

MCES 2023 – 2028

CAPITAL PROGRAM



Aerial Photo of Empire Wastewater Treatment Plant Solids Expansion Phase I which adds biogas treatment facilities to increase on-site utilization of biogas, a renewable fuel.

Adopted December 8, 2022

390 Robert Street North | St. Paul, MN 55101-1805
Phone 651.602.1000 | Fax 651.602.1550 | TTY 651.291.0904 | metro council.org
An Equal Opportunity Employer



The Council's mission is to foster efficient and economic growth for prosperous metropolitan region

Metropolitan Council Members

Charlie Zelle	Chair	Raymond Zeran	District 9
Judy Johnson	District 1	Peter Lindstrom	District 10
Reva Chamblis	District 2	Susan Vento	District 11
Vacant	District 3	Francisco J. Gonzalez	District 12
Deb Barber	District 4	Chai Lee	District 13
Molly Cummings	District 5	Kris Fredson	District 14
John Pacheco Jr.	District 6	Phillip Sterner	District 15
Robert Lilligren	District 7	Wendy Wulff	District 16
Abdirahman Muse	District 8		



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.

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About Metropolitan Council Environmental Services

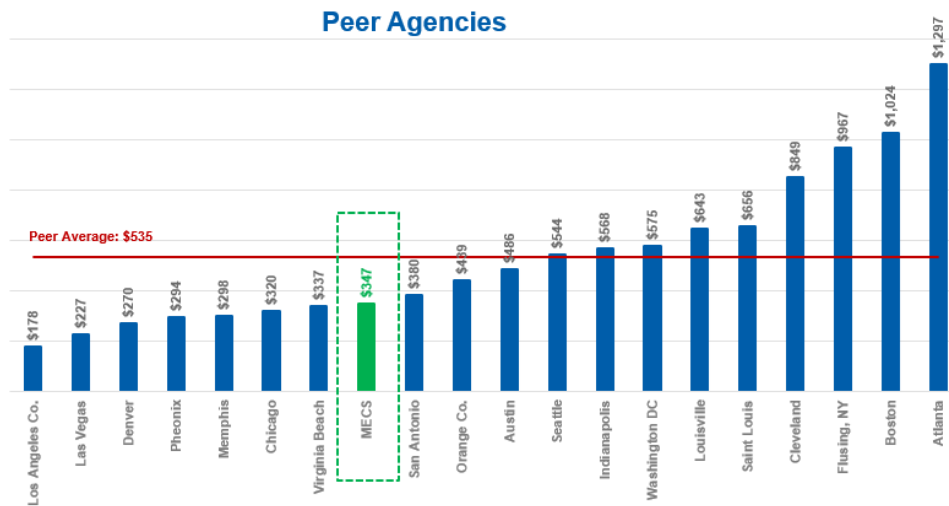


Metropolitan Council Environmental Services (MCES) is responsible for operating and maintaining the regional wastewater system which protects public health, protects the environment, and fosters the economic growth of the seven county Twin Cities Metropolitan Area. The regional wastewater system currently serves 111 communities and has an estimated replacement value of \$7 Billion. The organization employs about 640 staff (full time equivalents) 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 about 35% 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.

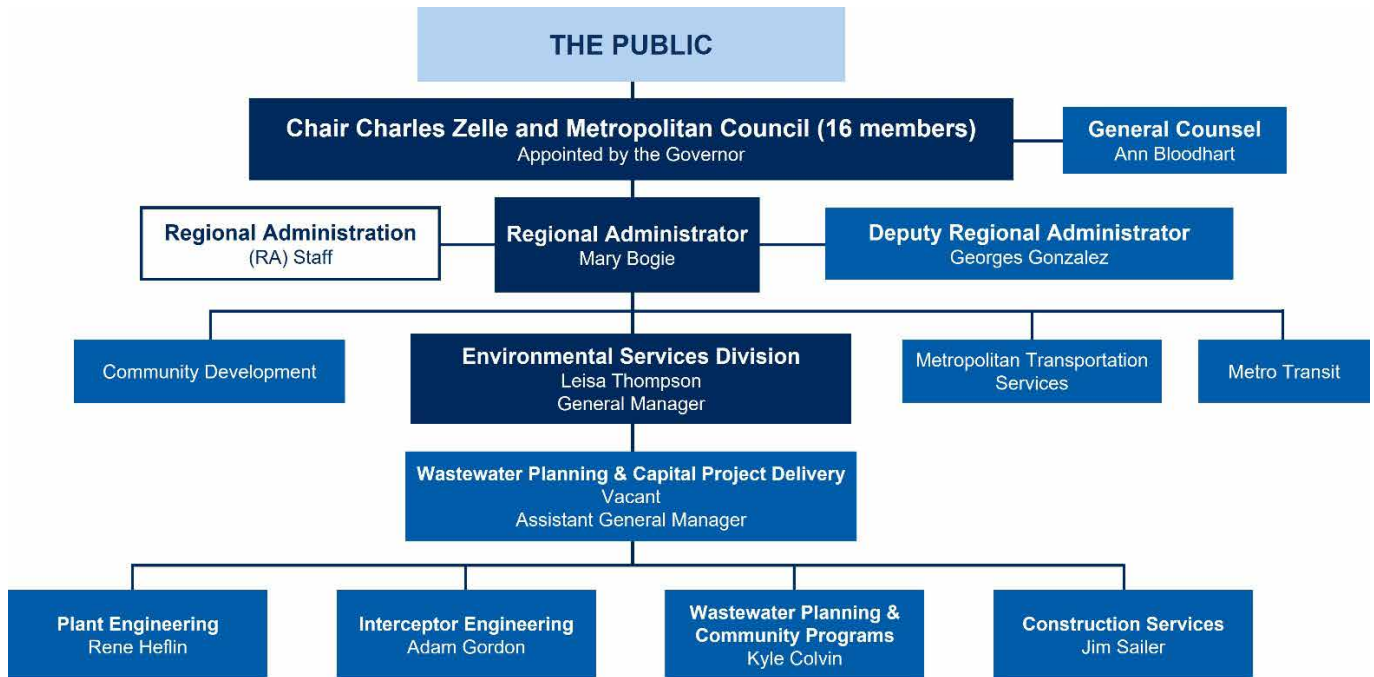
National Association of Clean Water Agencies (NACWA) 2020 peer agency rate survey results.

Retail Sewer Charges Per Household (2019 rates from 2020 NACWA survey)



Peer agency are those wastewater service providers that treat 100 million Gallons per day (MGD) or more.

Environmental Services Organizational Chart



Extraordinary Facts by the numbers!

Environmental Services

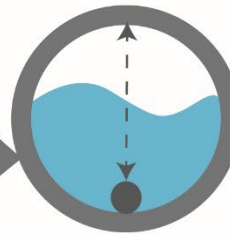
moves and treats
250 million gallons
of wastewater each day

serving **2.8 million**
people in 111 communities in the
7-county Twin Cities metro area.



That wastewater moves through privately owned
and city sewer pipes into

637 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

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



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

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



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 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 2023-2028 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.



Contractors installing a manhole structure as part of the L24 Renovation & 7020 FM Replacement project located in Minnetrista.

MCES Customer Level of Service

HEALTH, SAFETY, & ENVIRONMENT



COMPLY WITH PERMITS

Comply consistently with water, air, and other environmental permits.



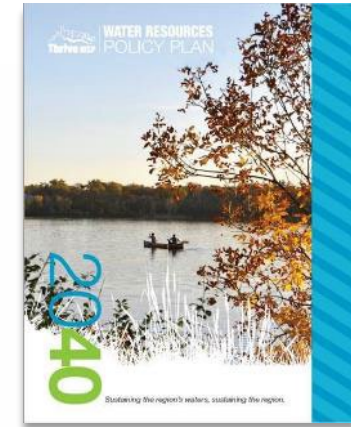
MINIMIZE IMPACTS

Convey and treat wastewater safely with minimal backups, spills, and traffic impacts.



LEAD BY EXAMPLE

Be a leader on environmental sustainability, including water/energy conservation and water reuse.



FINANCIAL



CHARGES & FEES

Charges and fees should be predictable, justifiable, and provide good value for the region.



RETAIN AAA BOND RATING

Retain AAA Bond rating in order to provide the lowest cost debt financing possible.



OPTIMIZE BUDGET PLAN

MCES' 5-year budget plan should optimize capital, O&M programs to meet customer service goals.



PRESERVE ASSETS

The region's wastewater assets should be well maintained to preserve their value and performance.



BE FAIR AND TRANSPARENT

Allocation of all charges should be fair, equitable, and transparent to the customer.

