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>
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<tbody>
<tr>
<td>807802</td>
<td>Regional Plant Improvements (Parent Project)</td>
</tr>
<tr>
<td>807803</td>
<td>Blue Lake Administration Building</td>
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<tr>
<td>807805</td>
<td>East Bethel WRP Improvements</td>
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<tr>
<td>807818</td>
<td>Hastings WWTP Condition Assessment</td>
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<tr>
<td>807825</td>
<td>Empire WWTP Entrance Road Reconstruction</td>
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<tr>
<td>807826</td>
<td>Empire WWTP Arc Flash Improvements</td>
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<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>
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</tbody>
</table>
8078XX Blue Lake FSF Renewal
8078XX Blue Lake WWTP Outfall Renewal

MCES 2021 – 2026 Capital Program:

Authorized Capital Program (ACP) $46,203,000
Capital Improvement Plan (CIP) $16,500,000

Estimated Program Cash Flow 2021 - 2026:

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

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

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FINANCIAL ANALYSIS

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**Blue Lake WWTP Outfall Renewal**

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

**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.

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**PROJECT SCHEDULE**

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Blue Lake WWTP Administration Building

**Program Family:** 8078  
**Project #:** 807803

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

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**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.

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**PROJECT SCHEDULE**

- **Planning:** 2020
- **Design:** 2021
- **Construction:** 2022-2023

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**FINANCIAL ANALYSIS**

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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**

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Hastings WWTP Condition Assessment

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

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**Empire WWTP Entrance Road Reconstruction**

**Program Family:** 8078  
**Project #** 807825

**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**

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Empire WWTP Arch Flash Improvements Phase 1

**Program Family:** 8078
**Project #** 807826

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

**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**

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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>
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MCES Rogers WWTF Modifications Project

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

**Program Family:** 8078
Project # 807861

**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 programable 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**

<table>
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**Financial Analysis**

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**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**

- Planning: 2020
- Design: 2021
- Construction: 2022

**FINANCIAL ANALYSIS**

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