<td></td>
</tr>
</tbody>
</table>

The projects in Environmental Services program are driven by the objectives of asset preservation, capacity needs, or to improve performance in order to respond to more stringent water quality and air quality regulations, increasing system reliability and conserving or generating energy. In the 2021 Authorized Capital Program (ACP), 65% of the funding will be spent on Preservation projects, 21% on Expansion projects, and 14% on Improvement projects. Furthermore, of the 2021 ACP, Interceptors will spend approximately 46% of the budget while Plants will spend approximately 54%.
**Capital Budget and Projected Expenses** - The Capital Budget is the amount from the ACP that is expected to be spent in that given year. It cannot be exceeded without formal Metropolitan Council action. The adopted MCES 2021 Capital Budget is $185 million. As depicted below, the projected capital expenses for the 2021-2026 timeframe are $1,171 million. The projected expenses are utilized in the development of the debt service numbers in the MCES' Capital Finance Plan.

![Chart showing projected capital expenses for 2021-2026](chart.png)
### Treatment Plant Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>2020 Amended</th>
<th>2021 Changes</th>
<th>2021 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8059 - Metro Rehabilitation &amp; Facilities Improve</td>
<td>112,064</td>
<td>-1,647</td>
<td>110,417</td>
</tr>
<tr>
<td>8062 - Metro Solids Improvements</td>
<td>94,101</td>
<td>74,645</td>
<td>168,746</td>
</tr>
<tr>
<td>8074 - Empire Plant Solids Improvements</td>
<td>33,336</td>
<td>23,305</td>
<td>56,642</td>
</tr>
<tr>
<td>8075 - Seneca Solids Processing Improvements</td>
<td>29,523</td>
<td>-564</td>
<td>28,960</td>
</tr>
<tr>
<td>8078 - Regional Plant Improvements</td>
<td>31,085</td>
<td>15,118</td>
<td>46,203</td>
</tr>
<tr>
<td>8089 - MWWTP Asset Renewal</td>
<td>72,999</td>
<td>49,142</td>
<td>122,141</td>
</tr>
<tr>
<td>8091 - Wastewater Reclamation Facilities</td>
<td>9,530</td>
<td>-2,755</td>
<td>6,775</td>
</tr>
<tr>
<td>8097 - Blue Lake Solids Processing</td>
<td>5,048</td>
<td>-3,100</td>
<td>1,948</td>
</tr>
<tr>
<td>8098 - Hastings WWTP</td>
<td>3,000</td>
<td>-1,000</td>
<td>2,000</td>
</tr>
<tr>
<td>8100 - Industrial Pretreatment Incentive Program</td>
<td>17,578</td>
<td>-4,621</td>
<td>12,957</td>
</tr>
<tr>
<td><strong>TOTAL Treatment Plant Projects</strong></td>
<td><strong>408,264</strong></td>
<td><strong>148,524</strong></td>
<td><strong>556,788</strong></td>
</tr>
</tbody>
</table>

### Interceptor Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>2020 Amended</th>
<th>2021 Changes</th>
<th>2021 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8028 - Blue Lake System Improvements</td>
<td>93,484</td>
<td>-34,565</td>
<td>58,919</td>
</tr>
<tr>
<td>8041 - Hopkins System Improvements</td>
<td>26,321</td>
<td>-16,114</td>
<td>10,207</td>
</tr>
<tr>
<td>8055 - Lift Station Improvements</td>
<td>22,770</td>
<td>9,727</td>
<td>32,497</td>
</tr>
<tr>
<td>8056 - Meter Improvements</td>
<td>13,947</td>
<td>5,879</td>
<td>19,826</td>
</tr>
<tr>
<td>8057 - Golden Valley Area Improvements</td>
<td>13,023</td>
<td>-13,023</td>
<td>-</td>
</tr>
<tr>
<td>8063 - SWC Interceptor - Lake Elmo Connections</td>
<td>8,585</td>
<td>4,859</td>
<td>13,444</td>
</tr>
<tr>
<td>8076 - Mpls. Interceptor System Rehabilitation</td>
<td>108,397</td>
<td>-25,448</td>
<td>82,949</td>
</tr>
<tr>
<td>8077 - Northeast Area Interceptor Imp</td>
<td>-</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>8079 - Brooklyn Park LS/FM Improvements</td>
<td>17,641</td>
<td>-17,641</td>
<td>-</td>
</tr>
<tr>
<td>8080 - Seneca Interceptor System Rehabilitation</td>
<td>11,963</td>
<td>-11,725</td>
<td>237</td>
</tr>
<tr>
<td>8081 - Maple Plain LS/FM Rehabilitation</td>
<td>5,000</td>
<td>-</td>
<td>5,000</td>
</tr>
<tr>
<td>8082 - St Bonifacius LS/FM Rehabilitation</td>
<td>27,408</td>
<td>-1,247</td>
<td>26,161</td>
</tr>
<tr>
<td>8083 - Waconia LS/FM Rehabilitation</td>
<td>10,386</td>
<td>2,200</td>
<td>12,586</td>
</tr>
<tr>
<td>8084 - Bloomington System Improvements</td>
<td>15,242</td>
<td>1,793</td>
<td>17,035</td>
</tr>
<tr>
<td>8085 - Elm Creek - Corcoran/Rogers Connections</td>
<td>3,539</td>
<td>-579</td>
<td>2,960</td>
</tr>
<tr>
<td>8086 - North Area Interceptor Rehabilitation</td>
<td>35,703</td>
<td>-4,607</td>
<td>31,096</td>
</tr>
<tr>
<td>8088 - St Paul Interceptor System Rehabilitation</td>
<td>79,498</td>
<td>-32,706</td>
<td>46,792</td>
</tr>
<tr>
<td>8090 - Interceptor Rehabilitation - Program</td>
<td>27,682</td>
<td>16,740</td>
<td>44,422</td>
</tr>
<tr>
<td>8092 - Mpls. Interceptor 1-MN-340 Rehabilitation</td>
<td>3,400</td>
<td>14,150</td>
<td>17,550</td>
</tr>
<tr>
<td>8093 - Brooklyn Park-Champlin Interceptor Renewal</td>
<td>54,410</td>
<td>-18,159</td>
<td>36,251</td>
</tr>
<tr>
<td>8094 - Brooklyn Park L32</td>
<td>12,921</td>
<td>2,588</td>
<td>15,509</td>
</tr>
<tr>
<td>8095 - Coon Rapids-Fridley Area Interceptor Renewal</td>
<td>-</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td><strong>Total Interceptor Imp</strong></td>
<td><strong>591,921</strong></td>
<td><strong>-116,039</strong></td>
<td><strong>475,882</strong></td>
</tr>
</tbody>
</table>

**Total ES Capital Program**

<table>
<thead>
<tr>
<th></th>
<th>Amended</th>
<th>Changes</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000,186</td>
<td>32,485</td>
<td>1,032,671</td>
<td></td>
</tr>
</tbody>
</table>
### Projected Expenses by Year (all costs in $1,000s)

<table>
<thead>
<tr>
<th>Family</th>
<th>Project Name</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2021-2026 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatment Plants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8059</td>
<td>Metro Rehabilitation and Facilities Improvements</td>
<td>30,900</td>
<td>28,065</td>
<td>21,000</td>
<td>6,000</td>
<td>0</td>
<td>0</td>
<td>$85,965</td>
</tr>
<tr>
<td>8062</td>
<td>Metro Solids Improvements</td>
<td>9,000</td>
<td>42,000</td>
<td>41,500</td>
<td>41,500</td>
<td>40,000</td>
<td>12,000</td>
<td>$186,000</td>
</tr>
<tr>
<td>8074</td>
<td>Empire Plant Solids Improvements</td>
<td>13,000</td>
<td>10,376</td>
<td>10,000</td>
<td>3,000</td>
<td>0</td>
<td>0</td>
<td>$36,376</td>
</tr>
<tr>
<td>8075</td>
<td>Seneca Solids Processing Improvements</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8078</td>
<td>Regional Plant Improvements</td>
<td>12,500</td>
<td>10,000</td>
<td>10,000</td>
<td>500</td>
<td>9,500</td>
<td>6,500</td>
<td>$49,000</td>
</tr>
<tr>
<td>8089</td>
<td>MWWTP Asset Renewal</td>
<td>21,800</td>
<td>22,000</td>
<td>28,500</td>
<td>23,500</td>
<td>28,500</td>
<td>38,000</td>
<td>$162,300</td>
</tr>
<tr>
<td>8091</td>
<td>Wastewater Reclamation Facilities</td>
<td>1,850</td>
<td>850</td>
<td>850</td>
<td>850</td>
<td>350</td>
<td>20,000</td>
<td>$24,750</td>
</tr>
<tr>
<td>8097</td>
<td>Blue Lake Solids Processing</td>
<td>500</td>
<td>250</td>
<td>250</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>$61,000</td>
</tr>
<tr>
<td>8098</td>
<td>Hastings WWTP</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>$31,500</td>
</tr>
<tr>
<td>8100</td>
<td>Industrial Pretreatment Incentive Program</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| Plant Totals | 90,050 | 114,041 | 112,600 | 105,350 | 108,350 | 106,500 | $636,891 |

| **Interceptor System** | | | | | | | |
| 8028 | Blue Lake Interceptor System Improvements | 3,920 | 8,386 | 5,599 | 10,090 | 9,891 | 300 | $38,186 |
| 8041 | Hopkins System Improvements | 1,864 | 1,983 | 0 | 0 | 0 | 0 | $3,847 |
| 8055 | Lift Station Improvements | 7,034 | 3,011 | 3,440 | 7,640 | 2,700 | 17,500 | $41,325 |
| 8056 | Meter Improvements | 3,475 | 3,940 | 1,500 | 1,504 | 1,500 | 1,500 | $13,419 |
| 8063 | SWC Interceptor - Lake Elmo Connections | 4,590 | 850 | 6,000 | 5,000 | 0 | 0 | $16,440 |
| 8076 | Mpls Interceptor System Rehabilitation | 28,358 | 13,474 | 3,401 | 300 | 300 | 300 | $46,133 |
| 8077 | Northease Area Interceptor Improvements | 50 | 200 | 200 | 200 | 200 | 200 | $1,050 |
| 8080 | Seneca Interceptor System Rehabilitation | 0 | 0 | 0 | 200 | 200 | 1,500 | $1,900 |
| 8081 | Maple Plain Area Improvements | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8082 | St Bonifacius LS/FM Rehabilitation | 500 | 10,000 | 10,000 | 3,000 | 0 | 0 | $23,500 |
| 8083 | Waconia LS/FM Rehabilitation | 823 | 2,322 | 1,222 | 722 | 0 | 0 | $5,089 |
| 8084 | Bloomingtom System Improvements | 6,778 | 0 | 0 | 0 | 0 | 0 | $6,778 |
| 8085 | Elm Creek - Corcoran/Rogers Connections | 300 | 0 | 0 | 0 | 0 | 0 | $300 |
| 8086 | North Area Interceptor Rehabilitation | 1,120 | 2,300 | 21,500 | 26,800 | 14,000 | 0 | $65,720 |
| 8088 | St Paul Interceptor System Rehabilitation | 9,440 | 5,808 | 3,916 | 800 | 15,500 | 28,000 | $63,464 |
| 8090 | Interceptor Rehabilitation | 14,198 | 12,275 | 4,600 | 4,612 | 4,400 | 4,400 | $44,485 |
| 8092 | Mpls Interceptor 1-MN-340 Rehabilitation | 2,250 | 6,600 | 6,500 | 2,500 | 2,000 | 20,000 | $39,850 |
| 8093 | Brooklyn Park-Champlin Interceptor Rehabilitation | 8,719 | 3,786 | 7,613 | 16,400 | 17,500 | 7,000 | $61,018 |
| 8094 | Brooklyn Park L32 | 1,500 | 2,000 | 11,500 | 11,000 | 11,000 | 1,523 | $38,523 |
| 8095 | South Area Interceptor Improvements | 50 | 200 | 200 | 200 | 200 | 200 | $1,050 |
| 8096 | Northwest Interceptor Improvements | 500 | 500 | 500 | 12,500 | 8,500 | 23,000 | $38,500 |
| 8099 | Joint Interceptor Rehabilitation | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Interceptor Totals | 95,469 | 77,635 | 87,691 | 91,468 | 91,891 | 90,923 | $535,077 |

| **Total** | 185,519 | 191,676 | 200,291 | 196,818 | 200,241 | 197,423 | $1,171,968 |
MCES 2021-2026 Capital Program Project Location Map

Metro Plant Projects
8059 - Rehab. & Facilities Improvements
8062 - Solids Improvements
8089 - Asset Renewal

Systemwide Projects
8055 - Lift Station Improvements
8056 - Meter Improvements
8077 - Northeast Area Interceptor Improvements
8078 - Regional Plant Improvements
8090 - Interceptor Rehabilitation Program
8091 - Wastewater Reclamation Facilities
8095 - Coon Rapids-Fridley Area Interceptor
8096 - Northwest Area Interceptor Improvements

Capital Program
2021-2026 Capital Project Families

MCES Wastewater Treatment System
- Lift Stations
- Wastewater Treatment Plants (WWTP)

Potential Future WWTP Sites
Interceptors
Boundaries
- Community
- County

Miles
MCES Council Districts Map

Click on the district to learn more about projects located in that district.

- District 1
- District 2
- District 3
- District 4
- District 5
- District 6
- District 7
- District 8
- District 9
- District 10
- District 11
- District 12
- District 13
- District 14
- District 15
- District 16

Metropolitan Council Districts
District 1

Capital Program & Projects
District 1 includes, in Hennepin County, the cities of Corcoran, Dayton, Greenfield, Independence, Loretto, Maple Grove, Maple Plain, Medicine Lake, Medina, Plymouth, and Rogers. Excluded are the Hennepin County portions of the cities of Hanover and Rockford.
**District 2**

**Capital Program & Projects**

District 2 includes, in Anoka County, the cities of Columbia Heights, Fridley, Hilltop, and Spring Lake Park and in Hennepin County, the cities of Brooklyn Center, Brooklyn Park, Champlin, and Osseo. Excluded is the Ramsey County portion of the city of Spring Lake Park.
District 3

Capital Program & Projects
District 3 includes the cities of Chanhassen, Deephaven, Eden Prairie, Excelsior, Greenwood, Long Lake, Minnetonka, Minnetonka Beach, Minnetrista, Mound, Orono, Shorewood, Spring Park, St. Bonifacius, Tonka Bay, Wayzata, and Woodland.
District 4

Capital Program & Projects
District 4 includes all of Carver County except for the city of Chanhassen and all of Scott County except Spring Lake Township, Credit River Township, Cedar Lake Township, New Market Township and the city of Elko New Market. Excluded is the Scott County portion of the city of New Prague.

[Map of District 4 showing wastewater infrastructure and projects]

Wastewater Infrastructure
- Siphon
- Effluent
- 2021 - 2026 Capital Program Projects
- Metropolitan Council Districts 2013
- Long Term Wastewater Service Area
  - Blue Lake
  - Potential Blue Lake
  - Seneca
  - Rural Center
  - Potential Rural Center
  - Scott Co. Rural Center Expansion
  - Scott Co. Urban Expansion
  - Shakopee
  - Mdewakanton Sioux Community

Programs in this District
- Program 8028: Blue Lake Interceptor System Improvements
- Program 8055: Lift Station Rehabilitation
- Program 8078: Regional Plant Improvements
- Program 8083: Waconia LS/FM Rehabilitation
- Program 8090: Interceptor Rehabilitation Program
- Program 8091: Wastewater Reclamation Facilities
- Program 8097: Blue Lake Solids Processing
District 5

Capital Program & Projects

District 5 includes the Hennepin County cities of Bloomington, Edina, Hopkins, Richfield, and the Fort Snelling Unorganized Territory (including MSP International Airport).
District 6

Capital Program & Projects
District 6 includes the Hennepin County cities of Crystal, Golden Valley, New Hope, St. Louis Park, and the portion of Minneapolis.