CUSTOMER SERVICE



BE A GOOD NEIGHBOR

Mitigate community impacts related to odors, traffic, noise, and visual aesthetics.



MEET CAPACITY NEEDS

Provide conveyance and treatment capacity consistent with regional and local plans.



COMMUNICATE INFORMATION

Communicate with customers about financial info and capital projects & programs that impact them.



ENGAGE CUSTOMERS

Engage customers in a meaningful public process. Provide notice for changes in policies, rules, fees, projects, environmental performance & resolving competing Council policies/interests.



COLLABORATE WITH OTHERS

Optimize intergovernmental coordination in all MCES work that intersects with community work.

Water Resources Policy Plan and the Customer Level of Service are the foundation for the Capital Program.

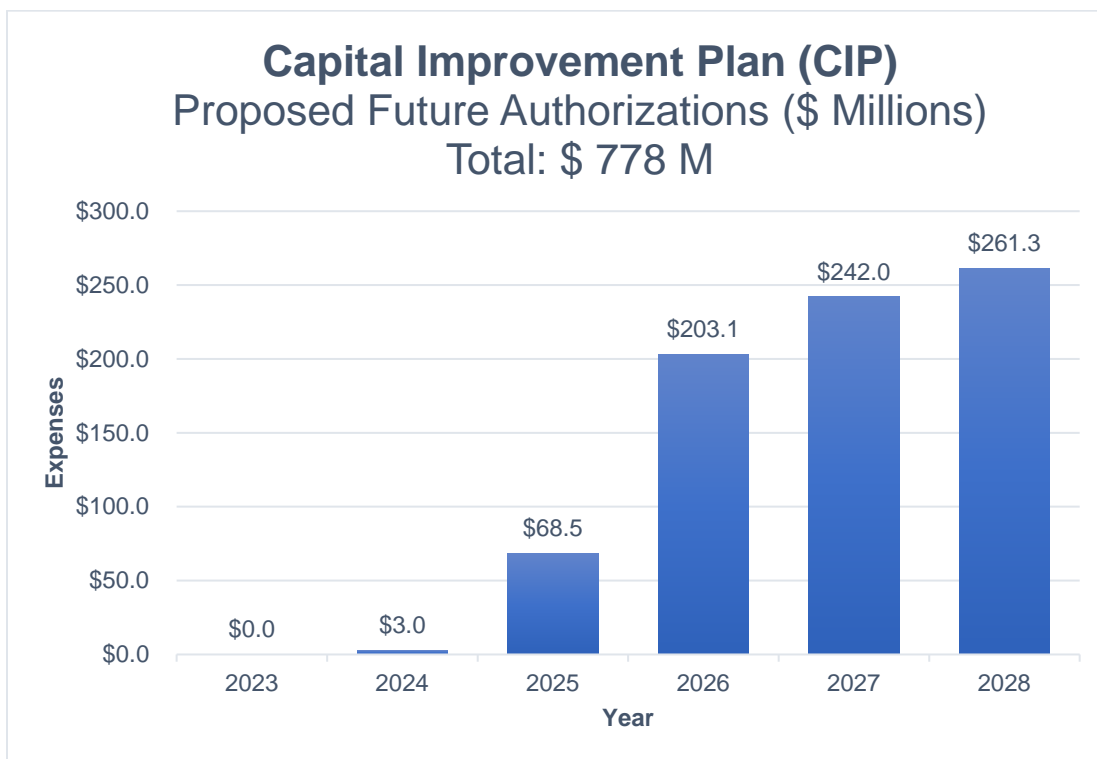
Authorized Capital Program (ACP) - The ACP provides multi-year authorization to spend on program costs where funding has been secured and the Council has given final approval to proceed. It is the total amount of all past and present approvals from the Council.

The 2023 ACP consists of the previously approved ACP; plus, the authorization of new programs; authorized 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

Previous Authorized Capital Program (ACP)	\$1,104,552,525
Adjustments to Existing Projects	\$ 223,296,628
Closed Projects	\$ (119,593,291)
New Projects	\$ 55,010,896
Total All Changes	\$ 158,714,233
Approved 2023 ACP	\$1,263,266,758

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.



Capital Program – The Capital Program consists of the ACP plus the CIP. Table 10 from the Metropolitan Council's 2023 Unified Budget summarizes the MCES 2023 - 2028 Capital Program:

**METROPOLITAN COUNCIL
CAPITAL PROGRAM, ENVIRONMENTAL SERVICES**

**TABLE 10
(\$ IN 000S)**

	Authorized Capital Program (ACP)			Capital Improvement Plan (CIP)							ACP + CIP Combined
	2022 Amended	Changes	2023 Proposed	2023	2024	2025	2026	2027	2028	Total	
Treatment Plant Projects											
8059 - Metro Rehabilitation & Facilities Improve	115,866	-5,955	109,911	-	-	-	-	-	-	-	109,911
8062 - Metro Solids Improvements	173,828	46,485	220,313	-	-	-	-	10,000	10,000	20,000	240,313
8074 - Empire Plant Solids Improvements	53,959	-7,050	46,909	-	-	-	-	-	-	-	46,909
8078 - Regional Plant Improvements	46,676	13,149	59,825	-	-	-	8,500	10,000	10,100	28,600	88,425
8089 - MWWTP Asset Renewal	176,257	54,545	230,802	-	-	-	19,740	37,200	35,200	92,140	322,942
8091 - Wastewater Reclamation Facilities	7,133	-497	6,637	-	-	-	30,000	30,000	40,000	100,000	106,637
8097 - Blue Lake Solids Processing	2,700	78,120	80,820	-	-	25,000	35,000	20,000	20,000	100,000	180,820
8098 - Hastings WWTP	22,600	5,268	27,868	-	-	5,000	25,000	30,000	30,000	90,000	117,868
8100 - Industrial Pretreatment Incentive Program	21,700	-7,994	13,706	-	-	-	100	100	100	300	14,006
TOTAL Treatment Plant Projects	620,719	176,071	796,790	-	-	30,000	118,340	137,300	145,400	431,040	1,227,830
Interceptor Projects											
8028 - Blue Lake System Improvements	43,090	15,043	58,133	-	-	7,459	6,490	10	10	13,969	72,102
8041 - Hopkins System Improvements	10,213	-832	9,381	-	-	-	-	-	-	-	9,381
8055 - Lift Station Improvements	60,934	-11,137	49,798	-	-	12,500	21,850	21,850	24,350	80,550	130,348
8056 - Meter Improvements	24,014	-5,789	18,224	-	-	5,000	6,500	6,500	6,500	24,500	42,724
8063 - SWC Interceptor - Lake Elmo Connections	19,563	6,021	25,584	-	-	-	-	-	-	-	25,584
8076 - Mpls. Interceptor System Rehabilitation	81,761	-47,824	33,937	-	-	-	-	-	-	-	33,937
8082 - St Bonifacius LS/FM Rehabilitation	32,304	-7,519	24,785	-	-	-	-	-	-	-	24,785
8083 - Waconia LS/FM Rehabilitation	5,298	1,428	6,727	-	-	-	-	-	-	-	6,727
8084 - Bloomington System Improvements	17,105	-17,105	-	-	-	-	-	-	-	-	-
8086 - North Area Interceptor Rehabilitation	22,008	22,691	44,699	-	-	-	610	600	7,500	8,710	53,409
8088 - St Paul Interceptor System Rehabilitation	27,969	1,945	29,914	-	-	-	210	210	10	430	30,344
8090 - Interceptor Rehabilitation - Program	80,298	5,755	86,053	-	-	-	20,031	45,011	45,011	110,053	196,106
8092 - Mpls. Interceptor 1-MN-340 Rehabilitation	25,757	18,448	44,204	-	-	-	6,000	6,000	1,020	13,020	57,224
8093 - Brooklyn Park-Champlin Inter	15,607	-6,574	9,033	-	-	2,500	2,500	-	-	5,000	14,033
8094 - Brooklyn Park L32	12,761	-6,767	5,994	-	3,000	11,000	12,010	12,010	19,010	57,030	63,024
8095 - Coon Rapids-Fridley Area Inter	3,900	14,380	18,280	-	-	-	10	10	10	30	18,310
8096 - Northwest Area Interceptor Imp	1,251	479	1,730	-	-	-	8,500	12,500	12,500	33,500	35,230
TOTAL Interceptor Projects	483,833	-17,356	466,477	-	3,000	38,459	84,711	104,701	115,921	346,792	813,269
Total ES Capital Program	1,104,553	158,714	1,263,267	-	3,000	68,459	203,051	242,001	261,321	777,832	2,041,099

Capital Program Use of Funds

The three objectives of the capital program are:

