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

Program location
The active projects within this program are in the following Council districts: All

Active projects in program

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<th>Project Number</th>
<th>Project Title</th>
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<td>805500</td>
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(Continued on next page)
Environmental Services 2024 through 2029 Capital Program

- Authorized Capital Program (ACP): $86,866,474
- Capital Improvement Plan (CIP): $48,050,000

Estimated program cash flow from 2024 through 2029

Note: the ACP is the total amount of all past and present authorizations including pre-2024 expenses.
Project location: Council districts #1 to 16, regional project

Project type
Lift Station Improvements

Objectives
Quality Improvements

Scope
Implement landscaping improvements at lift station properties on a case-by-case basis to provide lower maintenance and meet sustainability goals.

Project need
Establishment of sustainable and native landscapes reduce the need to maintain conventional site landscaping through mowing, watering, and application of lawn chemicals. Sustainable landscapes are better for the local ecology, the environment, and reduce carbon footprint. Undertaking these projects reduces maintenance labor and better meets sustainability goals.

Project schedule:


Financial analysis
- 2024 cash flow: $100,000
- Current ACP: $2,213,000
- 2024 through 2029 cash flow: $2,100,000
- Total project cost: $3,413,000
Project type
Condition Assessment

Objectives
Asset Preservation, System Expansion, and Quality Improvements

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:

- Planning: 2018 through 2027
- Design: N/A
- Construction: N/A

Financial analysis

- 2024 cash flow: $150,000
- Current ACP: $1,051,000
- 2024 through 2029 cash flow: $900,000
- Total project cost: $1,500,000
Project location: Council district #15, City of Eagan

**Project type**
Lift Station Improvements

**Objectives**
Asset Preservation and Quality Improvements

**Scope**
Design and construct HVAC (Heating, Ventilation, and Air Conditioning) and odor control systems that reduce odors and preserve the function of the existing lift station.

**Project need**
High H2S levels will continue to cause corrosion within the lift station that can compromise station reliability. In addition, odors from the lift station are leaving the lift station site. The odor and potential disruption of service to our customers does not meet the Council's Level of Service goals.

**Project schedule:**
- Planning: 2021 through 2022
- Design: 2022 through 2023
- Construction: 2023 through 2024

**Financial analysis**
- 2024 cash flow: $1,250,000
- Current ACP: $5,632,000
- 2024 through 2029 cash flow: $5,250,000
- Total project cost: $5,632,000
Project type: Condition Assessment

Objectives: Asset Preservation

Scope
Design inspection program for 1.2 miles of forcemain in Orono.

Project need
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

Project schedule:

- Planning: 2022
- Design: 2024 through 2025
- Construction: Under Project 805506

Financial analysis
- 2024 cash flow: $50,000
- Current ACP: $12,359,000
- 2024 through 2029 cash flow: $20,000,000
- Total project cost: $20,359,000
Project location: Council district #8, City of Brooklyn Center

**Project type**
Condition Assessment

**Objectives**
Asset Preservation

**Scope**
Design an inspection program for 1.3 miles of forcemain in Brooklyn Center.

**Project need**
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

**Project schedule:**

- **Planning:** 2022
- **Design:** 2024
- **Construction:** Under Project 805506

**Financial analysis**
- 2024 cash flow: $50,000
- Current ACP: $12,359,000
- 2024 through 2029 cash flow: $20,000,000
- Total project cost: $20,359,000
**Project type**
Condition Assessment

**Objectives**
Asset Preservation

**Scope**
Inspect 0.05 miles of forcemain in Lakeville and Apple Valley.

**Project need**
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

**Project schedule:**
- Planning: 2022
- Design: 2024
- Construction: Under Project 805506

**Financial analysis**
- 2024 cash flow: $50,000
- Current ACP: $12,359,000
- 2024 through 2029 cash flow: $20,000,000
- Total project cost: $20,359,000
Project location: Council District #6, Minneapolis

**Project type**  
Condition Assessment

**Objectives**  
Asset Preservation

**Scope**  
Inspect the 0.1 mile long Emergency Relief Structure ERS08 outfall.

**Project need**  
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

**Project schedule:**


**Financial analysis**

- 2024 cash flow: $50,000
- Current ACP: $12,359,000
- 2024 through 2029 cash flow: $20,000,000
- Total project cost: $20,359,000
Project location: Council Districts #3 and #4, Eden Prairie

Project type: Condition Assessment

Objectives: Asset Preservation

Scope
Design an inspection program for 3.4 miles of siphon in Eden Prairie.