Programs in this District
Program 8041: Hopkins System Improvements
Program 8055: Lift Station Rehabilitation
Program 8076: Minneapolis Interceptor Rehabilitation
Program 8090: Interceptor Rehabilitation Program
Program 8092: Interceptor 1-MN-340 Rehabilitation
Program 8096: Northwest Area Interceptor Improvements
**District 7**

**Capital Program & Projects**

District 7 includes in Hennepin County, the city of Robbinsdale and the portion of Minneapolis.
District 8

Capital Program & Projects
District 8 includes the Hennepin and Ramsey County parts of the city of St. Anthony and the portion of Minneapolis.
District 9

Capital Program & Projects
District 9 includes, in Anoka County, the cities of Andover, Anoka, Bethel, Coon Rapids, East Bethel, Ham Lake, Nowthen, Oak Grove, Ramsey, and St. Francis.
District 10

Capital Program & Projects
District 10 includes, in Anoka County, the cities of Blaine, Circle Pines and Lexington and in Ramsey County, Falcon Heights, Lauderdale, Mounds View, New Brighton, North Oaks, Roseville, Shoreview, and the Ramsey County portions of Arden Hills, Blaine and Spring Lake Park.
District 11

Capital Program & Projects
District 11 includes, in Anoka County, the cities of In Anoka County, Centerville, Columbus, Lino Lakes, and Linwood. In Washington County, it includes the cities of Hugo, Landfall, Oakdale, and White Bear Lake (Washington County Part). In Ramsey County, the cities of Gem Lake, Little Canada, Maplewood, North St. Paul, Vadnais Heights, White Bear Lake, and White Bear Township.
District 12

Capital Program & Projects
District 12 includes the cities of Afton, Bayport, Baytown Twp., Birchwood Village, Cottage Grove, Dellwood, Denmark Twp., Forest Lake, Grant, part of Grey Cloud Island Twp., Lake Elmo, Lake St. Croix Beach, Lakeland, Lakeland Shores, Mahtomedi, Marine on St. Croix, May Twp., Newport, Oak Park Heights, Pine Springs, Scandia, St. Mary’s Point, St. Paul Park, Stillwater, Stillwater Twp., West Lakeland Twp., Willernie, and Woodbury.
District 13

Capital Program & Projects
District 13 includes, in Dakota County, the cities of Lilydale, Mendota, Mendota Heights, Sunfish Lake, West St. Paul, and South St. Paul. In Washington County, Newport, St. Paul Park and the enclaves of Grey Cloud Island Township that are wholly within the city of St. Paul Park. In Ramsey County, that portion of the city of St. Paul.
**District 14**

**Capital Program & Projects**

District 14 includes the portion of the city of St. Paul described as follows: west of a line beginning at the point where the median of Interstate 35E intersects the northern boundary of the city of St. Paul.
District 15

Capital Program & Projects
District 15 includes the cities of Burnsville, Eagan, Inver Grove Heights, and Rosemount in Dakota County.
District 16

Capital Program & Projects

Appendix A: Project Summaries by Program – Treatment Plant

Table of Contents:

Program 8059: Metro Rehabilitation & Facilities Improvements ........................................32
Program 8062: Metro WWTP Solids Improvements ..................................................41
Program 8074: Empire WWTP Solids Improvements ..............................................46
Program 8078: Regional Plant Improvements ..........................................................51
Program 8089: Metro WWTP Asset Renewal .........................................................63
Program 8091: Wastewater Reclamation Facilities ...............................................77
Program 8097: Blue Lake WWTP Solids Improvements .......................................81
Program 8098: Hastings WWTP ...........................................................................84
Program 8100: Industrial Pretreatment Incentive Program .....................................87
Program 8059
Metro Rehabilitation and Facilities Improvements

Description:
This program provides funding for planning and implementation of a plant-wide renewal program at the Metropolitan Wastewater Treatment Plant (Metro WWTP).

Purpose and Justification:
The program provides for planning and implementation of projects to address renewal needs for continued, reliable and sustainable wastewater service at the Metro WWTP through the year 2030.

Program Location:
The active projects within this program are in the following Council Districts: 13

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>805932</td>
<td>Metro WWTP HVAC Improvements Phase 2</td>
</tr>
<tr>
<td>805947</td>
<td>Metro WWTP Solids Renewal and Improvements</td>
</tr>
<tr>
<td>805963</td>
<td>Metro WWTP Water Systems Renewal and Improvements</td>
</tr>
<tr>
<td>805981</td>
<td>Metro WWTP Secondary Sludge Collection and Return Activated Sludge (RAS) Flow Meter Replacement</td>
</tr>
<tr>
<td>805987</td>
<td>G7/G9 Troubleshooting and Repair</td>
</tr>
<tr>
<td>805990</td>
<td>Metro WWTP Site Preparation and Improvements</td>
</tr>
<tr>
<td>805998</td>
<td>Metro WWTP Services Building</td>
</tr>
</tbody>
</table>

MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>$110,417,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Improvement Plan (CIP)</td>
<td>$0</td>
</tr>
</tbody>
</table>
Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Metro WWTP HVAC Improvements

Project Location:
Council District # 13
City of Saint Paul
Metro WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preserve and Improve
CUSTOMER LEVEL OF SERVICE: Preserve Assets
SCOPE: This project replaces the main air handling unit at the Laboratory Building, an air handling system for the Maintenance Warehouse Building lunchroom, and other HVAC equipment in the 408 Building.

PROJECT NEED: HVAC equipment near end-of-service life need to be rehabilitated or replaced based on condition assessment and business case evaluations.

PROJECT SCHEDULE

Planning 2016-2019
Design 2019-2020
Construction 2021

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$3,029,000</td>
<td>$2,000,000</td>
<td>$3,029,000</td>
</tr>
</tbody>
</table>
Metro WWTP Solids Renewal & Improvements

Program Family: 8059
Project # 805947

Project Location:
Council District # 13
City of Saint Paul
Metro WWTP

PROJECT TYPE: Plant Improvements

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Communicate Information and Preserve Assets

SCOPE: The projects includes miscellaneous improvements and renewal of equipment related to processing wastewater solids at the Metropolitan Wastewater Treatment Plant including baghouse rehabilitation, scrubber modifications, waste heat boiler tube replacement, fluid bed incinerator renewal, alkaline loadout modifications, cake pumping modifications, alkaline odor control renewal, ash cleanup improvements, auxiliary condenser improvements, instrumentation & control improvements, BF08 vent reroute, flotation thickener modifications, and sludge storage mixing improvements.

PROJECT NEED: Components of the solids processing system at the Metro WWTP need to be renewed due to the harsh environment experienced inside the incineration system. Improvements will increase reliability and performance.

PROJECT SCHEDULE

Planning: 2006-2009
Design: 2018-2019
Construction: 2020-2022

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2025 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,400,000</td>
<td>$24,391,000</td>
<td>$16,465,000</td>
<td>$24,391,000</td>
</tr>
</tbody>
</table>
Metro WWTP Water Systems Renewal and Improvements

**Project Location:**
Council District # 13
City of Saint Paul
Metro WWTP

**Corroded pump column pipe**

**Groundwater Well Pump**

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Lead by Example and Preserve Assets

**SCOPE:** The project replaces the service water piping network throughout the Plant with a new piping network in preparation for a future reclaimed water system.

**PROJECT NEED:** Rehabilitate and repurpose the Metro Plant Water Systems and reduce withdrawal of water from the Prairie du Chien aquifer.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2020-2021</td>
<td>2022-2024</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$16,448,000</td>
<td>$16,000,000</td>
<td>$16,448,000</td>
</tr>
</tbody>
</table>
Metro WWTP Secondary Sludge Collection and RAS Flow Meter Replacement

**Program Family:** 8059  
**Project #** 805981

**Project Location:**  
Council District # 13  
City of Saint Paul  
Metro WWTP

**Installation of new chains and flights**

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:** The project provides funding for the Maintenance Business Unit to purchase and install chains and flights in final settling tanks, and to install flow sensors downstream of each return active sludge pump.

**PROJECT NEED:** Inspections by Maintenance staff indicate the chains & flights and flow meters are at the end of service life. Flow meter replacement is prudent to ensure that accurate flow is measured to control the RAS secondary system.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2017</td>
<td>2018-2020</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,000,000</td>
<td>$5,317,000</td>
<td>$3,000,000</td>
<td>$5,317,000</td>
</tr>
</tbody>
</table>
G7 Troubleshooting and Rehabilitation

**Project Location:**
Council District # 13
City of St. Paul
Metro WWTP

**Program Family:** 8059
Project # 805987

**PROJECT TYPE:** Plant Improvements
**OBJECTIVES:** Preservation
**CUSTOMER LEVEL OF SERVICE:** Preserve Assets
**SCOPE:** Troubleshooting & rehabilitation of turbine generator (G7)

**PROJECT NEED:**
Steam from the incineration process generates electricity that helps reduce the amount of purchased power from the electrical utility.

**PROJECT SCHEDULE**
- Planning: Complete
- Design: Complete
- Construction: 2020-2021

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th></th>
<th>2021 Cash Flow</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Cash Flow</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Current ACP</td>
<td>$1,500,000</td>
<td>$1,000,000</td>
<td></td>
</tr>
<tr>
<td>2021 – 2026</td>
<td></td>
<td>$1,000,000</td>
<td></td>
</tr>
<tr>
<td>Cash Flow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Project</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Metro WWTP Site Preparation and Improvements

Project Location:
Council District # 13
City of Saint Paul
Metro WWTP

Aerial View of Metro WWTP
Primary Settling Tank Collector System

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:**
The project rehabilitates roads; rehabilitates concrete in Primary Settling tanks (#1 in photo above), Gravity Thickening tanks (2) and parts of the influent channel (3); installs a waterline; rehabilitates the Solids storage pad and installs a closed loop cooling system for instrument air compressors.

**PROJECT NEED:** There is a need to be replaced or rehabilitated assets throughout the Metro Plant to extend service life.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019-2020</td>
<td>2021-2024</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,500,000</td>
<td>$9,664,000</td>
<td>$9,500,000</td>
<td>$9,664,000</td>
</tr>
</tbody>
</table>
Program Family: 8059  
Project # 805998

Project Location:
Council District # 13  
City of Saint Paul  
Metro WWTP

Metro WWTP Services Buildings

![Services Building and Field Service Annex Concept Drawing](image)

**PROJECT TYPE:** Plant Improvements  
**OBJECTIVES:** Improvement  
**CUSTOMER LEVEL OF SERVICE:** Engage Customers, Lead by Example and comply with permits

**SCOPE:** The Services Building and Field Service Annex will be constructed adjacent to the Laboratory Building and will office the Construction Services, Water Resources, Industrial Waste Pollution Prevention and Process Engineering R&D.

**PROJECT NEED:** Other departmental offices or laboratories currently reside within deteriorating buildings at the Metro Plant or in rental facilities away from Council property. There is a need to consolidate similar functions in common spaces to increase efficiency.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2009</td>
<td>2020-2022</td>
<td>2021-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8,000,000</td>
<td>$35,303,000</td>
<td>$34,000,000</td>
<td>$35,303,000</td>
</tr>
</tbody>
</table>
Program 8062
Metro WWTP Solids Improvements

Description:
This program provides funding for planning and implementation of improvements to wastewater solids processing facilities at the Metropolitan Wastewater Treatment Plant (Metro WWTP).

Purpose and Justification:
The program provides for planning and implementation of projects to address capacity and renewal needs for continued, reliable and sustainable wastewater solids processing at the Metro WWTP through the year 2050.

Program Location:
The active projects within this program are in the following Council Districts: 13

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>806210</td>
<td>Metro WWTP Solids Management Improvements Facility Plan</td>
</tr>
<tr>
<td>806220</td>
<td>Beneficial Use of Ash: U of M Study</td>
</tr>
<tr>
<td>806230</td>
<td>Metro WWTP Fluid Bed Reactor 4</td>
</tr>
<tr>
<td>806240</td>
<td>Metro WWTP Renewal of Fluid Bed Reactors 1, 2 &amp; 3</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

**Authorized Capital Program (ACP)**
$168,746,000

**Capital Improvement Plan (CIP)**
$23,500,000

**Estimated Program Cash Flow 2021 - 2026:**

![Graph showing cash flow](chart)

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Metro WWTP Solids Management Improvements Facility Plan

**Project Location:**
- Council District # 13
- City of Saint Paul
- Metro WWTP

**Project Type:** Plant Improvements

**Objectives:** Preservation and Expansion

**Customer Level of Service:**
- Comply with Permits, Minimize Impacts, Lead by Example, Be A Good Neighbor, Optimize Budget Plan, and Preserve Assets

**Scope:**
- Develop a facility plan for Council approval. Conduct planning activities necessary to support facility plan development: evaluate current and future wastewater solids production, evaluate air emissions, assess existing solids treatment facilities, develop and evaluate alternatives. Identify the recommended alternative(s) and the implementation plan.
- Develop and execute a communications plan for internal and external outreach, including a public hearing for facility plan review.

**Project Need:**
- The Metro WWTP needs additional solids treatment capacity to preserve existing wastewater infrastructure and to serve regional population growth.

**Project Schedule**
- Planning: 2011-2018
- Design: N/A
- Construction: N/A

**Financial Analysis**
- **2021 Cash Flow:** $500,000
- **Current ACP:** $2,500,000
- **2021 – 2026 Cash Flow:** $1,000,000
- **Total Project Cost:** $2,500,000
Metro WWTP Fluid Bed Reactor 4

Program Family: 8062
Project # 806230

Project Location:
Council District # 13
City of Saint Paul
Metro WWTP

3D rendering design of future 4th Incinerator at Metro WWTP

**PROJECT TYPE:** Plants

**OBJECTIVES:** Preservation and Expansion

**CUSTOMER LEVEL OF SERVICE:** Meet Capacity Need and Preserve Assets

**SCOPE:** Expand the Metro WWTP solids management building and install a fourth incinerator train next to the existing three. The fourth train will include energy recovery, air pollution control, and related solids processing equipment.

**PROJECT NEED:** The Metro WWTP needs additional solids treatment capacity to preserve existing wastewater infrastructure and to serve regional population growth through the year 2050.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design/Permitting/Procurement</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2020-2022</td>
<td>2023-2025</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000,000</td>
<td>$155,000,000</td>
<td>$155,000,000</td>
<td>$155,000,000</td>
</tr>
</tbody>
</table>
**Metro WWTP Renewal of Fluid Bed Reactors 1, 2 & 3**

**Program Family:** 8062  
**Project #** 806240

**Project Location:**  
Council District # 13  
City of Saint Paul  
Metro WWTP

<table>
<thead>
<tr>
<th>PROJECT TYPE:</th>
<th>Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVES:</td>
<td>Preservation and Improvement</td>
</tr>
<tr>
<td>CUSTOMER LEVEL OF SERVICE:</td>
<td>Communicate Information and Preserve Assets</td>
</tr>
<tr>
<td>SCOPE:</td>
<td>Implement renewal and level of service improvements (e.g., increased reliability, flexibility, operability, maintainability) to the three existing fluid bed reactors and associated solids treatment facilities.</td>
</tr>
<tr>
<td>PROJECT NEED:</td>
<td>In 2025, the existing incinerators will be 20 years old and in need of major renewal work to extend service life and to recover capacity.</td>
</tr>
</tbody>
</table>

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2024-2025</td>
<td>2026-2028</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$0</td>
<td>$22,000,000</td>
<td>$34,000,000</td>
</tr>
</tbody>
</table>
**Description:**
This program provides funding for planning and implementation of improvements to wastewater solids processing facilities at the Empire Wastewater Treatment Plant (WWTP).

**Purpose and Justification:**
The program provides for planning and implementation of projects to address capacity constraints and improve performance for wastewater solids processing at the Empire WWTP.

**Program Location:**
The active projects within this program are in the following Council Districts: 16

**Active Projects in Program:**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>807400</td>
<td>Empire WWTP Solids Improvements Phase I</td>
</tr>
<tr>
<td>807401</td>
<td>Empire WWTP Solids Improvements Phase II</td>
</tr>
<tr>
<td>807415</td>
<td>Empire WWTP High Strength Waste Receiving Pilot</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$56,642,000</td>
<td>$0</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Empire WWTP Solids Improvements Phase I

**Program Family:** 8074  
**Project #:** 807400

**Project Location:**  
Council District # 16  
Empire Township  
Empire WWTP

*A pad cover has been constructed to improve solids processing*

**PROJECT TYPE:** Plant Expansion

**OBJECTIVES:** Preservation, Expansion and Improvement

**CUSTOMER LEVEL OF SERVICE:** Lead by Example, Meet Capacity Needs, and Preserve Assets

**SCOPE:** Increase biosolids storage capacity by covering existing storage area. Improve pad drainage and recover stormwater for on-site infiltration. Provide biogas moisture removal for use as boiler fuel. Renew boiler system to replace aging equipment and meet future plant-wide heating needs.

**PROJECT NEED:** Solids treatment capacity at the Empire Plant must be increased to accommodate future growth in the service area. The existing boiler system is near end of service life and requires renewal. Biogas improves fuel quality in preparation for a future combined heat and power system (See Empire WWTP Solids Improvements Phase II, Project # 807401).

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2013</td>
<td>2014-2019</td>
<td>2020-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$11,000,000</td>
<td>$31,147,000</td>
<td>$11,326,000</td>
<td>$31,147,000</td>
</tr>
</tbody>
</table>
Empire WWTP Solids Improvements Phase II

**PROJECT TYPE:** Plant Expansion

**OBJECTIVES:** Expansion and Improvement

**CUSTOMER LEVEL OF SERVICE:** Lead by Example and Meet Capacity Needs

**SCOPE:**
Modify existing digesters to increase capacity and meet future capacity needs. Add advanced biogas treatment to remove hydrogen sulfide and siloxanes from biogas prior to use as fuel in a combined heat and power engine generator (CHP). CHP will generate heat and electricity for on-site use.

**PROJECT NEED:** Solids treatment capacity at the Empire Plant must be increased to accommodate future growth in the service area. CHP will generate approximately 1/3 of the plant’s heat and power demand utilizing biogas generated on-site as fuel.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2013</td>
<td>2019-2020</td>
<td>2021-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$25,000,000</td>
<td>$25,000,000</td>
<td>$25,000,000</td>
</tr>
</tbody>
</table>
Empire WWTP High Strength Waste Receiving Pilot

**Project Location:**
Council District # 16
Empire Township
Empire WWTP

**Program Family:** 8074
Project # 807415

**OBJECTIVES:**
Improve

**CUSTOMER LEVEL OF SERVICE:**
Lead by Example

**SCOPE:**
Install a 27,000-gallon high strength waste receiving station complete with storage and pumping systems.

**PROJECT NEED:**
This project pilot’s digestion of an industrial high strength waste to increase biogas production for use as fuel in a combined heat and power engine generator system (See Empire WWTP Solids Improvements Phase II, Project #807401).