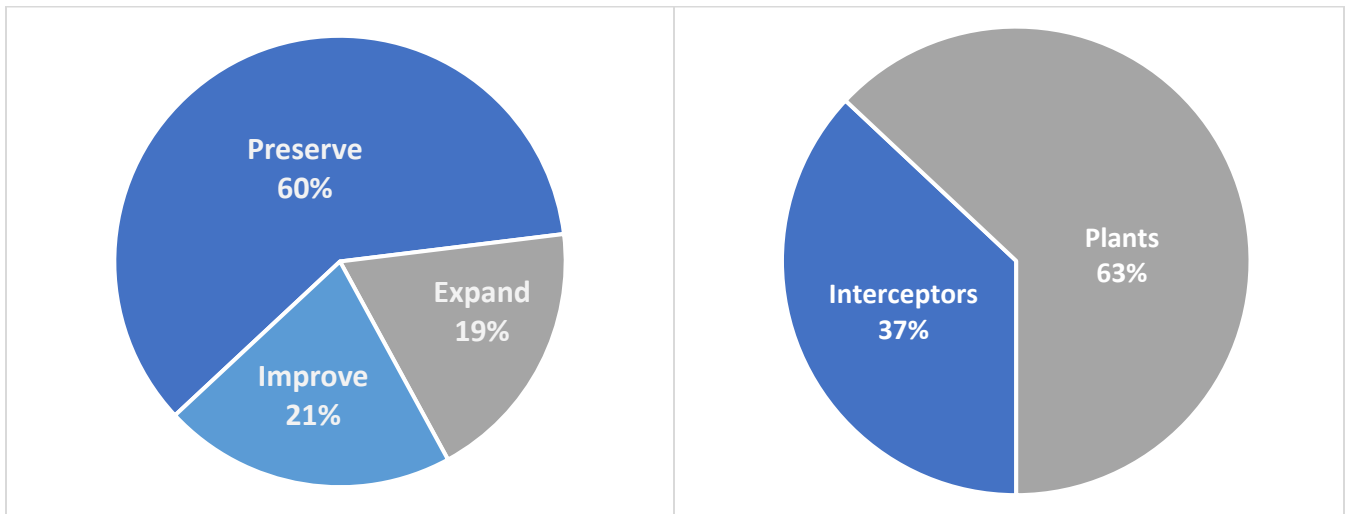
- **Asset Preservation** – Preserve the existing MCES infrastructure investment through rehabilitation and replacements.
- **System Expansion** - Expand the system capacity through treatment plant and interceptor expansions and interceptor extensions to meet the needs of a growing region.
- **Quality 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 2023 ACP and the Total Capital Program are as follows:

Capital Program (ACP) Objectives

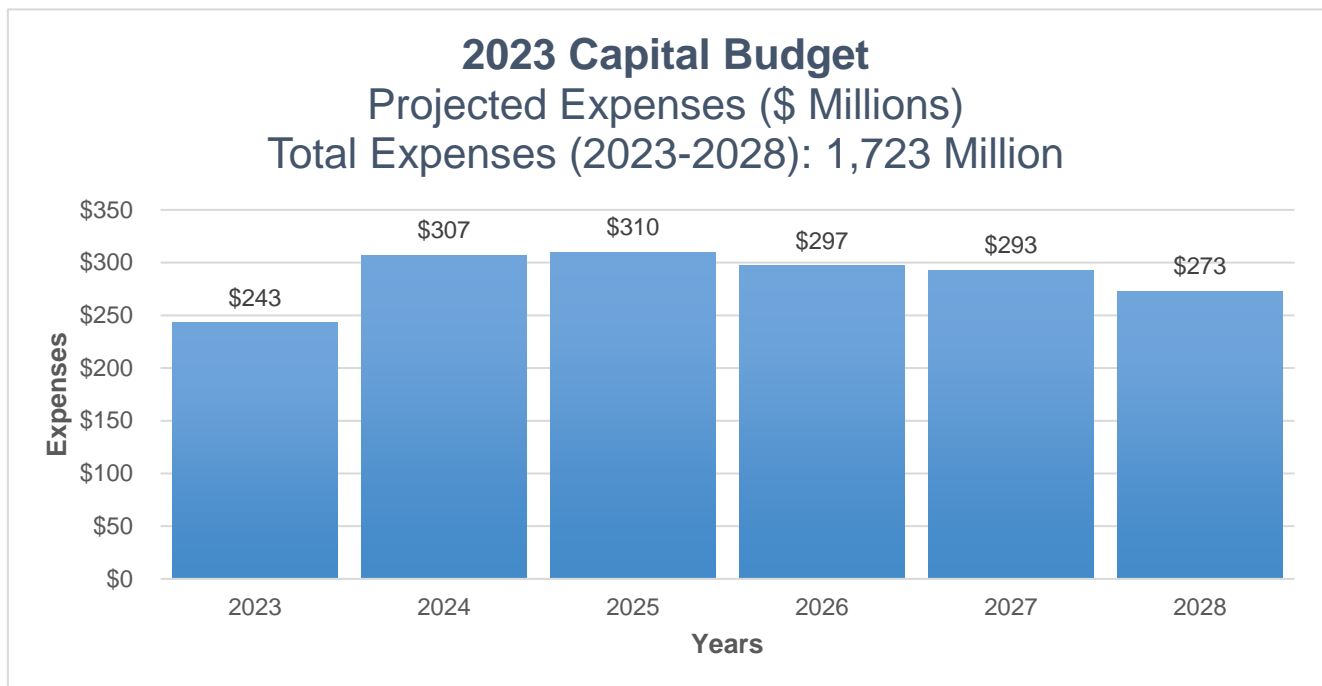
Objective:

Type:



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 2023 Authorized Capital Program (ACP), 60% of the funding will be spent on Preservation projects, 19% on Expansion projects, and 21% on Improvement projects. Furthermore, of the 2023 ACP, Interceptors will spend approximately 37% of the budget while Plants will spend approximately 63%.

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 2023 Capital Budget is \$243 million. As depicted below, the projected capital expenses for the 2023-2028 timeframe are \$1,723 million. The projected expenses are utilized in the development of the debt service numbers in the MCES' Capital Finance Plan.



MCES 2023 Capital Program

Authorized Capital Program (ACP)

METROPOLITAN COUNCIL CAPITAL PROGRAM, ENVIRONMENTAL SERVICES

	Authorized Capital Program (ACP)		
	2022 Amended	Changes	2023 Proposed
Treatment Plant Projects			
8059 - Metro Rehabilitation & Facilities Improve	115,866	-5,955	109,911
8062 - Metro Solids Improvements	173,828	46,485	220,313
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8078 - Regional Plant Improvements	46,676	13,149	59,825
8089 - MWWTP Asset Renewal	176,257	54,545	230,802
8091 - Wastewater Reclamation Facilities	7,133	-497	6,637
8097 - Blue Lake Solids Processing	2,700	78,120	80,820
8098 - Hastings WWTP	22,600	5,268	27,868
8100 - Industrial Pretreatment Incentive Program	21,700	-7,994	13,706
TOTAL Treatment Plant Projects	620,719	176,071	796,790
Interceptor Projects			
8028 - Blue Lake System Improvements	43,090	15,043	58,133
8041 - Hopkins System Improvements	10,213	-832	9,381
8055 - Lift Station Improvements	60,934	-11,137	49,798
8056 - Meter Improvements	24,014	-5,789	18,224
8063 - SWC Interceptor - Lake Elmo Connections	19,563	6,021	25,584
8076 - Mpls. Interceptor System Rehabilitation	81,761	-47,824	33,937
8082 - St Bonifacius LS/FM Rehabilitation	32,304	-7,519	24,785
8083 - Waconia LS/FM Rehabilitation	5,298	1,428	6,727
8084 - Bloomington System Improvements	17,105	-17,105	-
8086 - North Area Interceptor Rehabilitation	22,008	22,691	44,699
8088 - St Paul Interceptor System Rehabilitation	27,969	1,945	29,914
8090 - Interceptor Rehabilitation - Program	80,298	5,755	86,053
8092 - Mpls. Interceptor 1-MN-340 Rehabilitation	25,757	18,448	44,204
8093 - Brooklyn Park-Champlin Inter	15,607	-6,574	9,033
8094 - Brooklyn Park L32	12,761	-6,767	5,994
8095 - Coon Rapids-Fridley Area Inter	3,900	14,380	18,280
8096 - Northwest Area Interceptor Imp	1,251	479	1,730
TOTAL Interceptor Projects	483,833	-17,356	466,477
Total ES Capital Program	1,104,553	158,714	1,263,267