Project need
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

Project schedule:
- Planning: 2022
- Design: 2024
- Construction: Under Project 805506

Financial analysis:
- 2024 cash flow: $50,000
- Current ACP: $12,359,000
- 2024 through 2029 cash flow: $20,000,000
- Total project cost: $20,359,000
Project type: Lift Station Improvements  

Objectives: Quality Improvements

Scope
Install a new biofilter to treat H2S and convert the existing carbon unit to a permanganate-impregnated media polishing unit to treat other odorous compounds. This system will also be used for the new L32A lift station scheduled to be built in 3 to 5 years.

Project need
The existing carbon odor control unit does not provide the level of treatment needed for the high H2S levels entering the lift station and the close proximity of the lift station site to neighboring properties.

Project schedule:
- Planning: 2021 through 2022
- Design: 2022
- Construction: 2023 through 2024

Financial analysis
- 2024 cash flow: $2,000,000
- Current ACP: $4,006,273
- 2024 through 2029 cash flow: $2,000,000
- Total project cost: $4,006,273
Project type
Interceptor Condition Assessment

Objectives
Asset Preservation

Scope
Inspect 2 miles of forcemain in Golden Valley and make repairs if necessary.

Project need
Programmatic evaluation of assets in accordance with the 2022 Forcemain-Siphon-River Crossing-Outfall Inspection Program Manual.

Planning: 2022
Design: 2024
Construction: 2024 - 2029

Financial analysis
2024 cash flow: $3,000,000
Current ACP: $4,000,000
2024 through 2029 cash flow: $3,000,000
Total project cost: $4,000,000
Project type
Lift Station Improvements

Objectives
Asset Preservation and Quality Improvements

Scope
The lift station rehabilitation will include HVAC upgrades, a carbon tank, a 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 projected 2040 flows. The HVAC is not up to code and needs replacement.

Project schedule:
- Planning: N/A
- Design: 2017 through 2022
- Construction: 2023 through 2026

Financial analysis
- 2024 cash flow: $5,000,000
- Current ACP: $7,617,000
- 2024 through 2029 cash flow: $7,000,000
- Total project cost: $7,617,000
**Project location:** Council district #11, City of Forest Lake

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**Project type**
Lift Station Improvements

**Objectives**
Asset Preservation

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**Scope**
Replace MCC (Motor Control Center), and in new enclosure, replace main breaker, replace manual transfer switch with automatic transfer switch and to install permanent generator in outdoor enclosure.

**Project need**
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by ES engineering, electrical, and ISBU staff. Lift Station L01 in Forest Lake is identified as a site needing rehabilitation as soon as possible. This site has many components in poor shape or obsolete.

**Project schedule:**
- **Planning:** 2022 through 2023
- **Design:** 2023 through 2024
- **Construction:** 2024 through 2025

**Financial analysis**
- 2024 cash flow: $80,000
- Current ACP: $2,240,000
- 2024 through 2029 cash flow: $2,200,000
- Total project cost: $2,240,000
Lift Station Electrical Rehabilitation – L02
Program family 8055

Project location: Council district #11, City of Hugo

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
Recommendations are to replace MCC in weather-proof enclosure, replace ATS and include space heater and provisions for moisture control, and to replace circuit breakers and clean all connections.

Project need
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by ES engineering, electrical, and ISBU staff. Lift Station L02 in Hugo is identified as a site needing rehabilitation as soon as possible. This site has many components that show corrosion and are obsolete.

Project schedule:
Planning: 2022 through 2023
Design: 2023 through 2024
Construction: 2024 through 2025

Financial analysis
2024 cash flow: $80,000
Current ACP: $2,240,000
2024 through 2029 cash flow: $2,200,000
Total project cost: $2,240,000
Project location: Council district #11, City of Hugo

Lift Station Electrical Rehabilitation – L03
Program family 8055

Objectives
Asset Preservation

Scope
This site has many components that show corrosion and are obsolete. Recommendations are to replace both MCCs in above grade, weather-proofed enclosures, clean and paint ATS enclosure, and to install outdoor service breaker.

Project need
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by MCES engineering, electrical, and ISBU staff. Lift Station L03 in Hugo is identified as a site needing rehabilitation as soon as possible.

Project schedule:
- Planning: 2022 through 2023
- Design: 2023 through 2024
- Construction: 2024 through 2025

Financial analysis
- 2024 cash flow: $80,000
- Current ACP: $2,240,000
- 2024 through 2029 cash flow: $2,200,000
- Total project cost: $2,240,000
Lift Station Electrical Rehabilitation – L31
Program family 8055

Project family 8055
Project #805566

Project location: Council district #12, City of St. Paul Park

Project #805566 L31 location east of the Mississippi River near 3rd Avenue in St. Paul Park

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
This site has many components that are potentially dangerous and nearing end-of-life. Recommendations are to install outdoor service circuit breaker, provide with remote on/off functions, and to install new MCC.