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2018-2019</td>
<td>2020-2021</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$495,000</td>
<td>$50,000</td>
<td>$495,000</td>
</tr>
</tbody>
</table>
Program 8078  
Regional Plant Improvements

**Description:**
This program provides funding to address capital improvements at 8 regional wastewater treatment plants (WWTPs).

**Purpose and Justification:**
The program provides for implementation of improvement and renewal projects for components and systems at the regional plants. These projects are outside of the realm of major plant expansion. The projects may also be in response to items that were not fully optimized in other major regional plant rehabilitation/renewal projects.

**Program Location:**
The active projects within this program are in the following Council Districts: 1, 4, 9, 12, 15 & 16

**Active Projects in Program:**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>807802</td>
<td>Regional Plant Improvements (Parent Project)</td>
</tr>
<tr>
<td>807803</td>
<td>Blue Lake Administration Building</td>
</tr>
<tr>
<td>807805</td>
<td>East Bethel WRP Improvements</td>
</tr>
<tr>
<td>807818</td>
<td>Hastings WWTP Condition Assessment</td>
</tr>
<tr>
<td>807825</td>
<td>Empire WWTP Entrance Road Reconstruction</td>
</tr>
<tr>
<td>807826</td>
<td>Empire WWTP Arc Flash Improvements</td>
</tr>
<tr>
<td>807857</td>
<td>Fridley Liquid Waste Receiving Improvements</td>
</tr>
<tr>
<td>807861</td>
<td>Rogers WWTF Acquisition &amp; Miscellaneous Modifications</td>
</tr>
<tr>
<td>807899</td>
<td>Regional Plant Planning</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$46,203,000</td>
<td>$16,500,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Blue Lake FSF Renewal

**Program Family:** 8078  
**Project #:** 8078XX

**Project Location:**  
- Council District # 4  
- City of Shakopee  
- Location: Blue Lake WWTP

### PROJECT TYPE:
Plant Improvements

### OBJECTIVES:
Preservation

### CUSTOMER LEVEL OF SERVICE:
Preserve Assets

### SCOPE:
The Blue Lake WWTP Solids Process has a few select items that need to be rehabilitated in the next 1-2 years. These items include: RTO emissions control system, the digester gas storage tank membrane, the mixing conveyor, WAS discharge valves, process piping and the associated electrical support systems.

### PROJECT NEED:
Blue Lake is starting a Facility Plan for large Solids Processing Improvements and Expansions. Most of the current solids train will reach end of life at 2030. Auxiliary and the pollution control systems need to be rehabilitated to keep the entire system operational until the expansion project.

### PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2020</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,500,000</td>
<td>$0</td>
<td>$3,500,000</td>
<td>$4,000,000</td>
</tr>
</tbody>
</table>

Blue Lake WWTP Outfall Renewal

**Project Location:**
Council District # 4
City of Shakopee
Blue lake WWTP

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:** Design and construct streambank stabilization around the outfall based on bank erosion monitoring.

**PROJECT NEED:** The Blue Lake WWTP outfall pipe ends in the bank of the Minnesota River. The outfall point has been reinforced but the upstream and downstream banks are eroding. The banks need to be reshaped and stabilized before the erosion surpasses the outfall stabilization and erodes farther back under the pipe.

**PROJECT SCHEDULE**
- Planning: 2018
- Design: 2019
- Construction: 2022-2023

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$0</td>
<td>$1,500,000</td>
<td>$1,500,000</td>
</tr>
</tbody>
</table>
Blue Lake WWTP Administration Building

**Project Location:**
- Council District # 4
- City of Shakopee
- Blue lake WWTP

### PROJECT TYPE:
- Plant Improvements

### OBJECTIVES:
- Preservation and Expansion

### CUSTOMER LEVEL OF SERVICE:
- Engage Customers

### SCOPE:
- Perform building assessments, modify space or construct an addition to the Administration building to better accommodate staff, education and training.

### PROJECT NEED:
- The Administration Building is not well-suited for meetings and school field trips. The Administration building needs restroom, HVAC, and ADA accessibility improvements based on intended use.

### PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2021</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$0</td>
<td>$10,000,000</td>
<td>$10,000,000</td>
</tr>
</tbody>
</table>
East Bethel WRP Improvements

Project Location:
- Council District # 9
- City of East Bethel
- East Bethel WWTP

PROJECT TYPE: Plant Improvements

OBJECTIVES: Improvement

CUSTOMER LEVEL OF SERVICE: Lead by Example

SCOPE: Modify the piping to adjust to start up flows and quickly increasing flows over time. Study and demonstrate different disinfection methods and equipment for use at future reclamation plants in the region.

PROJECT NEED: East Bethel is the first water reclamation plant (WRP) in the MCES service area. The plant was brought online in 2014 as a demonstration plant for water reuse in the metro area at 7% of design flow. Adjustments are required for low flow that is quickly increasing as new connections are made. MCES is also working to achieve high effluent quality for a variety of potential reclaimed uses.

PROJECT SCHEDULE

- Planning: 2017-2019
- Design: 2020
- Construction: 2020-2021

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>2021 Cash Flow</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ACP</td>
<td>$200,000</td>
<td>$400,000</td>
<td>$1,087,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hastings WWTP Condition Assessment

PROGRAM FAMILY: 8078
Project # 807818

Project Location:
Council District # 16
City of Hastings
Hastings WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Optimize Budget Plan and Be Fair & Transparent

SCOPE: A condition assessment of the existing Hastings WWTP was completed. A modest renewal project is planned to support existing facilities until the proposed new WWTP can be constructed at a location outside of downtown Hastings.

PROJECT NEED: The Hastings plant was originally built in 1952, with expansions in 1967 and 1981. MCES will continue to preserve the plant until the new facility is constructed.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2021</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,500,000</td>
<td>$5,358,000</td>
<td>$5,000,000</td>
<td>$5,358,000</td>
</tr>
</tbody>
</table>
Empire WWTP Entrance Road Reconstruction

Project Location:
Council District # 4, 12, 16
Empire Township
City of Cottage Grove
City of Shakopee
Empire WWTP
Eagles Point WWTP
Blue Lake WWTP

PROJECT TYPE: Plant Expansion
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Preserve Assets

SCOPE:
Reconstruct approximately 2,600 linear feet of the Empire WWTP entrance road from base course to surface course as a 10-ton roadway. Rehabilitate portions of the Eagles Point WWTP and Blue Lake WWTP entrance and plant roads that require patching and seal coat work.

PROJECT NEED:
The Empire plant’s entrance road is at the end of its useful service life and requires replacement. Portions of roadway at the Eagles Point and Blue Lake WWTPs have deteriorated and require renewal.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>2016</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,000,000</td>
<td>$1,124,000</td>
<td>$1,000,000</td>
<td>$1,124,000</td>
</tr>
</tbody>
</table>
Empire WWTP Arch Flash Improvements Phase 1

Project Location:
Council District # 16
Empire Township
Empire WWTP

Program Family: 8078
Project # 807826

Motor Control Center with obsolete switch

Electrician puts on Arc rated PPE

PROJECT TYPE: Plant Improvements

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Minimize Impacts and Preserve Assets

SCOPE: Replace obsolete electrical equipment and construct improvements to mitigate arc flash.

PROJECT NEED: Motor Control Centers in the sludge pumping building are obsolete and require replacement. MCES routinely evaluates arc flash potential for all its facilities. Where possible, MCES constructs improvements to minimize impacts and reduce risk of arc flash to its maintenance personnel.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2019</td>
<td>2020-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,000,000</td>
<td>$2,399,000</td>
<td>$2,000,000</td>
<td>$2,399,000</td>
</tr>
</tbody>
</table>
Fridley Liquid Waste Receiving Station

**Program Family:** 8078  
**Project #:** 807857

**Project Location:**  
Council District # 2  
City of Fridley  
Fridley Liquid Waste Receiving Station

**PROJECT TYPE:** Treatment Plant / Interceptor

**OBJECTIVES:** Improvement

**CUSTOMER LEVEL OF SERVICE:** Lead by Example and Be A Good Neighbor

**SCOPE:**  
This project will address minor process concerns with liquid waste receiving at the MCES Fridley Liquid Waste Receiving Station and implement upgrades necessary to use it as a maintenance facility for Interceptor Services staff. The facility will also include space for ES Construction staff working in the north area.

**PROJECT NEED:**  
The Fridley Liquid Waste Receiving Station was acquired by MCES in 2009 and requires improvements for hauler loadout and liquid waste receiving. Additionally, the maintenance facility in Moundsview is not adequate for current operations. The Fridley site is ideally placed in the center of the northern service area and has available space to accommodate operations, maintenance and construction services needs.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2021</td>
<td>2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$3,541,000</td>
<td>$3,500,000</td>
<td>$3,541,000</td>
</tr>
</tbody>
</table>
MCES Rogers WWTF Modifications Project

Project Location:
Council District # 1
City of Rogers
Rogers WWTF

Rogers Wastewater Treatment Facility (WWTF)

Project Type:
Plant Improvements

Objectives:
Preservation

Customer Level of Service:
Meet Capacity Needs

Scope:
On July 1, 2019, MCES acquired the Rogers Wastewater Treatment Facility (WWTF) as requested by the City of Rogers. MCES and Rogers jointly operated the facility through 2019. In 2020, MCES begin operations and will operate the facility until a new regional wastewater plant is constructed (planned for 2030).

In December of 2020, MCES received bids to construct a series of modifications to the MCES Rogers WWTF that will bring it in line with other MCES facilities for backup power, security, employee workspace, and remote monitoring capabilities. The project will add a permanent backup generator, modify the existing workspace to house MCES staff, add a security gate and camera system, change out aging programmable logic controllers (PLCs), and make other minor process modifications to improve the operability of the plant. Work on the project will be completed by December 2021.

Project Need:
The Rogers WWTF is the newest wastewater MCES wastewater plant. Minor modifications are needed to accommodate MCES operation.

Project Schedule

Planning
2018-2020

Design
2019-2020

Construction
2021

Financial Analysis

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,700,000</td>
<td>$3,080,000</td>
<td>$1,700,000</td>
<td>$3,080,000</td>
</tr>
</tbody>
</table>
Regional Plant Planning

Program Family: 8078
Project # 807899

Project Location:
Regional

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:**
Current planning activities include the following: arc flash studies, road condition assessments, sustainable landscape planning, roof condition assessments, and real estate appraisal needs.

**PROJECT NEED:** Planning activities are needed to identify near-term (less than 10 years) regional Plant capital project needs.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2020-2023

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$800,000</td>
<td>$300,000</td>
<td>$800,000</td>
</tr>
</tbody>
</table>
Program 8089
Metro WWTP Asset Renewal

Description:
This program provides funding to continue the plant-wide renewal program at the Metropolitan Wastewater Treatment Plant (Metro WWTP), which was initiated under Program 8059 Metro WWTP Rehabilitation and Facilities Improvements. Funds are for planning and implementation of capital improvements to the liquids processing and plant-wide facilities at the Metro WWTP.

Purpose and Justification:
The program provides for planning and implementation of projects to address renewal needs for continued, reliable and sustainable wastewater service at the Metro WWTP through the year 2040.

Program Location:
The active projects within this program are in the following Council Districts: 13

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808900</td>
<td>Metro WWTP Asset Renewal (Parent Project)</td>
</tr>
<tr>
<td>808915</td>
<td>Metro WWTP Electrical Distribution Renewal Phase 2</td>
</tr>
<tr>
<td>808916</td>
<td>Metro WWTP Electrical Distribution Renewal Phase 3</td>
</tr>
<tr>
<td>808920</td>
<td>Metro WWTP Roof Replacements Phase 1</td>
</tr>
<tr>
<td>808921</td>
<td>MWWTP Primary Settling Tank Chain</td>
</tr>
<tr>
<td>808922</td>
<td>Metro Effluent Pump Station Renewal</td>
</tr>
<tr>
<td>808923</td>
<td>MWWTP Site Preparation and Improvements - Phase 2</td>
</tr>
<tr>
<td>808930</td>
<td>Metro WWTP Secondary Renewal</td>
</tr>
<tr>
<td>808935</td>
<td>Metro WWTP Secondary &amp; Primary Renewal</td>
</tr>
<tr>
<td>8089XX</td>
<td>Metro WWTP Primary Scum Improvements</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>$122,141,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Improvement Plan (CIP)</td>
<td>$53,500,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Metro Roof Replacements

Program Family: 8089  
Project # 8089xx

Project Location:
Council District # 13
City of Saint Paul
Metro WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Preserve Assets
SCOPE:
Replace the following roofs: FLT, EPR, MWH (low roof) and CMP above the compressor floor. Rehabilitate or repair roofs for decommissioned buildings 408, REL and F&I#2 to preserve building envelopes.

PROJECT NEED:
Condition assessment determined that several roofs are at or nearing the end of useful service life and need to be replaced.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>2021-2022</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>
Metro WWTP Secondary and Primary Renewal

Project Location:
Council District # 13
City of St. Paul
Metro WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Preserve Assets

SCOPE:
The following improvements are planned: East Secondary FST inlet gates, sluice gate replacements, Compressor system monitoring/diagnostic instrumentation, E-Valve gate actuator replacement, primary sludge pump replacement, primary scum area rehabilitation and process area inspections.

PROJECT NEED:
The equipment is approaching 40 years old and needs replacement.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$2,500,000</td>
<td>$17,500,000</td>
<td>$17,500,000</td>
</tr>
</tbody>
</table>
Metro WWTP Secondary and Primary Renewal

**Project Location:**
Council District # 13
City of St. Paul
Metro WWTP

**Project # 8089XX**

**Project Location:**
Council District # 13
City of St. Paul
Metro WWTP

**Program Family: 8089**

**Metro WWTP Secondary and Primary Renewal**

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:**
The following improvements are planned: East Secondary FST inlet gates, sluice gate replacements, Compressor system monitoring/diagnostic instrumentation, E-Valve gate actuator replacement, primary sludge pump replacement, primary scum area rehabilitation and process area inspections.

**PROJECT NEED:** The equipment is approaching 40 years old and needs replacement.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$2,500,000</td>
<td>$17,500,000</td>
<td>$17,500,000</td>
</tr>
</tbody>
</table>
**Metropolitan WWTP Primary Scum Improvements**

**Project Location:**
- Council District # 13
- City of St. Paul
- Metro WWTP

**Project Type:** Plant Improvements

**Objectives:**
- Preservation

**Customer Level of Service:**
- Lead by example and Preserve Assets

**Scope:**
This project will install improvements for the processing of primary scum at the Metro WWTP.

**Project Need:**
Approximately 2.0 tons per day of scum is conveyed on a batch process from the primary clarifiers to the dumpsters at the Solids Management Building. There is a need to evaluate alternatives for the ultimate location for primary scum and to renew the Primary Scum process.

**Project Schedule**
- **Planning:** 2020
- **Design:** 2020-2021
- **Construction:** 2021-2023

**Financial Analysis**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$1,500,000</td>
<td>$1,500,000</td>
<td>$1,500,000</td>
</tr>
</tbody>
</table>
MWWTP HVAC Improvements – Phase 3

Aerial view of MWWTP showing location of West Secondary

PROJECT TYPE: Plant Improvements

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Preserve Assets

SCOPE: This project replaces various HVAC equipment at West Secondary and the top floor computer room insulated to improve energy efficiency. Other HVAC equipment will be replaced based on the outcome from the condition assessment.

PROJECT NEED: HVAC equipment near end-of-life needs to be rehabilitated or replaced based on condition assessment and business case evaluations

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2021</td>
<td>2021-2022</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$3,000,000</td>
<td>$3,000,000</td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>
Metro WWTP Electrical Distribution Renewal Phase 2

Program Family: 8089
Project # 808915

Project Location:
Council District # 13
City of St. Paul
Metro WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Preserve Assets
SCOPE: Maintenance staff will coordinate rehabilitation of seven compressor motors through specialty contracted services and install temperature and vibration monitoring for the motors.
PROJECT NEED: The aeration compressors are critical to the continued performance of the aeration process and inspections by Maintenance staff indicate the compressor motors need to be replaced or rehabilitated to extend service life.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019-2020</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,500,000</td>
<td>$3,908,000</td>
<td>$2,000,000</td>
<td>$3,908,000</td>
</tr>
</tbody>
</table>
Metro WWTP Electrical Distribution Renewal
Phase 3

Program Family: 8089
Project # 808916

Project Location:
Council District # 13
City of St. Paul
Metro WWTP

Substation Building

**PROJECT TYPE:**
Plant Improvements

**OBJECTIVES:**
Preservation, Expansion and Improvement

**CUSTOMER LEVEL OF SERVICE:**
Minimize Impacts, Meet Capacity Needs, and Preserve Assets

**SCOPE:**
Replace electrical distribution equipment (unit substations, switchgear, and motor control centers) with new equipment. Upgrade and expand the existing Main Substation Building to provide space for new equipment and to increase worker safety during maintenance.