MCES 2023 – 2028 Capital Program

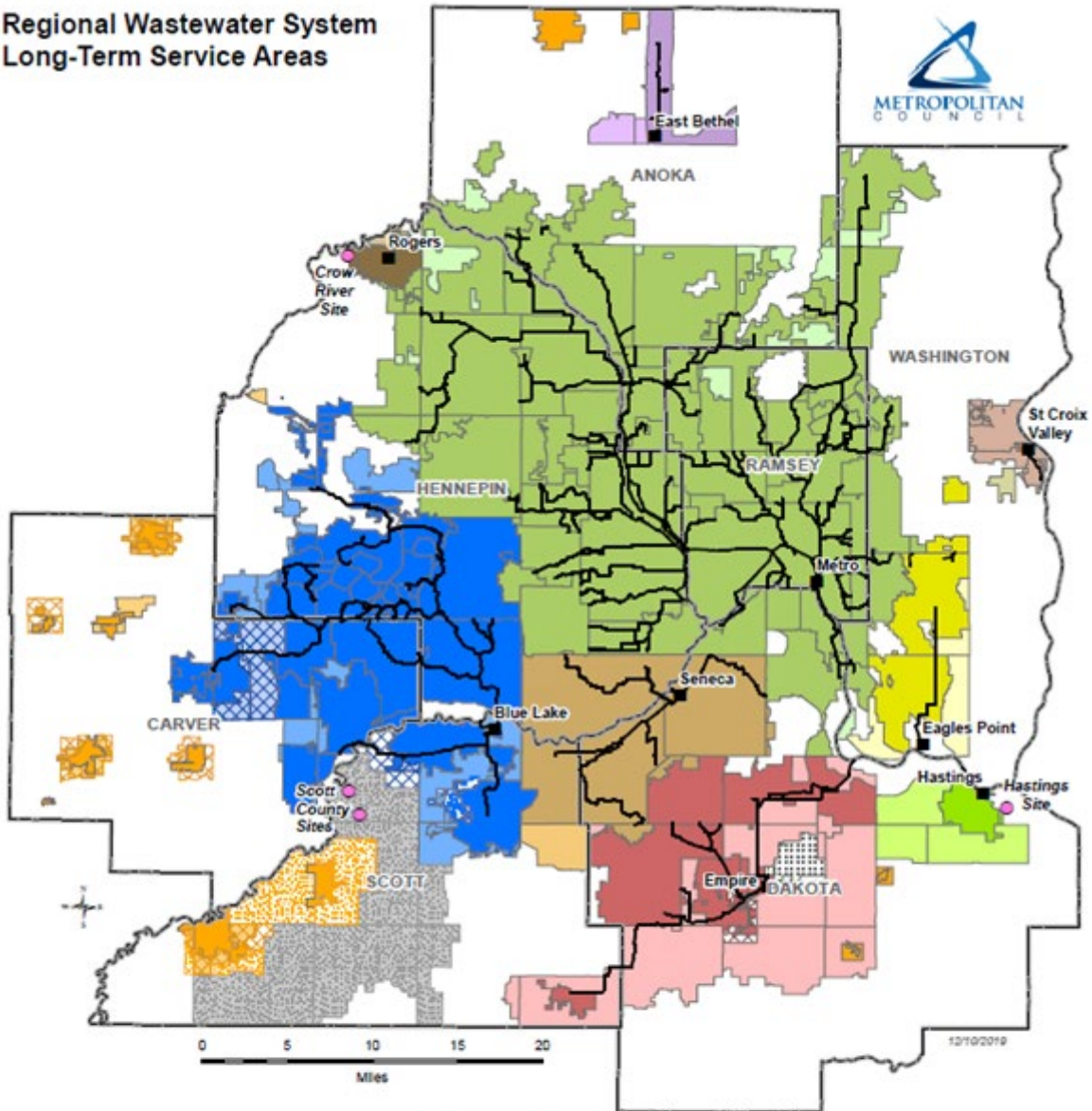
Projected Expenses by Year (all costs in \$1,000s)

Family	Project Name	2023	2024	2025	2026	2027	2028	2023-2028 Total
<i>Treatment Plants</i>								
8059	Metro Rehabilitation and Facilities Improvements	16,702	18,900	18,900	5,300	0	0	59,802
8062	Metro Solids Improvements	26,500	46,000	46,000	47,000	51,500	11,500	228,500
8074	Empire Plant Solids Improvements	6,000	5,000	0	0	0	0	11,000
8078	Regional Plant Improvements	13,377	15,875	10,550	10,000	10,000	10,100	69,902
8089	MWWTP Asset Renewal	47,368	55,557	53,156	39,621	42,200	40,200	278,102
8091	Wastewater Reclamation Facilities	500	750	1,250	30,000	30,000	40,000	102,500
8097	Blue Lake Solids Processing	5,000	30,000	55,000	39,000	24,000	25,000	178,000
8098	Hastings WWTP	7,100	7,100	13,800	28,000	30,000	30,000	116,000
8100	Industrial Pretreatment Incentive Program	2,100	100	100	100	100	100	2,600
Plant Totals		124,647	179,282	198,756	199,021	187,800	156,900	1,046,406
Percent of Planned Expenses		51%	58%	64%	67%	64%	58%	61%
<i>Interceptor System</i>								
8028	Blue Lake Interceptor System Improvements	21,600	15,130	19,809	10,090	10	10	66,649
8041	Hopkins System Improvements	966	148	1	0	0	0	1,115
8055	Lift Station Improvements	15,700	20,050	20,850	21,850	21,850	24,350	124,650
8056	Meter Improvements	2,536	2,570	9,500	7,500	6,500	6,500	35,106
8063	East Area Interceptor Improvements	4,440	8,500	6,010	0	0	0	18,950
8076	Mpls Interceptor System Rehabilitaiton	1,923	1,262	0	0	0	0	3,185
8082	St Bonifacius LS/FM Rehabilitation	9,700	5,700	300	0	0	0	15,700
8083	Waconia LS/FM Rehabilitation	900	100	0	0	0	0	1,000
8086	North Area Interceptor Rehabilitation	8,710	14,660	11,000	4,610	600	7,500	47,080
8088	St Paul Interceptor System Rehabilitation	4,860	5,283	3,260	210	210	10	13,833
8090	Interceptor Rehabilitation	30,971	24,223	6,634	20,281	45,011	45,011	172,131
8092	Mpls Interceptor System Improvements	7,370	18,920	12,870	8,000	6,000	1,020	54,180
8093	Brooklyn Park-Champlin Interceptor Renewal	4,210	700	2,510	2,510	0	0	9,930
8094	Brooklyn Park L32	3,010	3,010	11,010	12,010	12,010	19,010	60,060
8095	South Area Interceptor Improvements	1,160	6,850	7,110	2,810	10	10	17,950
8096	Northwest Area Interceptor Improvements	500	500	500	8,500	12,500	12,500	35,000
Interceptor Totals		118,556	127,606	111,364	98,371	104,701	115,921	676,519
		49%	42%	36%	33%	36%	42%	39%
Total		243,203	306,888	310,120	297,392	292,501	272,821	1,722,925