Project need
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by ES engineering, electrical, and ISBU staff. Lift Station L31 in St. Paul Park is identified as a site needing rehabilitation as soon as possible.

Project schedule:

- Planning: 2022 through 2023
- Design: 2023 through 2024
- Construction: 2024 through 2025

Financial analysis
- 2024 cash flow: $80,000
- Current ACP: $2,240,000
- 2024 through 2029 cash flow: $2,200,000
- Total project cost: $2,240,000
Project location: Council district #9, City of Anoka

Project type
Lift Station Improvements

Objectives
Asset Preservation

Scope
Recommendations are to install outdoor service entrance circuit breaker, retrofit main switchboard to include surge protection and power meter, expand the existing switchboard to include an ATS, add flow meters at lift station, and to clean or replace corroded equipment.

Project need
The electrical condition assessment reports, preventative maintenance data, and arc flash study results were reviewed and prioritized by ES engineering, electrical, and ISBU staff. Lift Station L31 in St. Paul Park is identified as a site needing rehabilitation as soon as possible. This site has many components that are showing corrosion and potentially dangerous.

Project schedule:
- Planning: 2022 through 2023
- Design: 2023 through 2024
- Construction: 2024 through 2025

Financial analysis
- 2024 cash flow: $80,000
- Current ACP: $2,240,000
- 2024 through 2029 cash flow: $2,200,000
- Total project cost: $2,240,000
L71 System Improvements  
Program family 8055  
Project #805568

Project location: Council district #4, City of Chaska, 600 4th Street East and eastward into Shakopee

**Project type**  
Lift Station Improvements

**Objectives**  
Asset Preservation

**Scope**  
Ongoing investigations of upstream contributions and results of pump testing and odor treatment will be evaluated to determine the scope of work. Preliminary indications are that fats, oils, and greases (FOG) pretreatment, forcemain modifications, and odor control will be needed.

**Project need**  
L71 receives high strength wastewater containing significant volumes of fats, oils, and greases. The FOGs impact lift station and forcemain operations. This has resulted in decreased capacity and creates odors.

**Project schedule:**

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<th>Planning</th>
<th>Design</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>2023 through 2024</td>
<td>2025</td>
<td>2026 through 2027</td>
</tr>
</tbody>
</table>

**Financial analysis**

| 2024 cash flow: | $150,000 |
| Current ACP: | $6,300,000 |
| 2024 through 2029 cash flow: | $6,150,000 |
| Total project cost: | $6,300,000 |
L73 Odor Control Improvements
Program family 8055

Project location: Council district #12, City of Woodbury

Project type
Lift Station Odor Control Improvements

Objectives
Quality Improvements

Scope
Replace an existing biofilter odor control system with a carbon odor control unit.

Project need
Improvements are needed to better control odor emissions from the lift station following development of neighboring properties.

Planning: 2023
Design: 2024
Construction: 2025

Financial analysis
2024 cash flow: $2,000,000
Current ACP: $2,500,000
2024 through 2029 cash flow: $2,250,000
Total project cost: $2,500,000
Project type
Lift Station Improvements

Objectives
Asset Preservation and Quality Improvements

Scope
The lift station rehabilitation will include HVAC upgrades, carbon tank, new segment of forcemain, wet well rehabilitation, and pump replacement.

Project need
A segment of forcemain will be replaced due to substantial corrosion. A pipe restriction will be upsized to increase lift station capacity along with new pumps.

Project schedule:
- Planning: 2022
- Design: 2023 through 2024
- Construction: 2025 through 2027

Financial analysis
- 2024 cash flow: $50,000
- Current ACP: $165,000
- 2024 through 2029 cash flow: $50,000
- Total project cost: $165,000
Anoka-Champlin Forcemain Improvements
Program family 8055

Project location: Council districts #2 and 9, Cities of Anoka and Champlin, north and south sides of the Mississippi River at Highway 169

Project #805581 location on either side of the Mississippi River in Anoka and Champlin

**Project type**
Lift Station and Interceptor Improvements

**Objectives**
Asset Preservation and Quality Improvements

**Scope**
Results of pump testing will be evaluated to determine the scope of work. Preliminary indications are that a second forcemain will be needed.

**Project need**
L33, L42, and L67 and their respective forcemains are interconnected. Forcemain 8751, downstream of all three lift stations, is an aging single 24” barrel. Air release valves on the forcemain are inoperable and impacting the forcemain capacity. The forcemain and air releases cannot be inspected or repaired without major temporary conveyance.

**Project schedule:**
- Planning: 2023 through 2024
- Design: 2025
- Construction: 2026 through 2027

**Financial analysis**
- 2024 cash flow: $300,000
- Current ACP: $15,500,000
- 2024 through 2029 cash flow: $15,300,000
- Total project cost: $15,500,000