**PROJECT NEED:**
Condition assessment determined that electrical equipment in the Main Substation Building and at various buildings throughout the plant are at or nearing the end of useful service life and need to be replaced.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$39,000,000</td>
<td>$39,000,000</td>
<td>$39,000,000</td>
</tr>
</tbody>
</table>
**Metro WWTP Roof Replacements – Phase 1**

**Program Family:** 8089  
**Project #:** 808920

**Project Location:**  
Council District #13  
City of St. Paul  
Metro WWTP

---

**PROJECT TYPE:** Plant Improvements  
**OBJECTIVES:** Preservation  
**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:** This project replaces eight roofs, East Secondary #2, West Secondary #3, Chlorine Pump & Blower and Tunnel Access Building.

**PROJECT NEED:** Several building roofs are over 40 years old and in need of renewal.

---

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,800,000</td>
<td>$2,943,000</td>
<td>$1,800,000</td>
<td>$2,943,000</td>
</tr>
</tbody>
</table>
MWWTP Primary Settling Tank Chain

**Program Family:** 8089
**Project # 808921**

**Project Location:**
Council District # 13
City of St. Paul
Metro WWTP

## PROJECT TYPE:
Plant Improvements

## OBJECTIVES:
Preservation

## CUSTOMER LEVEL OF SERVICE:
Preserve Assets

## SCOPE:
The project will remove and replace existing collection equipment in 5 Primary Settling Tanks and provide Maintenance with spare equipment for future replacements.

## PROJECT NEED:
The sludge collection equipment is critical to the continued performance of the primary process and inspections by Maintenance staff indicate the chain and flight systems need to be replaced or rehabilitated to extend service life.

### PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2020</td>
<td>2021-2024</td>
</tr>
</tbody>
</table>

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,000,000</td>
<td>$3,000,000</td>
<td>$3,000,000</td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>
Metro Effluent Pump Station Rehabilitation

**Program Family:** 8089  
**Project #** 808922

**Project Location:**  
Council District # 13  
City of Saint Paul  
Metro WWTP

**PROJECT TYPE:** Plant Improvements  
**OBJECTIVES:** Preservation and Expansion  
**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:**  
This project enhances the effluent pumping reliability by providing a more robust facility to handle peak flows and during flooding and adverse weather conditions. These improvements include interior and exterior building improvements; replace switchgear, transformers, MCCs and other electrical equipment; replace HVAC equipment; inspect wet wells and replace gates.

**PROJECT NEED:**  
The pump station has experienced problems with pump service availability. There is a need to rehabilitate the station to increase system reliability for an additional 30-40-year service life.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$1,000,000</td>
<td>$4,000,000</td>
<td>$15,500,000</td>
</tr>
</tbody>
</table>
Program Family: 8089
Project # 808923

Project Location:
Council District # 13
City of St. Paul
Metro WWTP

MWWTP Site Preparation & Improvements – Phase 2

Project Location:
Council District # 13
City of St. Paul
Metro WWTP

PROJECT TYPE: Plant Improvements
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Financial
SCOPE: Construction of staffed guard station, tunnel access to the Services Building and road and parking lot rehabilitation
PROJECT NEED: Road, tunnel, parking and security improvements are required for the new Services Building and Field Service Annex

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-2020</td>
<td>2020-2021</td>
<td>2021-2024</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$550,000</td>
<td>$8,550,000</td>
<td>$8,550,000</td>
<td>$8,500,000</td>
</tr>
</tbody>
</table>
Metro WWTP Secondary Renewal

**Project Location:**
- Council District # 13
- City of St. Paul
- Metro WWTP

**Diffusers at the Metro Plant’s Secondary Treatment.**

**PROJECT TYPE:** Plant Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets

**SCOPE:**
This project will replace the aeration tank diffusers, install aeration control upgrades, rehabilitate Underdrain, and Meter pits, install Final Settling Tank backfill gates and air header leak assemblies. Underdrain, Meter, Final settling are not capitalized.

**PROJECT NEED:**
The aeration system equipment was last replaced in the early 2000s and needs replacement.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021-2024</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15,000,000</td>
<td>$50,000,000</td>
<td>$40,000,000</td>
<td>$40,000,000</td>
</tr>
</tbody>
</table>
Description:
This program provides funding for planning activities needed to support the Council’s overall wastewater reuse initiative.

Purpose and Justification:
The Water Resources Policy Plan directs MCES to pursue wastewater reuse where it is economically feasible to promote sustainable water resources. Drivers include:

- Alleviating future regional conveyance pipe capacity constraints
- Conserving & supplementing groundwater & surface water
- Projects to reduce the future issuance of a water appropriation due to concerns about the area’s long-term water supply
- Projects driven by future regulatory requirements that result in effluent quality being closure to reuse standards

Program Location:
The active studies and projects within this program are relevant to all Council Districts. In particular, the Crow River Wastewater Reclamation Plant is planned to be built in District 1; the SE Metro
Wastewater Reclamation Facility has been planned for District 15; and the Scott County Wastewater Plant is planned for District 4.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809110</td>
<td>Crow River Wastewater Reclamation Plant</td>
</tr>
<tr>
<td>809120</td>
<td>SE Metro Water Reclamation Facility</td>
</tr>
<tr>
<td>809130</td>
<td>Scott County Wastewater Plant - Land Acquisition</td>
</tr>
</tbody>
</table>

MCES 2021 – 2026 Capital Program:

- Authorized Capital Program (ACP) $6,775,000
- Capital Improvement Plan (CIP) $21,200,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Crow River Wastewater Treatment Plant

**Program Family:** 8091  
**Project #** 809110

**Project Location:**  
Council District # 1  
City of Rogers  
Crow River WWTP

**PROJECT TYPE:** Wastewater Treatment Plant

**OBJECTIVES:** Expand

**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Lead by Example, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, and Coordinate with Others

**SCOPE:** MCES has recognized and planned for the need for a new wastewater facility in the northwest Metropolitan service area in the 2030 and 2040 Water Resources Policy Plans. The new facility, the Crow River Wastewater Treatment Plant, will be located on a parcel of land purchased by MCES in the City of Rogers near the Crow River. The facility will replace the existing MCES Rogers Wastewater Treatment Facility and will serve the City of Rogers as well as portions of Dayton and Corcoran. MCES is planning to start receiving flow at the facility in 2030.

**PROJECT NEED:** This new Crow River Plant is needed to free up capacity for urban core growth in the Elm Creek interceptor which currently serves a rapidly expanding portion of Rogers. It also prepares for projected growth in the communities of Rogers, Dayton, Corcoran and the surrounding area.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2023-2025</td>
<td>2025-2027</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$2,195,000</td>
<td>$20,500,000</td>
<td>$101,195,000</td>
</tr>
</tbody>
</table>
Scott County Land Acquisition

**Project Location:**
Council District # 4
Louisville Township
Scott County, MN

**PROJECT TYPE:** Plants

**OBJECTIVES:** Expansion

**CUSTOMER LEVEL OF SERVICE:** Lead by Example, Meet Capacity Needs, and Coordinate with Others

**SCOPE:**
Council desires to acquire a suitable property in Scott County for the future regional wastewater reclamation plant identified in the 2040 Water Resources Policy Plan. An evaluation of potential sites for the proposed Scott County plant was conducted in 2007. That study considered six potential sites and ranked them based on various criteria. This project will further analyze the highest ranked sites from the original study to determine a recommended site and then acquire the site.

**PROJECT NEED:** Increase capacity and/or extend services to developing areas to fulfill obligations of water resources policy plan and approved local comprehensive plans.

**PROJECT SCHEDULE**
- **Planning:** Land Acquisition 2019-2021
- **Design:** Plant Design-Post 2040
- **Construction:** Plant Construction-Post 2040

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$1,000,000</td>
<td>$1,105,000</td>
<td>$1,000,000</td>
<td>$1,105,000</td>
</tr>
</tbody>
</table>
Description:
This program provides funding for planning and implementation of projects to address renewal and capacity needs to improve performance for wastewater solids processing at the Blue Lake Wastewater Treatment Plant (WWTP).

Purpose and Justification:
The program provides for planning and implementation of projects to address renewal and capacity needs and to improve performance for wastewater solids processing at the Blue Lake WWTP.

Program Location:
The active projects within this program are in the following Council Districts: 4

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809700</td>
<td>Blue Lake WWTP Solids Improvements</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,948,000</td>
<td>$60,100,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Blue Lake WWTP Solids Improvements

The Blue Lake WWTP located in Shakopee, produces Class A Fertilizer

**Program Family:** 8097  
**Project #:** 809700

**Project Location:**  
Council District # 4  
City of Shakopee  
Blue Lake WWTP

---

**PROJECT TYPE:** Wastewater Treatment Plant  
**OBJECTIVES:** Preservation, Expansion and Improvement  
**CUSTOMER LEVEL OF SERVICE:** Communicate Information and Preserve Assets  
**SCOPE:** Develop a facility plan and implement recommended improvements.  
**PROJECT NEED:** Wastewater solids drying facilities over 20 years old and are nearing end of its useful life.

---

**PROJECT SCHEDULE**

- **Planning:** 2018-2019  
- **Design:** 2020-2021  
- **Construction:** 2021-2028

---

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$1,948,000</td>
<td>$61,000,000</td>
<td>$80,948,000</td>
</tr>
</tbody>
</table>
Program 8098
Hastings WWTP

Description:
This program provides funding for planning and implementation of a new Hastings Wastewater Treatment Plant (WWTP) located at 2445 Ravenna Trail in Hastings and includes projects for construction of the new plant and associated interceptor system improvements.

Purpose and Justification:
MCES intends to relocate Hastings WWTP service to 2445 Ravenna Trail in Hastings to address the following challenges associated with the existing plant site:

1.) implementation of major infrastructure renewals,
2.) land use compatibility, and
3.) inability to expand the plant to the 2040 planned capacity of 4 MGD

The new plant site provides ability to expand the plant to meet the long-term planned capacity (post 2040).

Program Location:
The active projects within this program are in the following Council Districts: 16

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809800</td>
<td>Hastings WWTP</td>
</tr>
</tbody>
</table>
MCES 2021 – 2025 Capital Program:

**Authorized Capital Program (ACP)**
$2,000,000

**Capital Improvement Plan (CIP)**
$30,000,000

Estimated Program Cash Flow 2021 - 2026:

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-2020 Actuals + 2020 Estimated Expenses</th>
<th>(ACP) Authorized Capital Program</th>
<th>(CIP) Capital Improvement Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-2021</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>10,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Hastings WWTP

Program Family: 8098  
Project # 8098XX

Project Location:
- Council District # 16
- Hastings
- Relocated Hastings WWTP

PROJECT TYPE: Plant Improvements

OBJECTIVES: Expansion and Improvement

CUSTOMER LEVEL OF SERVICE: Meet Capacity Needs, Lead by Example and Coordinate with Others

SCOPE: Construct a new wastewater treatment plant in Hastings

PROJECT NEED: MCES intends to relocate Hastings WWTP service by the year 2026 to 2445 Ravenna Trail in Hastings. The existing plant site, located in downtown Hastings, presents challenges to major renewal, land use compatibility, and expandability of the plant to respond to growth and changes in regulatory requirements. The new plant site provides ability to expand to support growth in the long-term service area identified in the 2040 Water Resources Policy Plan, which may include land areas in the townships of Marshan, Nininger, or Vermilion.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2022</td>
<td>2023-2024</td>
<td>2025-2030</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$1,500,000</td>
<td>$31,500,000</td>
<td>$65,000,000</td>
</tr>
</tbody>
</table>
**Program 8100**  
**Industrial Pretreatment Incentive Program**

**Description:**  
Industrial Pretreatment Incentive Program (IPIP) provides financial incentives to assist high-strength industrial wastewater dischargers to pretreat the wastewater at their site, reducing or eliminating the high-strength discharge and reducing Metropolitan Council Environmental Services' (MCES) cost to treat that discharge.

**Purpose and Justification:**  
This innovative public-private partnership yields benefits to MCES ratepayers, private industry, and the environment. The Council and its ratepayers benefit by: avoiding operating costs (e.g., energy) to treat high-strength waste; improve ability to generate electricity by better handling of high-strength waste; potentially delay or eliminate the need for wastewater treatment plant expansion. Industries benefit by: having access to low-cost loans to install treatment equipment; reducing or eliminating strength charges; enhancing ability to grow.

**Program Location:**  
The active projects within this program are in the following Council Districts: Industries in all Districts were invited to apply; current active project is Northern Star (Michael Foods) in District 4.
Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>810010</td>
<td>IPIP – Northern Star</td>
</tr>
</tbody>
</table>

MCES 2021 – 2026 Capital Program:

- **Authorized Capital Program (ACP)**: $12,957,000
- **Capital Improvement Plan (CIP)**: $0

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
### PROJECT TYPE:
Industrial Pollution Incentive Program (IPIP)

### OBJECTIVES:
Improvement

### CUSTOMER LEVEL OF SERVICE:
Minimize Impacts, Lead By Example, Meet Capacity Needs, Engage Customers, Coordinate With Others, and Charges & Fees

### SCOPE:
Construction of pretreatment facilities at Northern Star. The company discharges to Blue Lake WWTP. Using a low-interest loan from MCES, Northern Star is installing additional pretreatment equipment. The company will pay back the loan over time. The equipment will reduce the strength of Northern Star’s wastewater discharge and will enable Northern Star to recycle its wastewater. At the end of 10-year loan payback, Northern Star will own the pretreatment equipment.

### PROJECT NEED:
Northern Star wishes to reduce its high-strength waste charge. A side benefit for MCES is that this IPIP project may reduce corrosion and odors in the interceptor system.

### PROJECT SCHEDULE
- **Planning**: Complete
- **Design**: Complete
- **Construction**: 2018 - 2021

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>Year</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Cash Flow</td>
<td>$11,300,000</td>
<td>$0</td>
<td>$11,300,000</td>
</tr>
</tbody>
</table>
Appendix B: Project Summaries by Program - Interceptor

Table of Contents:

Program 8028: Blue Lake Interceptor Improvements ......................................................... 91
Program 8041: Hopkins System Improvements ................................................................. 101
Program 8055: Lift Station Rehabilitation ........................................................................... 104
Program 8056: Meter Improvements .................................................................................. 114
Program 8063: East Area Interceptor Improvements ......................................................... 117
Program 8076: Minneapolis Interceptor Rehabilitation .................................................... 122
Program 8077: Northeast Area Interceptor Improvements .............................................. 138
Program 8081: Maple Plain Lift Station / Forcemain Improvements ................................. 140
Program 8082: St Bonifacius Lift Station / Forcemain Improvements ............................. 144
Program 8083: Waconia Lift Station / Forcemain Improvements ..................................... 146
Program 8084: Bloomington System Improvements ......................................................... 150
Program 8086: North Area Interceptor (NAI) Rehabilitation .......................................... 153
Program 8088: St Paul Interceptor Rehabilitation ............................................................ 160
Program 8090: Interceptor Rehabilitation Program ......................................................... 167
Program 8092: Minneapolis Interceptor System Rehabilitation – Phase 2 ....................... 175
Program 8093: Brooklyn Park – Champlin Interceptor Renewal ..................................... 178
Program 8094: Brooklyn Park L32 Replacement ............................................................... 185
Program 8095: South Area Interceptor Improvements ..................................................... 188
Program 8096: Northwest Area Interceptor Improvements ............................................. 190
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:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>802800</td>
<td>Lake Minnetonka Area (Parent Project)</td>
</tr>
<tr>
<td>802829</td>
<td>Mound Area Improvements – Interceptor 7021</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $58,919,000
Capital Improvement Plan (CIP) $17,422,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
INTERCEPTOR 7021

Program Family: 8028
Project # 802829

Project Location:
- Council District # 3
- City of Mound
- City of Minnetrista
- County Road 44

PROJECT TYPE: Interceptor Replacement

OBJECTIVES:
- Perseveration and Improvement

CUSTOMER LEVEL OF SERVICE:
- Minimize Impacts
- Lead by Example, Be A Good Neighbor
- Meet Capacity Needs
- Engage Customers
- Coordinate with Others and Preserve Assets

SCOPE:
- Install dual 18” forcemains to replace an aged, single 24” forcemain, line a portion of the downstream gravity pipe and rehabilitate coinciding maintenance holes. Through cooperative agreements, project will install city watermain, provide storm drainage improvements, local forcemain improvements and upgrade two city lift stations.