Six Year Cash Flow = **\$1,722,925**

MCES Long-Term Service Area Map

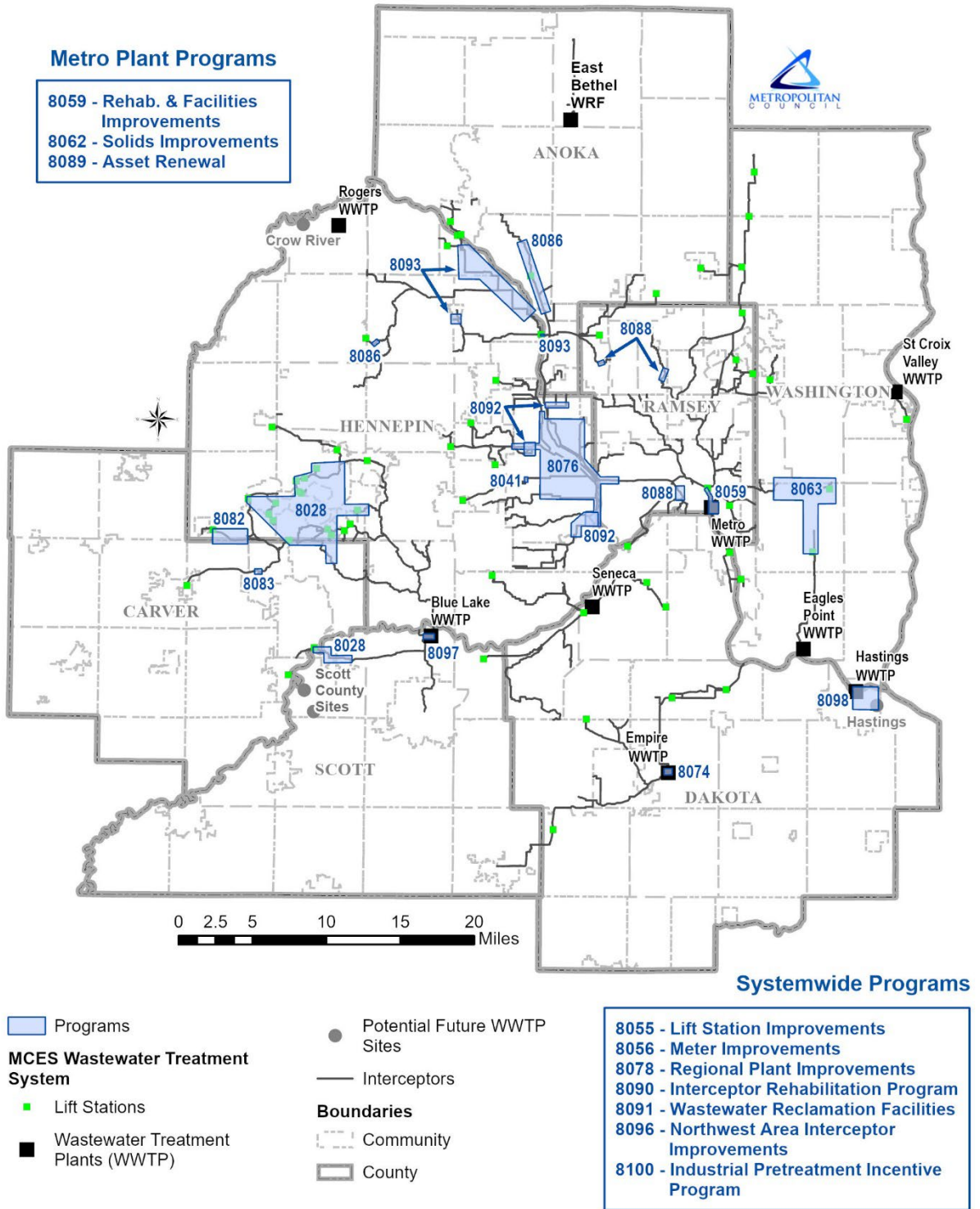
Regional Wastewater System Long-Term Service Areas



Long Term Service Areas

	Current	Potential			Orderly Annexations	
Rural Centers				Shakopee Mdewakanton Sioux Community		Rural Centers Pre-2030
Metro				Scott Co. Urban Expansion		Blue Lake Pre-2030
Blue Lake				Scott Co. Rural Center Expansion		Rural Centers Post-2030
Seneca				Wildlife Mgmt. Area		Blue Lake Post-2030
Empire				County Boundaries		Empire Post-2030
Eagles Point				City and Township Boundaries		
St. Croix Valley				Lakes and Rivers		
Hastings						
Rogers						
East Bethel						

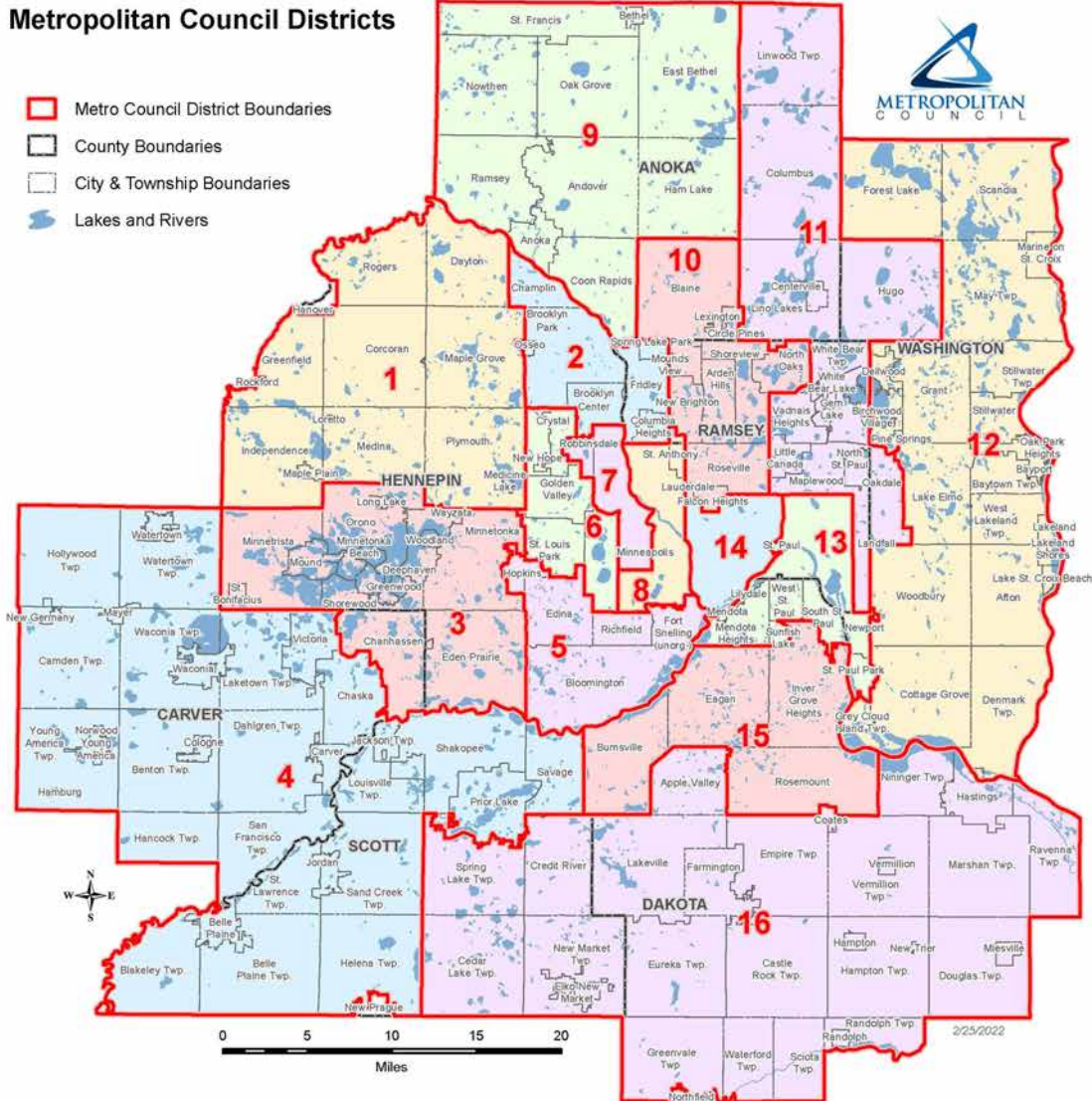
MCES 2023-2028 Capital Program Project Location Map