PROJECT NEED:
The current Mound 7021 forcemain was constructed as a single 24” steel forcemain in 1973, commencing at the L38 lift station and running approximately 15,400 feet. This is an aged system that lacks redundancy and is adjacent to Lake Minnetonka.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2015-2017</td>
<td>2018-2021</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$27,212,000</td>
<td>$500,000</td>
<td>$27,212,000</td>
</tr>
</tbody>
</table>
**Program Family:** 8028  
**Project #:** 802831

---

**Project Location:**  
Council District # 3  
City Orono

---

**Orono Lift Stations L46 and L49 Improvements**

---

**Map of project location**

---

**PROJECT TYPE:** Lift Station Improvements

**OBJECTIVES:** Preservation and Improvement

**CUSTOMER LEVEL OF SERVICE:** 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

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

**PROJECT NEED:** 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 to relocate the lift station across the street 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**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2023</td>
<td>2024-2025</td>
</tr>
</tbody>
</table>

---

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$108,000</td>
<td>$50,000</td>
<td>$3,977,000</td>
<td>$3,982,000</td>
</tr>
</tbody>
</table>
L48 Rehabilitation and 6-DH-645 Forcemain Replacement

**PROJECT TYPE:** Lift Station Rehabilitation and Forcemain Replacement

**OBJECTIVES:** Preservation and Improvement

**CUSTOMER LEVEL OF SERVICE:** Lead by Example, Be A Good Neighbor, Meet Capacity Needs and Preserve Assets

**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 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**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2020-2021</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$430,000</td>
<td>$5,910,000</td>
<td>$5,085,000</td>
<td>$5,910,000</td>
</tr>
</tbody>
</table>
Excelsior Area Lift Station L20

Project Location:
Council District # 3
City of Excelsior

Program Family: 8028
Project # 802856

PROJECT TYPE:
Interceptor System Improvements

OBJECTIVES:
Preservation and Improvement

CUSTOMER LEVEL OF SERVICE:
Comply with Permits, Minimize Impacts, Be A Good Neighbor, Engage Customers and Coordinate with Others

SCOPE:
Replace existing lift station L20 with 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 2009 Lake Minnetonka Area Facility Plan determined that L20 should be abandoned and replaced with a gravity pipe connection to L19.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2019</td>
<td>2019-2021</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,541,000</td>
<td>$10,001,000</td>
<td>$9,362,000</td>
<td>$10,001,000</td>
</tr>
</tbody>
</table>
8567 Channel Crossings Replacement

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

**Program Family:** 8028  
**Project #:** 802863

**PROJECT TYPE:** Interceptor Replacement  
**OBJECTIVES:** Preservation and Improvement  
**CUSTOMER LEVEL OF SERVICE:** Minimize Impacts, Lead by Example, Be A Good Neighbor, Engage Customers, Coordinate with Others and Preserve Assets  
**SCOPE:** 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.

**PROJECT NEED:** 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 could be scheduled when North Shore Drive is closed for bridge work. A cooperative project with Hennepin County for this portion of the work is likely.

**PROJECT SCHEDULE**
- **Planning:** 2020  
- **Design:** 2021  
- **Construction:** 2022

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Cash Flow</td>
<td>$189,000</td>
<td>$2,000,000</td>
<td>$1,905,000</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>
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

PROJECT TYPE: Interceptor Rehabilitation
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Comply with Permits, Minimize Impacts, Communicate Information, Engage Customers, Coordinate with Others and Preserve Assets

SCOPE:
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.

PROJECT NEED:
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

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019</td>
<td>Winter / Spring 2020</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$413,000</td>
<td>$4,900,000</td>
<td>$413,000</td>
<td>$4,900,000</td>
</tr>
</tbody>
</table>
Interceptor System Improvements at Tanager Bridge

**Preservation**

Minimize Impacts, Engage Customers, Coordinate with Others and Preserve Assets

Replace existing forcemain at Tanager bridge with new forcemain alignment due to bridge replacement. Associated Hennepin County Project.

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**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2019</td>
<td>2019-2020</td>
<td>2021-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$395,000</td>
<td>$850,000</td>
<td>$605,000</td>
<td>$1,200,000**</td>
</tr>
</tbody>
</table>

**Estimated. MCES share of project costs are currently being negotiated with Hennepin County. MCES cost participation is 50% of total FM relocation cost.**
Orono Interceptor 7113 Forcemain Replacement

**Project Location:**
Council District # 3
City of Orono

**Program Family:** 8028
Project # 802897

**Photo of existing Dakota Rail Trail Corridor**

**PROJECT TYPE:** Interceptor System Improvements

**OBJECTIVES:** Preservation and Improvement

**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Engage Customers and Coordinate with Others

**SCOPE:**
Replacement of existing forcemain from Lift Station L59 to junction with forcemain 7113A with a new forcemain. The new forcemain will follow the HCRRA trail corridor to avoid County Road 15 and the Lake Minnetonka shoreline.

**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. New forcemain will be constructed within its existing corridor except along the Lake Minnetonka shoreline. The shoreline portion of the forcemain will be constructed along the Dakota Rail Trail to avoid the environmentally sensitive shoreline.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2022</td>
<td>2023-2025</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150,000</td>
<td>$1,230,000</td>
<td>$14,920,000</td>
<td>$15,000,000</td>
</tr>
</tbody>
</table>
Program 8041
Hopkins System Improvements

Description:
The Program provides for the replacement of a 5-mile-long force main, known as the Hopkins force main, and lift station L27 located in the city of Hopkins. The force main is a single 24 to 30-inch interceptor pipe that begins in Hopkins at the intersection of Blake Rd and Lake St and passes through St. Louis Park and Minneapolis where it discharges to the 1-MN-330 gravity interceptor sewer. The system serves the cities of Hopkins, St. Louis Park, and Minneapolis. The new force main system is constructed as a dual 18 to 24-inch pipe system. The new 6.3 mgd lift station is constructed 700-feet to the west of the existing lift station.

Purpose and Justification:
These facilities are over 40 years old, have significant condition issues and lack redundancy. The existing force main is constructed as Prestressed Concrete Cylinder Pipe which is susceptible to internal and external corrosion. In 2000, a corroded section of the force main collapsed within the Dean neighborhood of Minneapolis. In addition, the existing lift station is undersized with little storage. This presented an operational limitation to addressing malfunctions at the lift station without causing backups to homes or spills.

Program Location:
The active projects within this program are in the following Council Districts: District # 5 and 6

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>804100</td>
<td>Hopkins Systems Improvements (Parent Project)</td>
</tr>
<tr>
<td>804125</td>
<td>HSI East Isles Force Main Improvements</td>
</tr>
<tr>
<td>804136</td>
<td>HSI Cooperative Agreements</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $10,207,000
Capital Improvement Plan (CIP) $0

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
**HSI East Isles Forcemain Improvements**

**Project Location:**
- Council District # 6
- City of Minneapolis
- The Mall Park, Humboldt Ave

**PROJECT TYPE:** Interceptor Rehabilitation

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Conveys wastewater safely with minimal backups and spills

**SCOPE:** The project includes replacement of 2500 lineal feet of 24” concrete forcemain with two 18” diameter forcemains. Cooperative construction with the City of Minneapolis and Minneapolis Park and Recreation Board to complete City improvements in the area.

**PROJECT NEED:** Without a redundant forcemain, inspecting the existing 24” 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 Ave. S. is severely corroded is at risk of failure.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019-2020</td>
<td>2021 - 2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,864,000</td>
<td>$3,151,000</td>
<td>$2,847,000</td>
<td>$3,151,000</td>
</tr>
</tbody>
</table>
Program 8055
Lift Station Rehabilitation

Description:
Upgrades include reconstruction and replacement work for force mains and lift stations. Fuel tanks are being replaced for compliance with changing storage tank rules.

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 spills, and improve the safety of staff who operate and maintain lift stations.

Program Location:
The active projects within this program are in all the Council Districts.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>805500</td>
<td>Lift Station Rehabilitation (Parent Project)</td>
</tr>
</tbody>
</table>
### MCES 2021 – 2026 Capital Program:

- **Authorized Capital Program (ACP)**: $32,497,000
- **Capital Improvement Plan (CIP)**: $19,833,000

### Estimated Program Cash Flow 2021 - 2026:

**Note:** The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Project Location:
Council District # 1 - 16
Various Cities

PROJECT TYPE:
Interceptor System Improvements

OBJECTIVES:
Preservation

CUSTOMER LEVEL OF SERVICE:
Comply with Permits, Minimize Impacts, Lead by Example, Be A Good Neighbor, Engage Customers, Coordinate with Others and Preserve Assets.

SCOPE:
Make minor improvements to lift station properties on a case-by-case basis as needs arise.

PROJECT NEED:
To comply with conditional use permits, local ordinances and other criteria minor improvements are needed at various lift station sites.

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$100,000</td>
<td>$560,000</td>
<td>$400,000</td>
<td>$560,000</td>
</tr>
</tbody>
</table>
Lift Station Condition Assessments

PROJECT TYPE: Interceptor Improvements

OBJECTIVES: Preservation and Improvement

CUSTOMER LEVEL OF SERVICE: Comply with Permits, Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers and Coordinate With Others

SCOPE: Evaluate and report the condition of 25 lift stations.

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

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2021</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$939,000</td>
<td>$100,000</td>
<td>$939,000</td>
</tr>
</tbody>
</table>
Coon Rapids L34 Improvements

**Project Location:**
Council District # 9
City of Coon Rapids
Coon Rapids Blvd.

**PROJECT TYPE:** Lift Station Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Minimize Impacts, Lead by Example, Be A Good Neighbor and Preserve Assets

**SCOPE:** Replace four existing pumps and motors, replace process piping and valves, replace undersized influent pipe, replace 100 feet of 48” concrete pipe with corrosion resistant pipe, replace HVAC systems and odor management system, rehabilitate wet well with corrosion resistant coating, addition of new channel grinder and mechanical hoists, replace electrical service, replace all interior electrical and lights with energy efficient LEDs. Construct an on-site stormwater filtration basin to protect water quality.

**PROJECT NEED:** Originally constructed in 1963, L34 facilities need to be rehabilitated to recover useful life and provide reliability, and ancillary improvements are required to improve site safety. The existing odor management unit does not have enough media capacity to successfully treat air through peak odor months, which are typically July through October.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,163,000</td>
<td>$7,352,000</td>
<td>$3,163,000</td>
<td>$7,352,000</td>
</tr>
</tbody>
</table>
L66 Rehabilitation

Project Location:
Council District # 15
City of Savage
125th Street

PROJECT TYPE: Lift Station rehabilitation
OBJECTIVES: Preservation and Improvement
CUSTOMER LEVEL OF SERVICE: Lead by Example, Be A Good Neighbor, Meet Capacity Needs and Preserve Assets
SCOPE: The lift station rehabilitation will include HVAC upgrades, carbon tank, 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 projects 2040 flows. The HVAC is not up to code and needs replacement.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2017-2021</td>
<td>2024-2026</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$211,000</td>
<td>$1,168,000</td>
<td>$5,895,000</td>
<td>$6,001,000</td>
</tr>
</tbody>
</table>
Lift Station Fuel Tank Upgrades

**Program Family:** 8055  
**Project #:** 805565

**Project Location:**  
**Council Districts:** # 3, 6, 15, 16  
Cities of Apple Valley, Eagan, Orono, Plymouth and Savage

---

**PROJECT TYPE:** Fuel Tank Replacement  
**OBJECTIVES:** Preservation and Improvement  
**CUSTOMER LEVEL OF SERVICE:** Comply with Permits and Preserve Assets  
**SCOPE:** Remove and replace five existing underground storage tanks (UST) with five above ground storage tanks (AST).

**PROJECT NEED:** The MPCA is requiring stricter reporting requirements on underground storage tanks (USTs). The first round of reports for the fuel tanks is due in October 2020. In order to comply with these standards MCES needs to replace these five tanks. Instead of replacing the USTs in kind, MCES is replacing them with above ground storage Tanks (ASTs) because of the additional maintenance costs and testing that is required for UST’s.

---

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2017-2019</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$525,000</td>
<td>$1,715,000</td>
<td>$525,000</td>
<td>$1,715,000</td>
</tr>
</tbody>
</table>
2020 Lift Station Electrical Rehabilitation

Project Location: Multiple Lift Stations
Council District # - NA
City - NA
Location - NA

PROJECT TYPE: Electrical Condition Assessment

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Minimize impacts and Preserve Assets

SCOPE: The current condition assessment reports, preventative maintenance data, and arc flash study results need to be reviewed to prioritize electrical rehabilitation work. MCES engineering and electrical maintenance staff will compare previous data from the condition assessments and conduct visit sites to determine current deficiencies with the electrical systems. Brown and Caldwell are assisting with site visits and arc flash modeling.

PROJECT NEED: A consultant has been hired to prepare condition assessments for Metropolitan Council Environmental Services (MCES) lift stations. The condition assessments include a review of the electrical systems. In addition, preventative maintenance testing conducted by MCES electrical maintenance and previous arc flash studies have noted deficiencies. This work has revealed many lift stations with electrical deficiencies consisting of failed components; antiquated switch gear, protective devices, and motor starters; deteriorated electrical cabinets and conduit; and unsafe arc flash conditions.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2021</td>
<td>2021-2030</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$300,000</td>
<td>$12,857,000</td>
<td>$12,807,000</td>
<td>$22,857,000</td>
</tr>
</tbody>
</table>
Lift Station L55 Replacement – Gravity Sewer and Forcemain Construction

**Project Location:**
Council District # 5  
City of Bloomington  
Southeast Quadrant of Hwy 100 and 494 intersection

**Project Type:** Lift Station Replacement

**Objectives:** Preservation

**Customer Level of Service:** Provide future capacity

**Scope:** Install new gravity sewer to, and new forcemain from, a new 3.8 MGD lift station installed under Project 808400

**Project Need:** In 2013, Bloomington and Edina notified MCES that major developments located in the lift station L55 sewershed, including the Edina Gateway, Mall of America and OATI expansions, were scheduled for construction in three to five years and that projected flows were expected to exceed the capacity of L55.

**Project Schedule**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**Financial Analysis**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,135,000</td>
<td>$4,300,000</td>
<td>$2,135,000</td>
<td>$4,300,000</td>
</tr>
</tbody>
</table>
Program 8056
Meter Improvements

Description:
This Program provides funding to upgrade MCES’s ability to measure flows for billing, operational, and planning purposes and standardize meter equipment at similar facilities. Meter improvements include meter rehabilitation or replacement, planning meter installation, and new meter installation.

Purpose and Justification:
Accurate flow metering is the basis of the MCES' billing system. It is essential that our customers trust the reliability and accuracy of the flow metering system. The project provides a systematic approach for capital improvements to the flow metering system. Increases in flow, greater emphasis on capturing peak flows stemming from MCES’ infiltration/inflow program, normal facility rehabilitation needs, and the need for additional flow metering locations for system planning purposes are driving this meter improvements project.

Program Location:
The active projects within this program are in the following Council Districts: District # 1 & 2

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>805600</td>
<td>Meter Improvements (Parent Project)</td>
</tr>
<tr>
<td>805601</td>
<td>Meter Station Property Maintenance</td>
</tr>
<tr>
<td>805603</td>
<td>2020 Meter Improvements</td>
</tr>
<tr>
<td>805636</td>
<td>Replacement Meter Vault M228</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $19,826,000

Capital Improvement Plan (CIP) $1,500,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Replacement Meter Vault M228

**Project Location:**
- Council District # 2
- City of Brooklyn Park

**Program Family:** 8056  
**Project #** 805636

**Map of project location**

**PROJECT TYPE:** Interceptor Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers, Coordinate with Others and Preserve Assets

**SCOPE:** Replace existing Meter M228

**PROJECT NEED:** Replace and update meter due to corrosion and difficult access. Meter is important to ensure accuracy of cost distribution among communities.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2020-2021</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,500,000</td>
<td>$2,176,000</td>
<td>$5,715,000</td>
<td>$7,126,800</td>
</tr>
</tbody>
</table>
Description:
The interceptor systems in Cottage Grove, Oakdale, Lake Elmo, Woodbury, and other east area communities need rehabilitation and/or replacement as well as expansion to serve additional areas. The Program will rehabilitate existing interceptor facilities, including gravity sewers, force mains, lift stations and meter stations, and analyze the system needs to accommodate regional growth.

Purpose and Justification:
The Program provides for improvements to the Interceptor System that serves the East Area. This includes work needed to serve the City of Lake Elmo, and the Northeast area of Woodbury. This also includes work to improve deteriorating facilities in Woodbury and Cottage Grove.

Program Location:
The active projects within this program are in the following Council Districts: District # 12

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>806301</td>
<td>East Area Interceptor Improvements (Parent Project)</td>
</tr>
<tr>
<td>806302</td>
<td>L77 Improvements</td>
</tr>
<tr>
<td>806325</td>
<td>Lake Elmo West Connection/I94 Crossing</td>
</tr>
<tr>
<td>806335</td>
<td>Woodbury Interceptor 9701 Rehabilitation</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $8,584,741
Capital Improvement Plan (CIP) $6,200,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Lift Station L77 Improvements

Program Family: 8063
Project # 806302

Project Location:
Council District 12
City of Woodbury

Map of project location

PROJECT TYPE: Interceptor
OBJECTIVES: Expansion
CUSTOMER LEVEL OF SERVICE: Meet Capacity Needs
SCOPE: Expand L77 lift station and connect to larger forcemain
PROJECT NEED: This expansion was planned with the construction of the L77 lift station, and is driven by development in eastern Woodbury and Lake Elmo.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022-2023</td>
<td>2024-2026</td>
<td>2020-2021</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$403,000</td>
<td>$801,000</td>
<td>$753,000</td>
<td>$801,000</td>
</tr>
</tbody>
</table>
South Washington County Interceptor Improvements

Project Location:
Council District # 12
Cities of lake Elmo and Woodbury

PROJECT TYPE:    Interceptor

OBJECTIVES:    Expansion

CUSTOMER LEVEL OF SERVICE:
Meet Capacity Needs

SCOPE:
Extend service to SW Lake Elmo Lift Station through Wilmes Lake Forcemain, or through a gravity service extension from 1-WO-500. May require upgrade of portions of 1-WO-500.