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](#)
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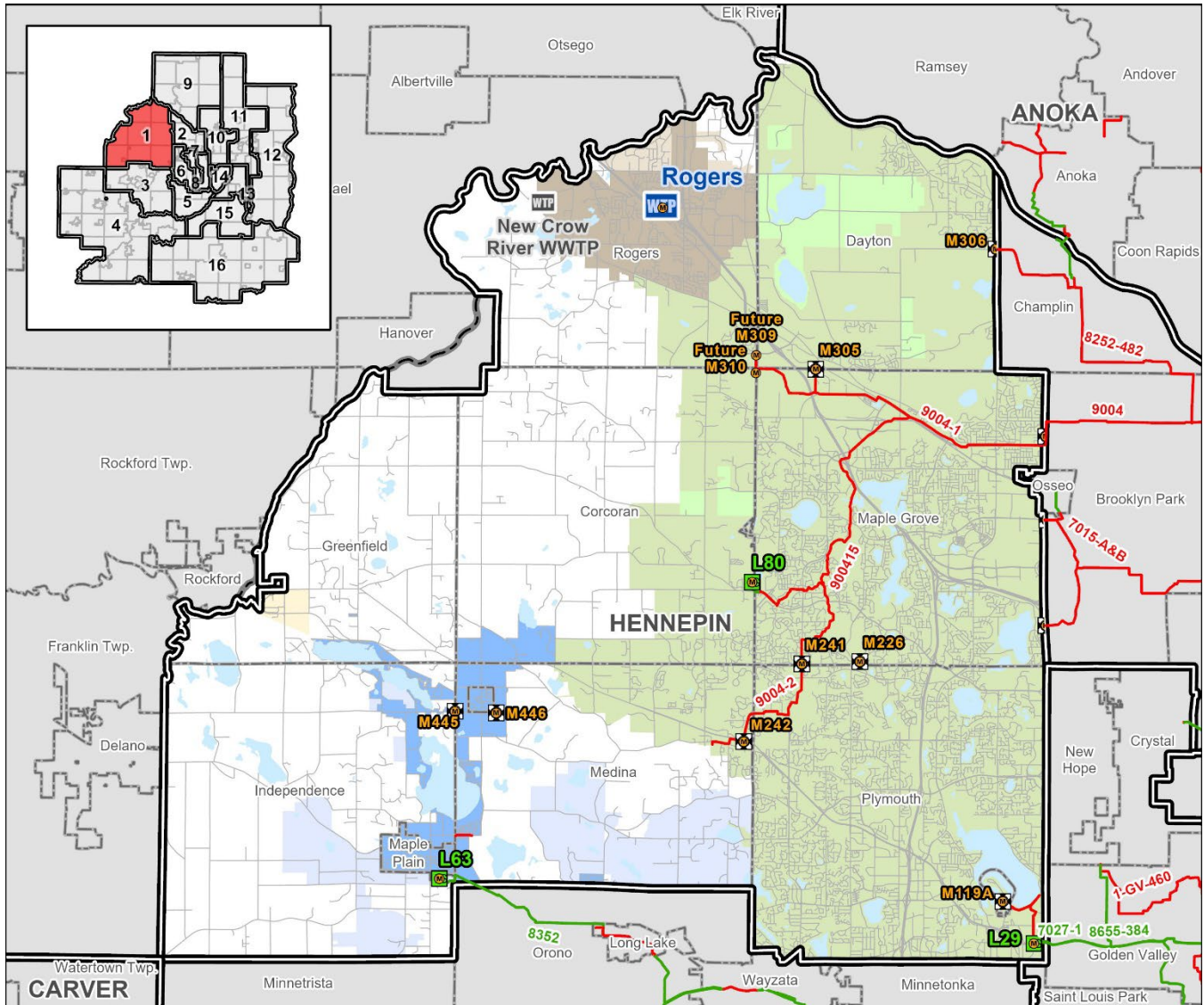
Chair Charlie Zelle	
District	District
1 Judy Johnson	9 Raymond Zeran
2 Reva Chamblis	10 Peter Lindstrom
3 Vacant	11 Susan Vento
4 Deb Barber	12 Francisco Gonzalez
5 Molly Cummings	13 Chai Lee
6 John Pacheco Jr.	14 Kris Fredson
7 Robert Lilligren	15 Phillip Sterner
8 Abdurahman Muse	16 Wendy Wulff

Source: Metropolitan Council Redistricting Plan passed by the state legislature on May 17, 2013. Boundaries re-aligned with municipal and county boundaries and NCompass Street Centerlines.

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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Wastewater Treatment Plants
- Future Wastewater Treatment Plants

Liquid Waste Hauler Disposal Sites

- Interceptors
- Gravity
- Forcemain
- Metropolitan Council Districts

Long Term Wastewater Service Area

- Blue Lake
- Potential Blue Lake
- Metro
- Potential Metro
- Rogers
- Potential Rogers
- Potential Rural Center

Programs in this District

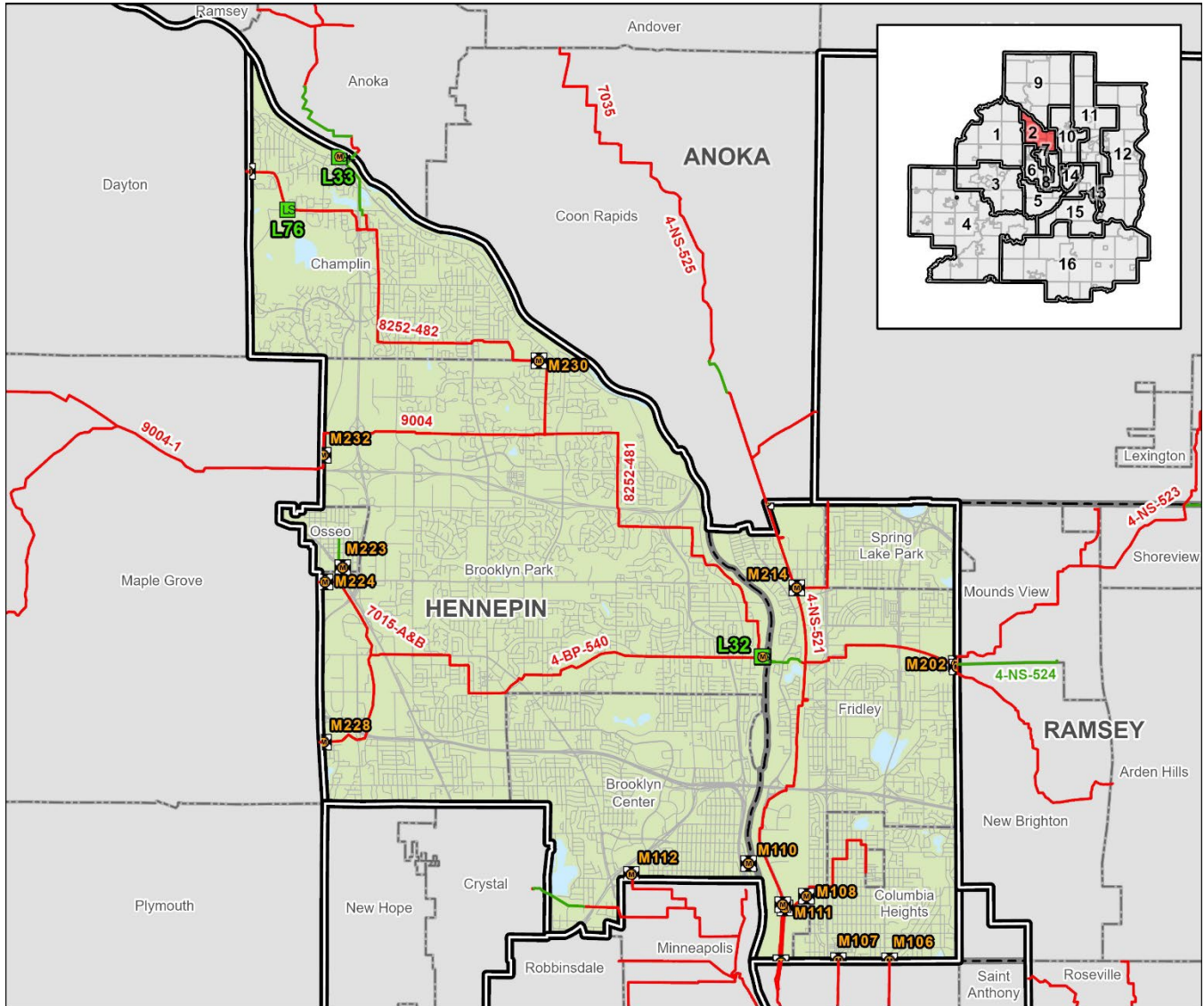
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8078: Regional Plant Improvements
- 8086: North Area Interceptor Rehabilitation
- 8090: Interceptor Rehabilitation
- 8091: Wastewater Reclamation Facilities
- 8096: Northwest Area Interceptor Improvements



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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Liquid Waste Hauler Disposal Sites

Interceptors

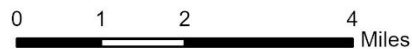
- Gravity
- Forcemain
- Metropolitan Council Districts