PROJECT NEED:
This project will provide interceptor facilities to convey wastewater from portions of Lake Elmo and northeast Woodbury to the Metro WWTP in St Paul. The project is needed to support growth in this eastern portion of the metropolitan area.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2020-2021</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$3,435,000</td>
<td>$12,000,000</td>
<td>$13,573,000</td>
</tr>
</tbody>
</table>
**Program Family:** 8063  
**Project #** 806335  

**Project Location:**  
Council District # 12  
City of Woodbury

---

**Woodbury Interceptor 9701 Rehabilitation**

**PROJECT TYPE:** Interceptor Improvements  
**OBJECTIVES:** Preservation  
**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers, Coordinate with Others and Preserve Assets  
**SCOPE:** Grouting behind between the interceptor pipe and host tunnel liner. Repair cracked pipe sections  
**PROJECT NEED:** Inspections of the interceptor segment have discovered several cracks, offset joints, and missing backfill grout. The unbalanced loadings to the interceptor pipe have created pipe fractures. These defects provide a pathway for groundwater to enter the interceptor, and indicate a potential for interceptor.

---

**PROJECT SCHEDULE**

- **Planning:** 2019  
- **Design:** 2019-2020  
- **Construction:** 2020-2021

---

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,387,000</td>
<td>$0</td>
<td>$3,387,000</td>
<td>$5,150,000</td>
</tr>
</tbody>
</table>
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>
</tr>
</thead>
<tbody>
<tr>
<td>807600</td>
<td>Minneapolis Interceptor System Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>807618</td>
<td>1-MN-341 Pipe-in-Pipe Rehab</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>807640</td>
<td>Maintenance Access Structures</td>
</tr>
<tr>
<td>807641</td>
<td>1-MN-303 Pipe-in-Pipe</td>
</tr>
<tr>
<td>807643</td>
<td>Minneapolis East Interceptor (MEI) Diversion Structure Rehabilitation</td>
</tr>
<tr>
<td>807644</td>
<td>Minneapolis Deep Tunnel Access and Cleaning Phase 2</td>
</tr>
</tbody>
</table>
807645  Mpls 1-MN-330 and 1-MN-341 Access Improvements Co-op
807646  Interceptor 1-MN-302 Rehabilitation at Hwy 88 Crossing
807647  Lake Street Siphon Inspection
807650  Minneapolis Joint Sewer Study
807666  1-MN-310 Rehabilitation Between Dowling and Broadway
807667  1-MN-310 Rehab Between Broadway and 8th Ave N
807670  Minneapolis Interceptor Odor Control Study – Phase 1
807699  Technical Support of Interceptors

### MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$82,949,000</td>
<td>$300</td>
</tr>
</tbody>
</table>

### Estimated Program Cash Flow 2021 - 2026:

- **Pre-2021**: $43,092
- **2021**: $28,358
- **2022**: $13,474
- **2023**: $3,401
- **2024**: $100
- **2025**: $100
- **2026**: $100

**Note:** The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Interceptor 1-MN-341 Pipe-in-Pipe Rehabilitation

Project Location:
Council District # 8
City of Minneapolis
38th St E from 23rd Ave S to West River Parkway

Pipe in Pipe (PIP) Profile
PIP Damage

PROJECT TYPE:
Pipe-in-Pipe Rehabilitation

OBJECTIVES:
Preservation

CUSTOMER LEVEL OF SERVICE:
Maintain existing assets

SCOPE:
Repair holes in CMP pipe and pour new geopolymer crown for CMP/invert for storm sewer.

PROJECT NEED:
Interceptor 1-MN-303 was built in the early 1920’s as a 102” reinforced concrete combined sanitary/storm sewer. The segment of 1-MN-303 on 31st Ave NE between Randolph St NE and Columbia Golf Course was converted to a PIP separated sewer in 1965 using inlaid deformed corrugated metal pipe (CMP). Recent walking inspections and smoke tests of the PIP segment identified 28 distinct sets of defects that are allowing inflow of stormwater into the sanitary sewer.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$400,000</td>
<td>$5,650,000</td>
<td>$5,600,000</td>
<td>$5,650,000</td>
</tr>
</tbody>
</table>
West Meters Odor Management Facility Improvements

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

3D design rendering of Odor Control Building (OCB)

PROJECT TYPE: Odor Control Improvements

OBJECTIVES: Improvement

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 anemometer to track stack emissions. Modify tunnel doors and air supply fan ductwork. Convert existing carbon tanks from single to dual beds.

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

Planning 2019
Design 2020
Construction 2020

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$11,246,000</td>
<td>$1,000,000</td>
<td>$11,246,000</td>
</tr>
</tbody>
</table>
ERS04 and 1-MN-344 Tunnel Rehabilitation

**Project Location:**
Council District # 8
City of Minneapolis
Minnehaha Park, Longfellow Gardens

---

**PROJECT TYPE:** Interceptor Rehabilitation

**OBJECTIVES:** Preservation

**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**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8,608,000</td>
<td>$27,039,00</td>
<td>$8,608,000</td>
<td>$27,039,00</td>
</tr>
</tbody>
</table>
Maintenance Access Structures

Project Location:
Council District # 4, 6, 7, 8, 10, 13, 14
Cities of Minneapolis, St. Paul, Cottage Grove, Chaska, Moundsview
10 Locations

PROJECT TYPE: Small construction projects at various locations to improve odor management.

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Be a good neighbor

SCOPE: Repair existing maintenance holes, hatches, and snow chutes that emit odors and upgrade existing carbon units to improve odor removal.

PROJECT NEED: Repairs required to maintain level of service related to odors.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019</td>
<td>2019 - 2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$1,000,000</td>
<td>$750,000</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>
Interceptor 1-MN-303 Pipe-in-Pipe (PIP) Rehabilitation

Project Location:
Council District # 8
City of Minneapolis
South Side of Columbia Golf Course

PROJECT TYPE: Pipe-in-Pipe Rehabilitation

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Maintain existing assets

SCOPE: Repair holes in CMP pie and pour new geopolymer crown for CMP/invert for storm sewer.

PROJECT NEED: Repair holes to prevent I/I into and out of CMP.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2020</td>
<td>2022-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

| 2021 Cash Flow $2,353,000 | Current ACP $3,750,000 | 2021 – 2026 Cash Flow $3,700,000 | Total Project Cost $3,750,000 |
Minneapolis East Interceptor (MEI) Control Gate Rehabilitation

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

**Program Family:** 8076
**Project #** 807643

**PROJECT TYPE:** Control Gate Structure Rehabilitation

**OBJECTIVES:** Improvement

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

**SCOPE:** Rehabilitate 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 1-MN-302 “pipe-in-pipe” at Site 11 and the abandonment of Interceptor 8255A.

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

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2018-2020</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4,000,000</td>
<td>$6,467,000</td>
<td>$5,800,000</td>
<td>$6,467,000</td>
</tr>
</tbody>
</table>
PROJECT LOCATION MAP

LEGEND

<table>
<thead>
<tr>
<th>Regulator Number</th>
<th>Description</th>
<th>Regulator Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R01</td>
<td>Cromwell Ave &amp; Valentine Ave</td>
<td>R08</td>
<td>E. 26th Ave &amp; Seabury St.</td>
</tr>
<tr>
<td>R02</td>
<td>Site 1A, Lake St. Siphon Tankhouse</td>
<td>R10</td>
<td>Minneapolis Southwest Met.</td>
</tr>
<tr>
<td>R03</td>
<td>Minneapolis Southwest Met.</td>
<td>R12</td>
<td>Minneapolis East Met.</td>
</tr>
<tr>
<td>R04</td>
<td>Portland Ave &amp; Washington Ave.</td>
<td>R10</td>
<td>Oak St. 54</td>
</tr>
</tbody>
</table>

Legend
- Regulators
- MEI Gate Rehab Sites
- MCES Interceptors
- Municipal Borders
- Roads
- Lakes
Large Diameter Interceptor Cleaning – Phase 2

Project Location:
Council District # 7, 8, 14
Cities of Minneapolis and St. Paul
6 Locations

Project Type:
Interceptor Cleaning

Objectives:
Preservation

Customer Level of Service:
Provide capacity

Scope:
Debris will be mobilized under live sewage flow using high volume/high velocity jetting; removed from the interceptor by pumping; and decanted or dried as required to dispose at a licensed landfill. Jetting will be conducted through existing access structures ranging from 30 to 110 feet deep, some offset from the interceptor, with minimal surface disruption and pavement restoration. Man entry will be required to remove debris that cannot be removed by jetting.

Project Need:
Interceptors need to be kept clean to maintain capacity.

Project Schedule

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2016-2021</td>
<td>2021-2025</td>
</tr>
</tbody>
</table>

Financial Analysis

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000,000</td>
<td>$9,002,000</td>
<td>$8,950,000</td>
<td>$9,002,000</td>
</tr>
</tbody>
</table>
1-MN-302 Hwy 88 Crossing Rehabilitation

**Project Location:**
Council District # 8
City of Minneapolis
Stinson and Hwy 88

**Program Family:** 8076
Project # 807646

**Project Location Map**

**Project Location:**

**Council District # 8**
City of Minneapolis
Stinson and Hwy 88

**Program Family:** 8076
Project # 807646

**PROJECT TYPE:** Interceptor Rehabilitation

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Meet Capacity Needs 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**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,624,000</td>
<td>$2,350,000</td>
<td>$1,624,000</td>
<td>$2,350,000</td>
</tr>
</tbody>
</table>
Lake Street Siphon Inspection

Inside of Lake Street Siphon

**PROJECT TYPE:** Inspection

**OBJECTIVES:** Improvement

**CUSTOMER LEVEL OF SERVICE:** Maintain existing assets

**SCOPE:**
This project will include temporary work such as siphon dewatering, lighting, and ventilation; permanent work such as ladder removal and replacement, stop log and hoist installation, and swing gate reinforcement; preparing and maintaining siphons to allow Third Party inspection under the Contractor’s Confined Space Entry Permit; Third Party Inspections including alignment, wall thickness, and ground penetrating radar; minor repairs as directed by the CAR.

**PROJECT NEED:**
The three 60” diameter Lake Street Siphons were last inspected in 1993. Inspections are needed to evaluate current conditions, identify future rehabilitation options, and ensure system reliability.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019-2020</td>
<td>2020-2021</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,200,000</td>
<td>$3,290,000</td>
<td>$2,200,000</td>
<td>$3,290,000</td>
</tr>
</tbody>
</table>
**Minneapolis Joint Sewer Study**

**Program Family:** 8076  
**Project #** 807650

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

**PROJECT TYPE:** Interceptor

**OBJECTIVES:** Preservation, Expansion and Improvement

**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>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,644,000</td>
<td>$6,031,000</td>
<td>$3,428,000</td>
<td>$6,031,000</td>
</tr>
</tbody>
</table>
Interceptor 1-MN-310 Rehabilitation Between Broadway and 8th Ave N

Program Family: 8076 Project # 807667

Project Location:
Council District # 7
City of Minneapolis
2nd St N

Inspection camera looking inside a deteriorated interceptor

<table>
<thead>
<tr>
<th>PROJECT TYPE:</th>
<th>Cured in Place Pipe Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVES:</td>
<td>Preservation</td>
</tr>
<tr>
<td>CUSTOMER LEVEL OF SERVICE:</td>
<td>Maintain existing assets</td>
</tr>
<tr>
<td>SCOPE:</td>
<td>CIPP line 2,100 feet of 1-MN-310 from 15th Avenue North to 8th Avenue North; rehabilitate seven maintenance holes; extend temporary conveyance downstream of the siphon so it can be cleaned, inspected and field measured to prepare for a future rehabilitation project that will include the siphon and the remainder of the Condition 4 interceptor downstream.</td>
</tr>
<tr>
<td>PROJECT NEED:</td>
<td>Interceptor 1-MN-310 was built under 2nd St N in the City of Minneapolis in 1932. Recent CCTV inspection has identified Condition 4 deterioration between 15th and 3th Aves N as shown in gold below. The siphon under Bassett Creek near 8th Ave N has never been inspected.</td>
</tr>
</tbody>
</table>

PROJECT SCHEDULE

Planning 2020
Design 2020 - 2021
Construction 2021 - 2022

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,500,000</td>
<td>$150,000</td>
<td>$3,000,000</td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>
Minneapolis Odor Control Study – Phase 1

Program Family: 8076
Project # 807670

Project Location:
Council District # 6,7,8
Cities of Richfield, Minneapolis, St. Paul, Eureka Township, and Golden Valley

PROJECT TYPE: Odor Management
OBJECTIVES: Improvement
CUSTOMER LEVEL OF SERVICE: Minimize Impacts, Be A Good Neighbor, Communicate Information
SCOPE: Model air and wastewater flows, deploy field instruments, and collect samples to identify individual odor contributors that may benefit from Industrial Waste’s IPIP program and propose odor management strategies 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>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2020</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$252,000</td>
<td>$1,001,000</td>
<td>$748,000</td>
<td>$1,001,000</td>
</tr>
</tbody>
</table>
MAP of MCES ODOR CONTROL UNITS
Description:
The interceptor systems in Centerville, Forest Lake, Hugo, Lino Lakes, White Bear Lake, and other northeast area communities need rehabilitation and/or replacement as well as expansion to serve growth. The Program will rehabilitate existing interceptor facilities, including gravity sewers, and force mains, and analyze the system needs to accommodate growth.

Purpose and Justification:
The Program provides for improvements to the Interceptor System that serves the Northeast Area. This includes work that will rehabilitate deteriorated Interceptors in this area.

Program Location:
The active projects within this program are in the following Council Districts: Districts #10 and 11.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>807700</td>
<td>Northeast Area Improvements (Parent Project)</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

**Authorized Capital Program (ACP)**
$450,000

**Capital Improvement Plan (CIP)**
$600,000

Estimated Program Cash Flow 2021 - 2026:

<table>
<thead>
<tr>
<th>Year</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Program 8081
Maple Plain Lift Station / Forcemain Improvements

Description:
This program will provide short term improvements that are required to the existing system to convey flow from Loretto to MCES lift station L-63 while the City of Loretto constructs a new lift station and 6-inch forcemain at their existing wastewater treatment facility (WWTF) to convey all future flows to lift station L-63. Other improvements under this program include new billing meters to measure flow from Loretto, possible upgrades to Independence and Medina lift stations, New 20-inch gravity sewer along County Rd 19, increase pump impellers at lift station L-63, and construction of a new storage facility at lift station L-63.

Purpose and Justification:
The Minnesota Pollution Control Agency reissued the City of Loretto for wastewater treatment plant permit in 2015, with the requirement to cease discharge to surface waters and connect to the regional wastewater system by December 31, 2020. The Council has agreed to provide wastewater service to Loretto by December 31, 2020. The Council has included this service extension in the Wastewater System Plan chapter of its 2040 Water Resources Policy Plan. This project addresses the improvements required to provide service to Loretto without expanding the existing Council system (until more growth occurs in the area) and using the Medina/Independence local wastewater systems.

Program Location:
The active projects within this program are in the following Council Districts: 1

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808100</td>
<td>Maple Plain Lift Station / Forcemain Improvements (Parent Project)</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000,000</td>
<td>$300,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
**Maple Plain, Medina and Independence Improvements**

**Program Family:** 8081  
**Project #:** 808100

**Project Location:**  
Council District # 1  
City of Independence, Loretto, Media and Maple Plain  
Interceptor 8081 & L-63

**Installation of new pipe using open cut method**  
**Pump upgrades to Lift Station L-63**

**PROJECT TYPE:** Interceptor and Lift Station Rehabilitation and New Meter Structures

**OBJECTIVES:** Expand and Improve

**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Engage Customers and Coordinate with Others

**SCOPE:** Construction of 2,000 ft of 15” gravity pipe and upgrades to the MCES lift station L-63 to meet the additional capacity requirements from the Loretto flow. Upgrades to the flumes M440 and M433 inside the lift station and installation of new meters M445 and M446 at Independence and Loretto lift station respectively. The project also includes interagency agreements with the cities of Medina, Independence and Loretto.

**PROJECT NEED:** The Minnesota Pollution Control Agency reissued the City of Loretto for wastewater treatment plant permit in 2015, with the requirement to cease discharge to surface waters and connect to the regional wastewater system by December 31, 2020. The Council has agreed to provide wastewater service to Loretto by December 31, 2020. The Council has included this service extension in the Wastewater System Plan chapter of its 2040 Water Resources Policy Plan. This project addresses the improvements required to provide service to Loretto without expanding the existing Council system (until more growth occurs in the area) and using the Medina/Independence local wastewater systems.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$4,798,000</td>
<td>$4,798,000</td>
<td>$5,000,000</td>
</tr>
</tbody>
</table>
Description:
This project consists of a new lift station and a new dual force main. Ultimately, the dual 14-inch force mains will be installed from L24 to the gravity discharge location in Lake Minnetonka Regional Park. This force main will connect to the previously installed Lotus Drive piping, a 2,600-foot segment of the force main that was constructed as part of the Lotus Drive with the City of Minnetrista. The force main construction will start at the west end of Lotus Drive and end on the east side of CR 44. The remaining 2,000 feet of the Waconia force main will be upgraded with this project as well, to align with work previously completed in Phases 1 & 2 of that project.

Purpose and Justification:
The lift station is in need of rehabilitation based on an assessment of its condition and a history of its performance. The St. Bonifacius force main is approximately forty years old and near the end of its design life. The single 12-inch diameter cast iron pipe is just over three miles long. The force main parallels Highway 7 and discharges to a gravity interceptor located in Lake Minnetonka Regional Park. The new dual force main will provide reliable conveyance of wastewater, as well as capacity to serve long-term growth.

Program Location:
This project serves District 3.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808200</td>
<td>St Bonifacius LS/FM Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>808200</td>
<td>L24 Renovation and FM 7020 Replacement</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

**Authorized Capital Program (ACP)**
$26,161,000

**Capital Improvement Plan (CIP)**
$0

Estimated Program Cash Flow 2021 - 2026:

- Pre-2020 Actuals + 2020 Estimated Expenses
- **(ACP) Authorized Capital Program**
- **(CIP) Capital Improvement Program**

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Description:
Replacement of the west 9,200’ of 7508 is planned as part of Phase 2. The existing 14-inch cast iron pipe would be removed and replaced with 20-inch PVC and HDPE pipe. The existing route would be followed through Lake Waconia Park and in TH 5 right-of-way. A micro tunnel crossing of CR 92 is necessary.

Purpose and Justification:
Forcemain 7508 is over 40 years old and near the end of its planned service life. It is one of two parallel forcemains from L70. 7508 is being replaced due to age and to provide future capacity.

Program Location:
The active projects within this program are in the following Council Districts: District # 4

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808300</td>
<td>Waconia Lift Station / Forcemain Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>808330</td>
<td>Waconia Forcemain 7508 Phase 3 West (included with 808200)</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

- **Authorized Capital Program (ACP)**: $12,584,000
- **Capital Improvement Plan (CIP)**: $0

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Waconia Forcemain 7508 Phase 2 & 3 Replacement

**Program Family:** 8083  
**Project #** 808320 & # 808330

**Project Location:**  
Council District # 4  
City of Waconia and Laketown Township  
Blue Lake WWTP

---

**PROJECT TYPE:** Interceptor Improvements

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers Coordinate with Others

**SCOPE:** Replace 9,000’ of Interceptor Forcemain 7508.

**PROJECT NEED:** Forcemain 7508 is over 40 years old and near the end of its planned service life. It is one of two parallel forcemains from L70. 7508 is being replaced due to age and to provide future capacity.

---

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2017-2018</td>
<td>2019-2020</td>
</tr>
</tbody>
</table>

---

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$8,300,000</td>
<td>$2,200,000</td>
<td>$8,300,000</td>
</tr>
</tbody>
</table>
Program 8084
Bloomington System Improvements

Description:
Construct a 3.8 Million Gallon Per Day (MGD) lift station, 1600 feet of 18 to 42-inch gravity sewer, 
635 feet of 16-inch force main, and decommission an existing lift station

Purpose and Justification:
Projected wastewater flows in the existing L55 sewershed following development in the I-494 corridor 
by the cities of Bloomington and Edina are expected exceed the capacity of existing L55.

Program Location:
The active projects within this program are in the following Council Districts: 5

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808400</td>
<td>Bloomington System Improvements Lift Station L55 (Parent Project)</td>
</tr>
</tbody>
</table>

MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$12,586,000</td>
<td>$0</td>
</tr>
</tbody>
</table>
Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Lift Station L55 Replacement

**Program Family:** 8084
**Project #** 808400

**Project Location:**
Council District # 5
City of Bloomington
SE Quadrant of I-494 and Hwy 100

**PROJECT TYPE:** Lift Station Replacement

**OBJECTIVES:** Preservation, Expansion and Improvement

**CUSTOMER LEVEL OF SERVICE:** Meet Capacity Needs

**SCOPE:**
Construct a 3.8 Million Gallon Per Day (MGD) lift station, 1600 feet of 18 to 42-inch gravity sewer, 635 feet of 16-inch force main, and decommission an existing lift station

**PROJECT NEED:** Projected wastewater flows in the existing L55 sewershed following development in the I-494 corridor by the cities of Bloomington and Edina are expected exceed the capacity of existing L55.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,778,000</td>
<td>$17,035,000</td>
<td>$6,778,000</td>
<td>$17,035,000</td>
</tr>
</tbody>
</table>
Program 8086
North Area Interceptor (NAI) Rehabilitation

Description:
The interceptor systems in Blaine, Brooklyn Park, Champlin, Circle Pines, Coon Rapids, Forest Lake Fridley, Hugo, Lexington, Lino Lakes, Maple Grove, Moundsview, Spring Lake Park, and other north area communities need rehabilitation and/or replacement. The project will rehabilitate existing interceptor facilities, including gravity sewers, forcemains, lift stations and meter stations.

Purpose and Justification:
Inspections of the interceptors that serve the North Metro Area have revealed corrosion damage. The corrosion is extensive and has resulted in significant damage to the interior concrete surfaces of the interceptors and maintenance structures.

Program Location:
The active projects within this program are in the following Council Districts: District # 1 & 9

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808600</td>
<td>North Area Interceptor (NAI) Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>808622</td>
<td>Elm Creek – Maple Grove Interceptor 900416 Renewal</td>
</tr>
<tr>
<td>808685</td>
<td>Coon Rapids: 4-NS-525 Phase I</td>
</tr>
<tr>
<td>808686</td>
<td>Interceptor 7034 Extension - Anoka</td>
</tr>
<tr>
<td>8086XX</td>
<td>Coon Rapids: 4-NS-525 Phase II</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

**Authorized Capital Program (ACP)**
$31,096,000

**Capital Improvement Plan (CIP)**
$40,800,000

Estimated Program Cash Flow 2021 - 2026:

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-2020 Actuals + 2020 Estimated Expenses</th>
<th>(ACP) Authorized Capital Program</th>
<th>(CIP) Capital Improvement Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-2021</td>
<td>20,226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>1,120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>2,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>21,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>26,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>14,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Maple Grove Interceptor Replacement

Project Location:
Council District # 1
City of Maple Grove

PROJECT TYPE: Interceptor Rehabilitation

OBJECTIVES: Preservation and Improvement

CUSTOMER LEVEL OF SERVICE: Comply with Permits and Preserve Assets

SCOPE: Areas of Interceptor 900416 have been identified with various degrees of deflection. The interceptor will be evaluated to determine which sections require rehabilitation or replacement.

PROJECT NEED: To maintain the integrity of the system and to prevent potential damage to the environment due to pipe failure, sections of the interceptor must be repaired or replaced.

PROJECT SCHEDULE

Planning 2019-2021
Design 2021-2022
Construction 2023-2025

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$17,064,000</td>
<td>$43,800,000</td>
<td>$44,065,000</td>
</tr>
</tbody>
</table>
Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 1

Project Location:
Council District # 9
City of Coon Rapids
Interceptor 4-NS-525

<table>
<thead>
<tr>
<th>Program Family: 8086</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project # 808685</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROJECT TYPE:</th>
<th>Interceptor Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVES:</td>
<td>Preservation</td>
</tr>
<tr>
<td>CUSTOMER LEVEL OF SERVICE:</td>
<td>Preserve Assets, Minimize Impacts, Engage Customers, and Coordinate with Others</td>
</tr>
</tbody>
</table>

SCOPE:
This project is the first of a two-phase interceptor rehabilitation project.
This first phase will renew approximately 7,900 LF of 48-inch RCP and 19 MHs with Cured-In-Place Pipe technology. The project will require 8 temporary construction easements, permits from BNSF and MNDOT for work in highway and railroad right of ways, City road and park permits, and will require coordination with CenterPoint Energy and Xcel Energy.

A cooperative agreement with the City of Coon Rapids is desired by the City for the purpose of rehabilitating trunk sewers that connect directly to the interceptor.

PROJECT NEED:
3,600 linear feet of 48-inch RCP is in need of immediate rehabilitation to extend useful life and provide reliability. Risk of failure includes a sinkhole forming that could engulf a mobile home and a 6.0 MGD spill to nearby Coon Creek that discharges directly to the Mississippi River.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2020-2021</td>
<td>2022-2025</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
</table>

Installation of CIPP lining
MCES Project 808685
Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 2

**Program Family:** 8086
**Project #** 8086XX

**Project Location:**
Council District # 9
City of Coon Rapids
Interceptor 4-N5-525

**Project Type:** Interceptor Rehabilitation

**Objectives:** Preservation

**Customer Level of Service:** Preserve Assets, Minimize Impacts, Engage Customers, and Coordinate with Others

**Scope:**
This project is the second of a two-phase interceptor rehabilitation project. This second phase will renew approximately 6,100 LF of 48-inch RCP and 21 MHs with Cured-In-Place Pipe technology. The project will require 8 temporary construction easements, permits from MNDOT for work in highway right of way, City road and park permits, and will require coordination with Centerpoint Energy and Xcel Energy.

A cooperative agreement with the City of Coon Rapids is desired by the City for the purpose of rehabilitating trunk sewers that connect directly to the interceptor.

**Project Need:**
48-inch RCP is in need of immediate planning for rehabilitation to extend useful life and provide reliability. Risk of failure includes a sinkhole near the foundation of an apartment complex and a 6.0 MGD spill to a tributary of Coon Creek that eventually discharges directly to the Mississippi River.

**Project Schedule**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2022</td>
<td>2022-2023</td>
<td>2024-2025</td>
</tr>
</tbody>
</table>

**Financial Analysis**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$0</td>
<td>$11,000,000</td>
<td>$11,000,000</td>
</tr>
</tbody>
</table>
Program 8088
St. Paul Interceptor System Rehabilitation

Description:
The interceptors located in Inver Grove Heights, Maplewood, Roseville, Shoreview, St. Paul, and Vadnais Heights need rehabilitation and/or replacement. The project will rehabilitate existing interceptor facilities to ensure reliable service.

Purpose and Justification:
The St. Paul Interceptor System Rehabilitation Program was developed to address areas of severe corrosion in the interceptor sewer system in St. Paul and surrounding suburbs. Internal corrosion of concrete sewer pipes and structures creates structural weakness that creates a risk for collapse and potential loss of service or wastewater spills. Projects have been identified to rehabilitate the existing sewers using trenchless means where possible, such as cured-in-place pipe or slip lining.

Program Location:
The active projects within this program are in the following Council Districts: District # 10, 11, 13 & 14

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>808800</td>
<td>St Paul Interceptor System (SPIS) Rehabilitation (Parent Project)</td>
</tr>
<tr>
<td>808823</td>
<td>Interceptors 1-SP-200 and 1-SP-201 Battle Creek Rehabilitation</td>
</tr>
<tr>
<td>808861</td>
<td>Grass Lake Interceptor Rehabilitation</td>
</tr>
<tr>
<td>808862</td>
<td>Long Lake Interceptor Rehabilitation</td>
</tr>
<tr>
<td>808882</td>
<td>1-MS-100 Rehabilitation Feasibility Study</td>
</tr>
<tr>
<td>808883</td>
<td>Review Siphon Preliminary Investigation</td>
</tr>
<tr>
<td>808885</td>
<td>1-MS-100 Rehabilitation - Phase 1</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$46,792,000</td>
<td>$43,000,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Interceptor Rehabilitation

**Project Location:**
Council District # 13
City St. Paul
Battle Creek Regional Park

**PROJECT TYPE:**
Interceptor Rehabilitation

**OBJECTIVES:**
Preservation and Improvement

**CUSTOMER LEVEL OF SERVICE:**
Comply with Permits, Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, Coordinate With Others and Preserve Assets

**SCOPE:**
Cured-in-place pipe lining of approximately 5,000 feet of 30” and 33” concrete gravity interceptor sewer, constructed in 1959. The work includes two adjacent sites at Battle Creek Regional Park in St. Paul. The program also includes the addition of a channel grinder in the bar screen building upstream of the Battle Creek Siphon, and some structure and pipe replacements.

**PROJECT NEED:**
This is one in a program of rehabilitation projects in St. Paul, for which a Facility Plan was approved by the MN Pollution Control Agency in 2016. The rehabilitation program is driven by condition assessment, and much of the pipe and structures included in this project are rated Condition 4 and 5 per National Association of Sewer Service Companies (NASSCO) condition assessment standards, in need of immediate attention.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-2016</td>
<td>2019</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,607,000</td>
<td>$12,537,000</td>
<td>$9,341,000</td>
<td>$12,537,000</td>
</tr>
</tbody>
</table>
Grass Lake Interceptor Rehabilitation

Project Location:
Council District # 10
City of Shoreview

PROJECT TYPE: Interceptor

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers and Coordinate with Others

SCOPE: Re-align MH1 to MH15 to improve access and reduce I&I along Grass Lake

PROJECT NEED: To relocate the interceptor to provide year around access and prevent flooded structures, prevent I&I as lake levels continue to rise.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2020-2021</td>
<td>2021-2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2020 – 2025 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$186,000</td>
<td>$6,327,000</td>
<td>$5,657,000</td>
<td>$6,147,000</td>
</tr>
</tbody>
</table>
Long Lake Interceptor Rehabilitation

PROGRAM FAMILY: 8088
Project # 808862

PROJECT LOCATION:
Council District # 10
City of New Brighton

PROJECT TYPE:
Interceptor

OBJECTIVES:
Preservation

CUSTOMER LEVEL OF SERVICE:
Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers and Coordinate with Others

SCOPE:
CIPP repair includes interceptor 2-NB-100 from MH 40 to MH 43

PROJECT NEED:
The segment of the Interceptor 2-NB-100 is showing signs and areas of heavy corrosion. The deterioration in the interceptor and at the maintenance structure at several locations is severe and needs repair.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2020</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,462,000</td>
<td>$1,671,000</td>
<td>$1,462,000</td>
<td>$1,671,000</td>
</tr>
</tbody>
</table>
Third and Commercial Site Needs Evaluation

Project Location:
Council District # 13
City St. Paul
Interceptor 1-MS-100
Third & Commercial LWR

PROJECT TYPE: Interceptor
OBJECTIVES: Preservation and Improvement
CUSTOMER LEVEL OF SERVICE: 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
SCOPE: The site needs evaluation to examine current and future needs at the Third and Commercial site to ensure that critical assets can be operated and maintained for the region into the future.
PROJECT NEED: MCES maintains critical infrastructure at its Third and Commercial site, including the largest sewer tunnel in the Twin Cities metro area. MCES needs to reserve the space needed to maintain operations and to allow access for future rehabilitation of Interceptor Sewer 1-MS-100, the emergency relief structure and the septage recovery facility.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$150,000</td>
<td>$0</td>
<td>$150,000</td>
</tr>
</tbody>
</table>
1-MS-100 Rehabilitation Feasibility Study

Program Family: 8088  
Project # 808882

Project Location:  
Council District 13  
City of St. Paul

Construction Photos from 1936

**PROJECT TYPE:** Interceptor  
**OBJECTIVES:** Preserve and improve  
**CUSTOMER LEVEL OF SERVICE:** Comply with Permits, Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, Coordinate With Others and Preserve Assets  
**SCOPE:** A facility plan will be created as a first phase, to evaluate alternatives for rehabilitating portions of 1-MS-100 with corrosion and other structural concerns.

**PROJECT NEED:**  
Past inspections have indicated corrosion and other structural concerns with this large and deep sewer tunnel constructed in the 1930’s. Due to the size and difficulty of this work, and expected costs of construction, it will require extensive planning and multiple stages of work in advance of future construction.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021-2026</td>
<td>2028-2031</td>
<td>2032-2036</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP 2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$333,000</td>
<td>$585,000</td>
<td>$585,000</td>
</tr>
</tbody>
</table>
Program 8090
Interceptor Rehabilitation Program

Description:
This Program includes miscellaneous projects to rehabilitate failing facilities, address Inflow and Infiltration (I/I) sources and addressing 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 the 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 required to efficiently operate the interceptor System.

Program Location:
The active projects within this program are in all the Council Districts.

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809099</td>
<td>Funds for Future Interceptor Rehabilitation Projects (Parent Project)</td>
</tr>
<tr>
<td>809083</td>
<td>I/I Mitigation</td>
</tr>
<tr>
<td>809089</td>
<td>Interceptor Inspection</td>
</tr>
<tr>
<td>809093</td>
<td>South Saint Paul WWTP Reconveyance</td>
</tr>
</tbody>
</table>
809094 Oak Park Heights Interceptor 9101 Replacement
809095 Regional Maintenance Facility (RMF) Improvements
819010 System Wide River Crossing Inspection
819011 Interceptor Chemical Odor Control
819013 Technical Support of Interceptors
819014 Odor Control Systems Assessment

MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>$44,422,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Improvement Plan (CIP)</td>
<td>$48,022,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
**I / I Mitigation**

**Project Location:**
Project location can vary across 7 county region

**PROJECT TYPE:** Interceptor rehabilitation

**OBJECTIVES:** Preservation and Improvement

**CUSTOMER LEVEL OF SERVICE:** Lead by Example, Minimize Impacts, Meet Capacity Needs and Comply with Permits

**SCOPE:** Working with Operations when items are identified, such as leaking maintenance hole joints, adjustment rings and broken castings, to repair these sources of inflow and infiltration.

**PROJECT NEED:** Elimination of inflow and infiltration sources is important to MCES in order to maintain system capacity, prevent backups of wastewater into private homes and businesses, prevent the entrance of wastewater into the environment during weather events.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$250,000</td>
<td>$1,533,000</td>
<td>$1,501,000</td>
<td>$2,783,000</td>
</tr>
</tbody>
</table>
**Special Interceptor Inspections**

**Program Family:** 8090  
**Project #** 809089

**Project Location:**  
Location: Region Wide

**PROJECT TYPE:** Interceptor Planning

**OBJECTIVES:** Preservation

**CUSTOMER LEVEL OF SERVICE:** Preserve Assets, Minimize Impacts, Lead by Example, Be A Good Neighbor, and Coordinate with Others

**SCOPE:** This project provides support for special inspections of the interceptor system that cannot otherwise feasibly be completed by internal stakeholders. In 2021 approximately 3 miles of interceptor 1-SP-224 in St. Paul and 1-VH-423 in Vadnais Heights will be cleaned and inspected.