Long Term Wastewater Service Area

- Metro

Programs in this District

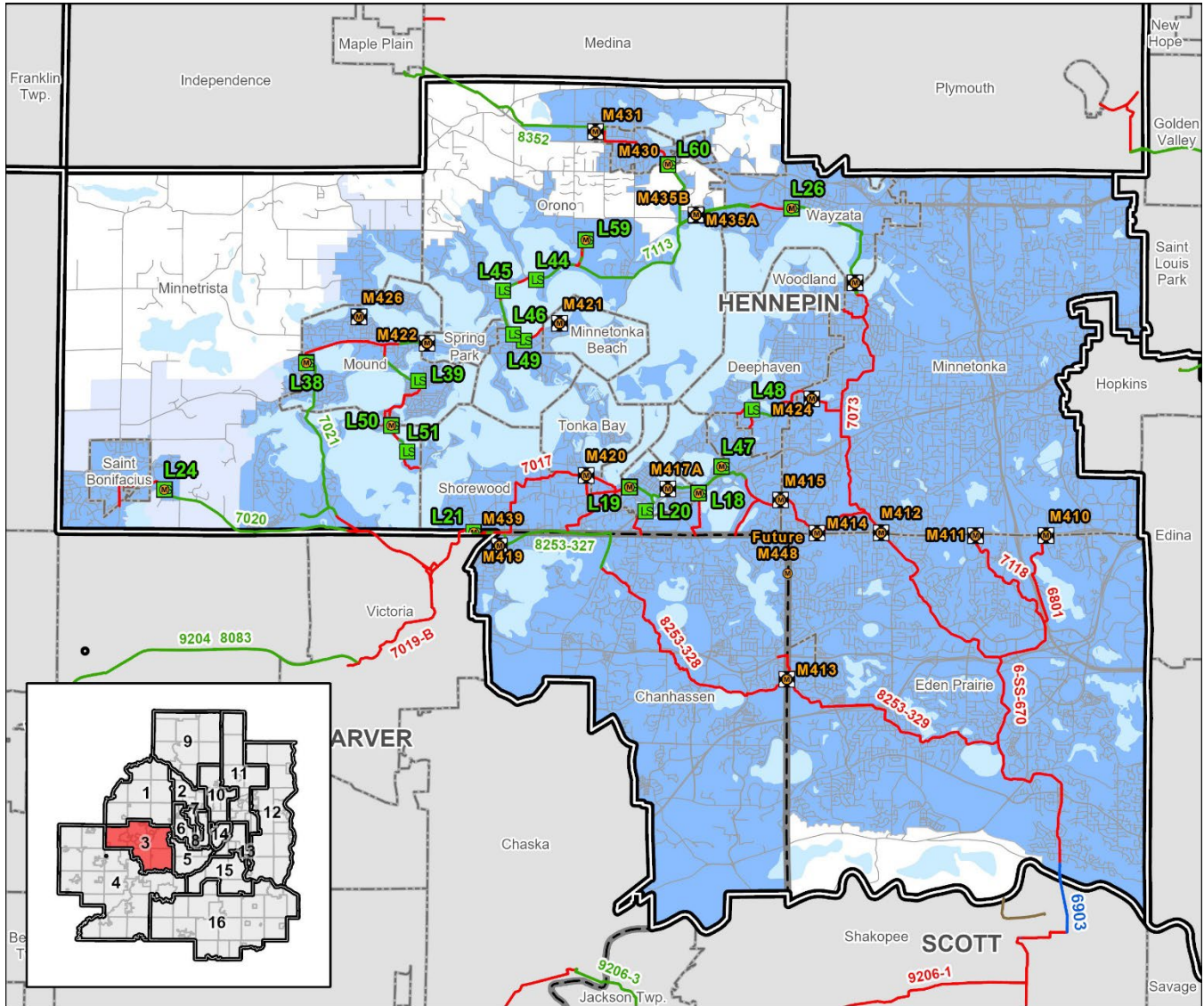
- 8028: Blue Lake Interceptor System Improvements
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8086: North Area Interceptor Rehabilitation
- 8090: Interceptor Rehabilitation
- 8092: Minneapolis Interceptor System Improvements
- 8093: Brooklyn Park - Champlin Interceptor Renewal
- 8094: Brooklyn Park L32



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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Liquid Waste Hauler Disposal Sites

Interceptors

- Gravity
- Forcemain
- Siphon

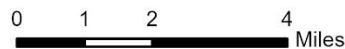
Metropolitan Council Districts

Long Term Wastewater Service Area

- Blue Lake
- Potential Blue Lake

Programs in this District

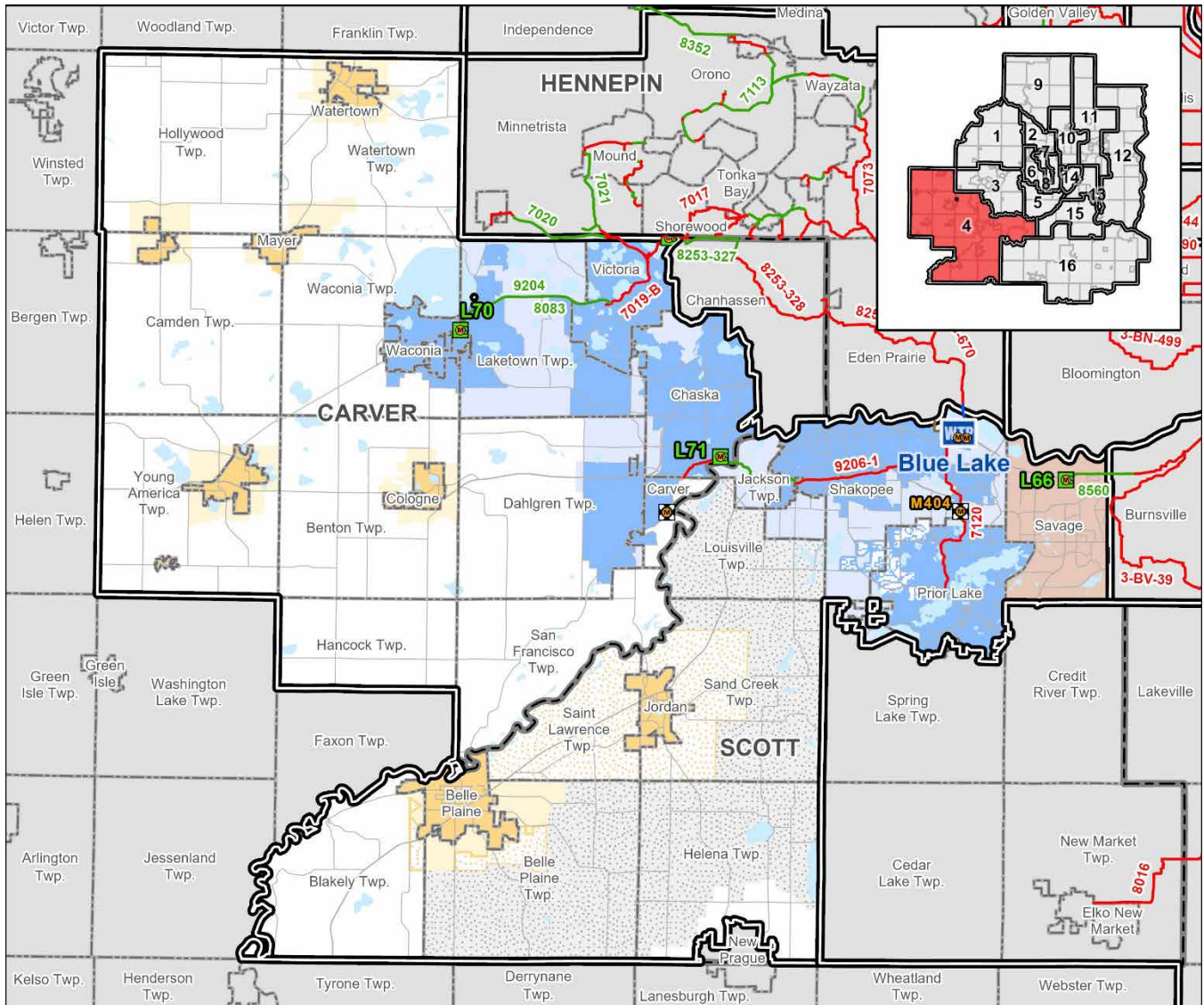
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8082: St Bonifacius LS/FM Rehabilitation
- 8083: Waconia LS/FM Rehabilitation
- 8090: Interceptor Rehabilitation



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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Wastewater Treatment Plants
- Liquid Waste Hauler Disposal Sites