**PROJECT NEED:** MCES maintains critical infrastructure throughout the greater metropolitan area, and not all of it is accessible by using the standard equipment that Interceptor Operations owns. In 2021 approximately 14,000 linear feet of interceptor gravity sewers in the cities of St. Paul and Vadnais Heights will need internal closed-circuit-television (CCTV) inspections. Specialized equipment, permits and coordination with the communities is needed to complete the work.

### PROJECT SCHEDULE

<table>
<thead>
<tr>
<th></th>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2021</strong></td>
<td>$800,000</td>
<td>$3,000,000</td>
<td>$4,802,000</td>
</tr>
</tbody>
</table>

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$800,000</td>
<td>$3,000,000</td>
<td>$4,802,000</td>
<td>$9,165,000</td>
</tr>
</tbody>
</table>
**South Saint Paul WWTP Reconveyance**

**Project Location:**
Council District # 13
City of South St. Paul
Metro WWTP

**PROJECT TYPE:** Interceptor System

**OBJECTIVES:** Improvement

**CUSTOMER LEVEL OF SERVICE:** Be A Good Neighbor, Engage Customers, and Coordinate with Others

**SCOPE:** This project completes some needed work required in anticipation of reconveying excess property back to the City of South St. Paul. Remove unneeded structures and materials from site. Make 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. MCES is obligated to clear the reconveyed land of pipes and structures in accordance with the draft acquisition agreement. In addition, to increase system reliability, a new portable generator connection and new portable pump connection will be constructed. This project will also install a grinder at L74.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019-2020</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,615,000</td>
<td>$2,810,000</td>
<td>$2,481,000</td>
<td>$2,810,000</td>
</tr>
</tbody>
</table>
Oak Park Heights Interceptor 9101 Replacement

**Project Location:**
Council District #12
City of Oak Park Heights
City of Bayport

**PROJECT TYPE:** Interceptor Rehabilitation

**OBJECTIVES:**
Preservation

**CUSTOMER LEVEL OF SERVICE:**
Minimize impacts, Be a Good Neighbor, Preserve Assets, and Be Fair and Transparent With Fees

**SCOPE:**
The project replaces approximately 305 feet of 21-inch Polyvinyl Chloride (PVC) gravity sewer piping and associated manholes. Meter M609 is rehabilitated which involves replacing the flume, hatch, hardware, rehabilitate the Programable Logic Controller (PLC) and upgrading the electrical service. Temporary conveyance will be provided for the interceptor and for a crossing municipal sewer.

**PROJECT NEED:**
Routine manhole inspection found sags in the 21” PVC interceptor located between Manhole (MH) G4 and MH G5. The sags have caused pooling of flow and sediment deposition. In addition, MH G13, the discharge manhole from lift station L68 was found to be extremely corroded with reinforcement wire visible throughout. Rehabilitating meter M609 during the temporary conveyance of the interceptor will save future costs.

**PROJECT SCHEDULE**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019-2020</td>
<td>2021</td>
</tr>
</tbody>
</table>

**FINANCIAL ANALYSIS**

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,952,000</td>
<td>$3,650,000</td>
<td>$2,952,000</td>
<td>$3,650,000</td>
</tr>
</tbody>
</table>
Regional Maintenance Facility (RMF) Expansion

PROJECT TYPE: Building Improvements
OBJECTIVES: Expansion
CUSTOMER LEVEL OF SERVICE: Good value to the region and preservation of assets
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, MCES 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.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019–2021</td>
<td>2021–2023</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4,324,000</td>
<td>$12,000,000</td>
<td>$11,133,000</td>
<td>$12,000,000</td>
</tr>
</tbody>
</table>
Interceptor Chemical Odor Control

Program Family: 8090  
Project # 819011

Project Location:  
Council District # NA  
City - NA  
Location – Multiple Lift Stations and Meter Stations

PROJECT TYPE: Interceptor/Odor Control

OBJECTIVES: Preservation and Improvement

CUSTOMER LEVEL OF SERVICE: Preserve Assets, Be a Good Neighbor

SCOPE: Advertise an RFP for a design, build, operate contract where MCES will own all equipment (except for hydrogen sulfide monitoring equipment) and vendor will operate, maintain, monitor, report, and supply chemical. This includes specifying brand new, non-proprietary equipment and double walled HDPE tanks with heat tracing and leak protection. It has been determined that the terms of the RFP are to be a 10-year term with two possible 5-year extensions, bringing the total length of the services contract up to 20 years. A longer-term contract will bring a more competitive bidding process and force potential suppliers to give an accurate bid.

PROJECT NEED: MCES currently has 15 operational chemical dosing odor control sites, including meters and lift stations. Evoqua is contracted at the sites to deliver Bioxide (calcium nitrate solution) to the interceptor system as part of our odor and corrosion control strategy. Evoqua provides most of the on-site tankage, dosing pumps, monitoring equipment, and piping to get the Bioxide product into a gravity sewer, force main, or lift station wet well. Our current contract with Evoqua is set to expire January 31, 2021.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>2020-2021</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,500,000</td>
<td>$2,500,000</td>
<td>$2,500,000</td>
<td>2,500,000</td>
</tr>
</tbody>
</table>
Description:
This program includes facility planning and new projects to address aging infrastructure within or contributory to the City of Minneapolis. Potential projects include:

- Interceptor 1-MN-340 Capacity Relief Study
- Interceptor 1-MN-320 Replacement

Purpose and Justification:
Interceptors in Minneapolis were constructed as early as 1891 and included tunnels constructed in the 1930’s to intercept the old combined sewers. Additional planning work is required to both identify projects needed to address capacity and to repair existing facilities. These projects will be prioritized into the future CIP.

Program Location:
The active projects within this program are in the following Council Districts: District # 6, 7 & 8

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809200</td>
<td>Minneapolis Interceptor Rehabilitation Phase 2 (Parent Project) – Facility Planning</td>
</tr>
<tr>
<td>809205</td>
<td>Interceptor 1-MN-320 Improvements</td>
</tr>
<tr>
<td>809206</td>
<td>1-MN-340 Capacity Relief Study</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

**Authorized Capital Program (ACP)**
$17,550,000

**Capital Improvement Plan (CIP)**
$22,500,000

**Estimated Program Cash Flow 2021 - 2026:**

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
1-MN-320 Improvement Study

Project Location: 1-MN-320
Council District # 6
City: Minneapolis
Location Currie Avenue

PROJECT TYPE: Study
OBJECTIVES: Improvement and preservation
CUSTOMER LEVEL OF SERVICE: Provide conveyance and treatment capacity consistent with regional and local plans
SCOPE: Evaluate condition and identify conceptual improvements
PROJECT NEED: Prevent future emergency repairs

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th></th>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$1,300,000</td>
<td>$15,000,000</td>
<td>$14,900,000</td>
<td>$15,000,000</td>
</tr>
</tbody>
</table>
Program 8093
Brooklyn Park – Champlin Interceptor Renewal

Description:
This Program provides for the rehabilitation concrete gravity interceptor in the Cities of Champlin, Brooklyn Park and Osseo. The interceptor will be rehabilitated using Cured-In-Place-Pipe (CIPP) technology.

Purpose and Justification:
Inspections and condition assessment show the need for rehabilitation of interceptors in the Brooklyn Park and Champlin area. The pipes included in this program are rated Condition 4 or 5, which indicates defects requiring immediate attention, and that the pipe has failed or has potential to fail within the next 5 to 10 years if nothing is done. The video inspection indicates significant hydrogen sulfide and age-related damage to the reinforced concrete pipe (RCP). The damage is extensive and steel reinforcement is visible and/or missing in several locations.

Program Location:
The active projects within this program are in the following Council Districts: District # 2

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809300</td>
<td>Brooklyn Park-Champlin Interceptor Renewal (Parent Project)</td>
</tr>
<tr>
<td>809311, 809315</td>
<td>BPCI Renewal – Phase 1, Part 2</td>
</tr>
<tr>
<td>809320</td>
<td>BPCI Renewal – Phase 2</td>
</tr>
<tr>
<td>809330</td>
<td>BPCI Renewal – Phase 3</td>
</tr>
<tr>
<td>809340</td>
<td>BPCI Renewal – Phase 4</td>
</tr>
<tr>
<td>809350</td>
<td>BPCI Renewal – Phase 5</td>
</tr>
<tr>
<td>809361</td>
<td>Brooklyn Park &amp; Osseo Interceptor Rehabilitation – 7015 A&amp;B, 4-OS-457 and M224</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $36,251,000

Capital Improvement Plan (CIP) $40,900,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Brooklyn Park – Champlin Interceptor (BPCI) Renewal Phase 1, Part 2

Program Family: 8093
Project # 809311, 809315 & 809089

Project Location:
Council District # 2
City of Brooklyn Park
Interceptor 4-BP-541 and 8252-481

Project Type: Interceptor Rehabilitation
Objectives: Improvement
Customer Level of Service: Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Engage Customers and Coordinate with Others

Scope:
The project includes two sites in Brooklyn Park on Mississippi Ln. and Riverview Ln. The 60-inch interceptor on Mississippi Ln will be replaced with a 72-inch pipe using open cut construction. The 60-inch and 66-inch interceptor on Riverview Ln will be Cured in Place Pipe (CIPP) lined. At each site, the local sanitary sewer will be installed to remove private lateral connections to the interceptor. The City lift station will be upgraded to take additional flow from the new local sewer pipe before it discharges to MCES system. The maintenance holes on both sites will be replaced with the new maintenance holes.

Project Need:
Inspections and condition assessments show the need for rehabilitation of interceptors in the Brooklyn Park and Champlin area. The pipes included in this project are rated Condition 4 and 5, which indicates defects requiring immediate attention. The video inspection indicates significant hydrogen sulfide and age-related damage to the reinforced concrete pipe (RCP). The damage is extensive and steel reinforcement is visible and/or missing in several locations.

Project Schedule

Planning
2016

Design
2017-2019

Construction
2020-2021

Financial Analysis

2021 Cash Flow | Current ACP | 2021 – 2026 Cash Flow | Total Project Cost
-----------------|-------------|------------------------|----------------------
$6,190,000 | $21,750,000 | $6,190,000 | $27,750,000
Program Family: 8093
Project # 809320

Brooklyn Park-Champlin Interceptor Renewal

Project Location:
Council District # 2
City of Brooklyn Park

PROJECT TYPE: Interceptor Improvements

OBJECTIVES: Preservation

CUSTOMER LEVEL OF SERVICE: Comply with Permits, Minimize Impacts, Be A Good Neighbor, Communicate Information, Engage Customers and Coordinate with Others

SCOPE: CIPP repair includes interceptor 8252-481 from MH 8 1 to MH 15 2

PROJECT NEED: The Phase 2 project is identified as Site 2-1 in the Facility Plan. It includes interceptor 8252-481 from Manhole (MH) 4 2 to MH 15 2. This section of the interceptor was constructed in 1985 and consists of 12,000 ft. of 66-inch RCP pipe and 22 maintenance holes. Based on the inspection, it has a condition rating of 4 and needs repair.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>2022-2023</td>
<td>2023-2025</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$6,050,000</td>
<td>$14,500,000</td>
<td>$14,550,000</td>
</tr>
</tbody>
</table>
Program Family: 8093  
Project # 809361

Brooklyn Park and Osseo Interceptor Rehabilitation – 7015 A&B, 4-OS-457 and M224

Project Location:
Council District # 1, 2  
City of Brooklyn Park, Osseo and Maple Grove  
Interceptor 7015 A&B And 4-OS-457

<table>
<thead>
<tr>
<th>PROJECT TYPE:</th>
<th>Interceptor Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVES:</td>
<td>Improvement</td>
</tr>
<tr>
<td>CUSTOMER LEVEL OF SERVICE:</td>
<td>Minimize Impacts, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, Coordinate with Others and Be Fair and Transparent with Fees</td>
</tr>
<tr>
<td>SCOPE:</td>
<td>The project includes Cured in Place Pipe (CIPP) lining of about 2,500 ft of 36-inch interceptor and replacement of about 1,000 ft of 12-inch interceptor. The maintenance hole structures along the route will either be rehabbed using Fiberglass Reinforces Plastic (FRP) inserts or replaced with new manholes. The meter structure M224 will be rehabilitated with a new flume and improved access to the structure. The exiting bioxide tank at M224 will be moved to a new location further south on 83rd Ave on City of Brooklyn Park property.</td>
</tr>
<tr>
<td>PROJECT NEED:</td>
<td>7015-A&amp;B, and 4-OS-457 is listed as condition 5 pipe. The RCP pipe has reinforcement exposed, and numerous defects were observed in the CCTV inspection video. Recently, there was a partially collapsed section of interceptor 7015-D in this area that caused a sink hole in the road that was fixed as an emergency repair (Project 809360). The section around the repair area is in poor shape. M224 has significant corrosion and access issue.</td>
</tr>
</tbody>
</table>

### PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019-2020</td>
<td>2021-2022</td>
</tr>
</tbody>
</table>

### FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,029,000</td>
<td>$5,680,000</td>
<td>$5,128,000</td>
<td>$5,650,000</td>
</tr>
</tbody>
</table>
Program 8094
Brooklyn Park L32 Replacement

Description:
This Program provides the construction of a new L32A on the east side of the Mississippi River on Council property. Program will determine facilities which will remain on the west side of the river at the existing L32 site.

Purpose and Justification:
Condition assessments have documented structural, mechanical, and electrical deficiencies which have led to system failures, such as backups and odor issues. Additionally, the existing Lift Station does not have capacity to serve the current and future needs of the area.

Program Location:
The active projects within this program are in the following Council Districts: District # 2

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809400</td>
<td>New Lift Station L32 (Parent Project)</td>
</tr>
<tr>
<td>809401</td>
<td>Building Demolition – Fridley Site</td>
</tr>
<tr>
<td>809410</td>
<td>Design of New Lift Station L-32A</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15,509,000</td>
<td>$23,523,000</td>
</tr>
</tbody>
</table>

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Design of New Lift Station L-32A

Program Family: 8094
Project # 809410

Project Location:
Council District # 2
Brooklyn Park and Fridley

Location

PROJECT TYPE: New Lift Station
OBJECTIVES: Preservation
CUSTOMER LEVEL OF SERVICE: Lead by Example, Be a Good Neighbor, Meet Capacity Needs
SCOPE: Preliminary Design, Design, and Engineering Services during construction for the new L-32A Lift Station.

PROJECT NEED: Condition assessments have documented structural, mechanical, and electrical deficiencies which have led to system failures, such as backups and odor issues. Additionally, the existing Lift Station does not have capacity to serve the current and future needs of the area.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Planning</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 - 2021</td>
<td>2021 - 2023</td>
<td>2023 - 2025</td>
</tr>
</tbody>
</table>

FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th>2021 Cash Flow</th>
<th>Current ACP</th>
<th>2021 – 2026 Cash Flow</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,500,000</td>
<td>$4,000,000</td>
<td>$4,000,000</td>
<td>$4,000,000</td>
</tr>
</tbody>
</table>
### Program 8095
South Area Interceptor Improvements

**Description:**
The interceptor systems in Apple Valley, Eagan, Farmington, Lakeville, Savage and other south area communities in need rehabilitation and/or replacement as well as expansion to serve growth. The Program will rehabilitate existing interceptor facilities, including gravity sewers, and force mains, and analyze the system needs to accommodate growth.

**Purpose and Justification:**
The Program provides for improvements to the Interceptor System that serves the South Area. This includes work that will rehabilitate deteriorated Interceptors in this area.

**Program Location:**
The active projects within this program are in the following Council Districts: District # 4, 15 and 16

**Active Projects in Program:**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809500</td>
<td>South Area Improvements (Parent Project)</td>
</tr>
</tbody>
</table>

**MCES 2021 – 2026 Capital Program:**

<table>
<thead>
<tr>
<th>Authorized Capital Program (ACP)</th>
<th>Capital Improvement Plan (CIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$450,000</td>
<td>$600,000</td>
</tr>
</tbody>
</table>
Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.
Description:
The interceptor systems in Plymouth, Maple Grove, Brooklyn Center, New Hope, Golden Valley, St Louis Park, Medina, and other northwest area communities need rehabilitation and/or replacement as well as expansion to serve growth. The Program will rehabilitate existing interceptor facilities, including gravity sewers, force mains, lift stations and meter stations, and analyze the system needs to accommodate growth.

Purpose and Justification:
The Program provides for improvements to the Interceptor System that serves the Northwest Area. This includes work needed to expand the Rogers WWTP service area and to improve system capacity and reliability.

Program Location:
The active projects within this program are in the following Council Districts: District # 1 & 6

Active Projects in Program:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>809600</td>
<td>Northwest Area Improvements (Parent Project)</td>
</tr>
</tbody>
</table>
MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $1,540,000

Capital Improvement Plan (CIP) $21,500,000

Estimated Program Cash Flow 2021 - 2026:

Note: The ACP is the total amount of all past and present authorizations including Pre-2021 Expenses.