Interceptors

- Gravity
- Forcemain
- Siphon
- Effluent
- Metropolitan Council Districts

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 Mdwakanton Sioux Community

Programs in this District

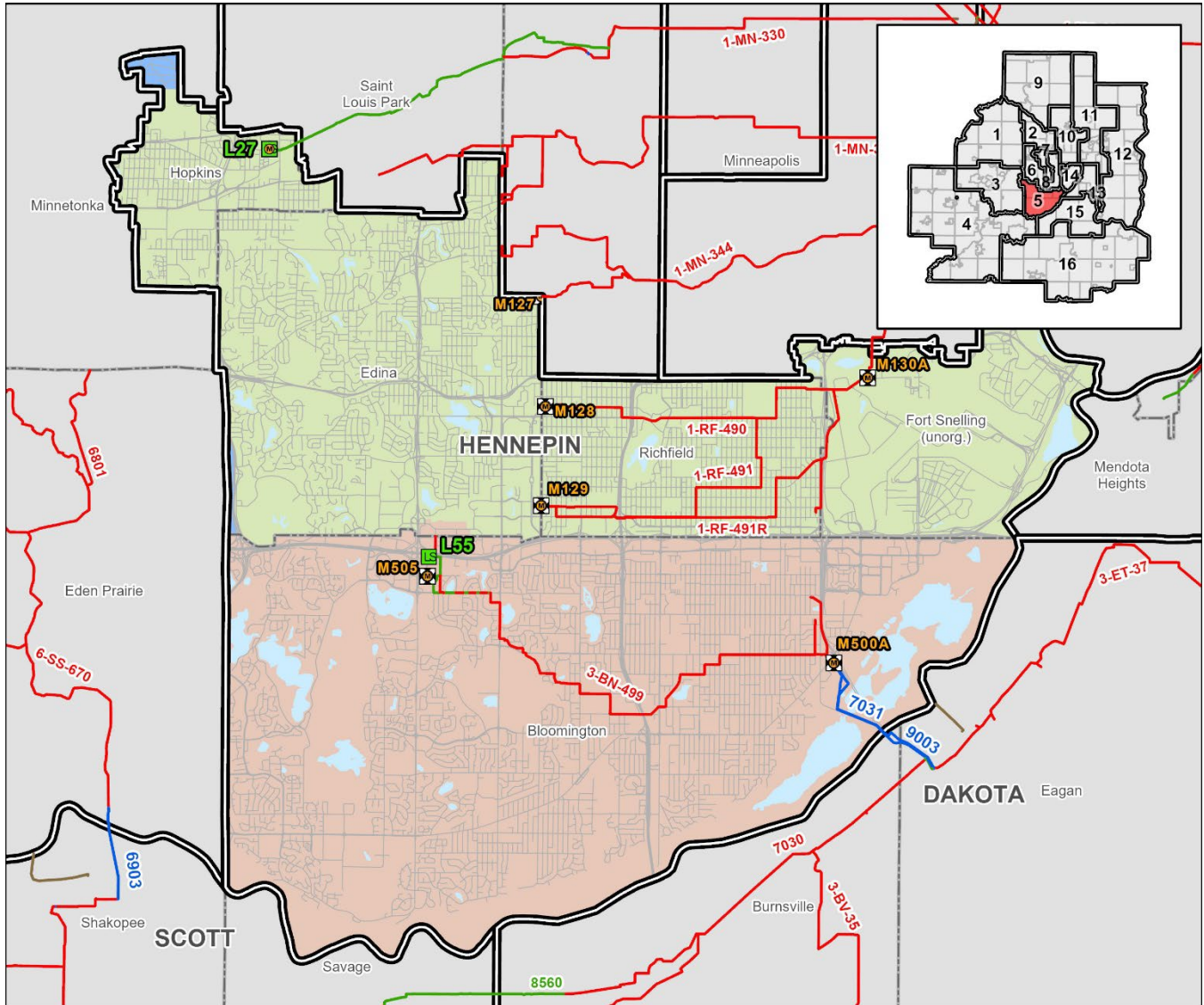
- 8028: Blue Lake Interceptor System Improvements
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8078: Regional Plant Improvements
- 8090: Interceptor Rehabilitation
- 8091: Wastewater Reclamation Facilities
- 8095: South Area Interceptor Improvements
- 8097: Blue Lake Solids Processing



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).



- Wastewater Infrastructure**
- Meters
 - Lift Stations
 - Liquid Waste Hauler Disposal Sites
- Interceptors**
- Gravity
 - Forcemain
 - Siphon

- Metropolitan Council Districts
- Long Term Wastewater Service Area**
- Blue Lake
 - Metro
 - Seneca

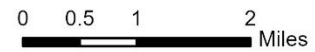
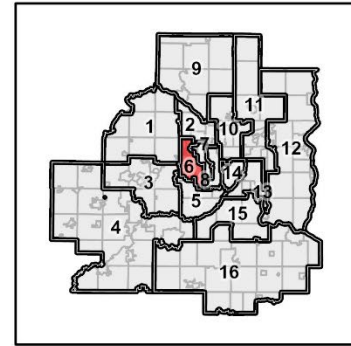
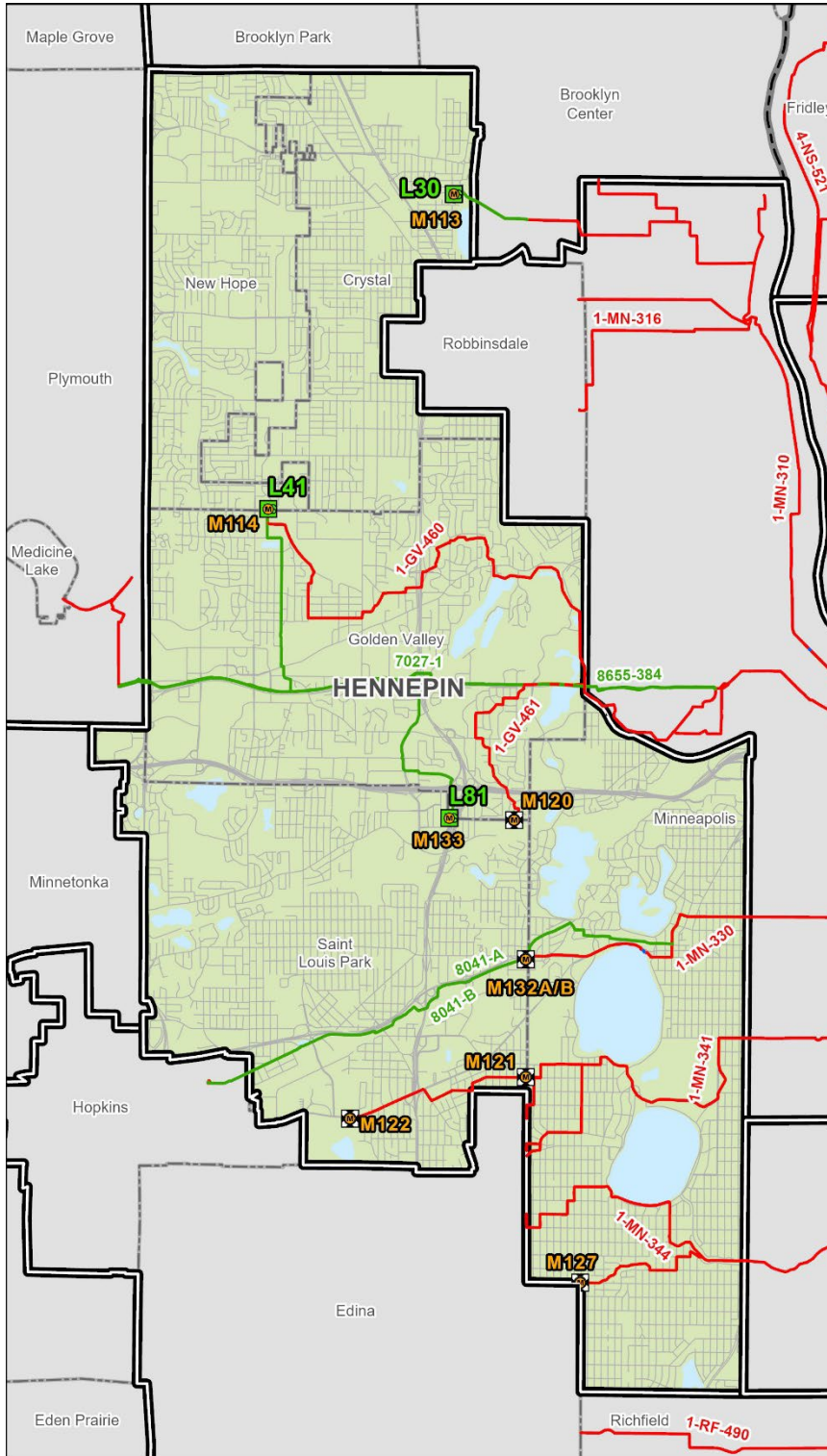
- Programs in this District**
- 8041: Hopkins System Improvements
 - 8055: Lift Station Improvements
 - 8056: Meter Improvements
 - 8090: Interceptor Rehabilitation



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.



Wastewater Infrastructure

- Meters
- Lift Stations
- ▣ Liquid Waste Hauler Disposal Sites

Interceptors

- Gravity
- Forcemain
- Siphon

Metropolitan Council Districts

- ▭ Metropolitan Council Districts
- Long Term Wastewater Service Area
- Metro

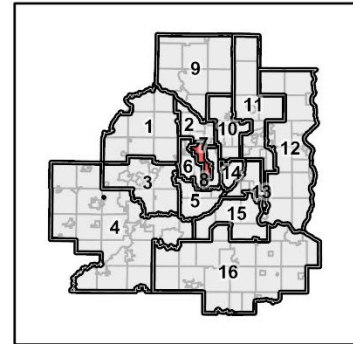
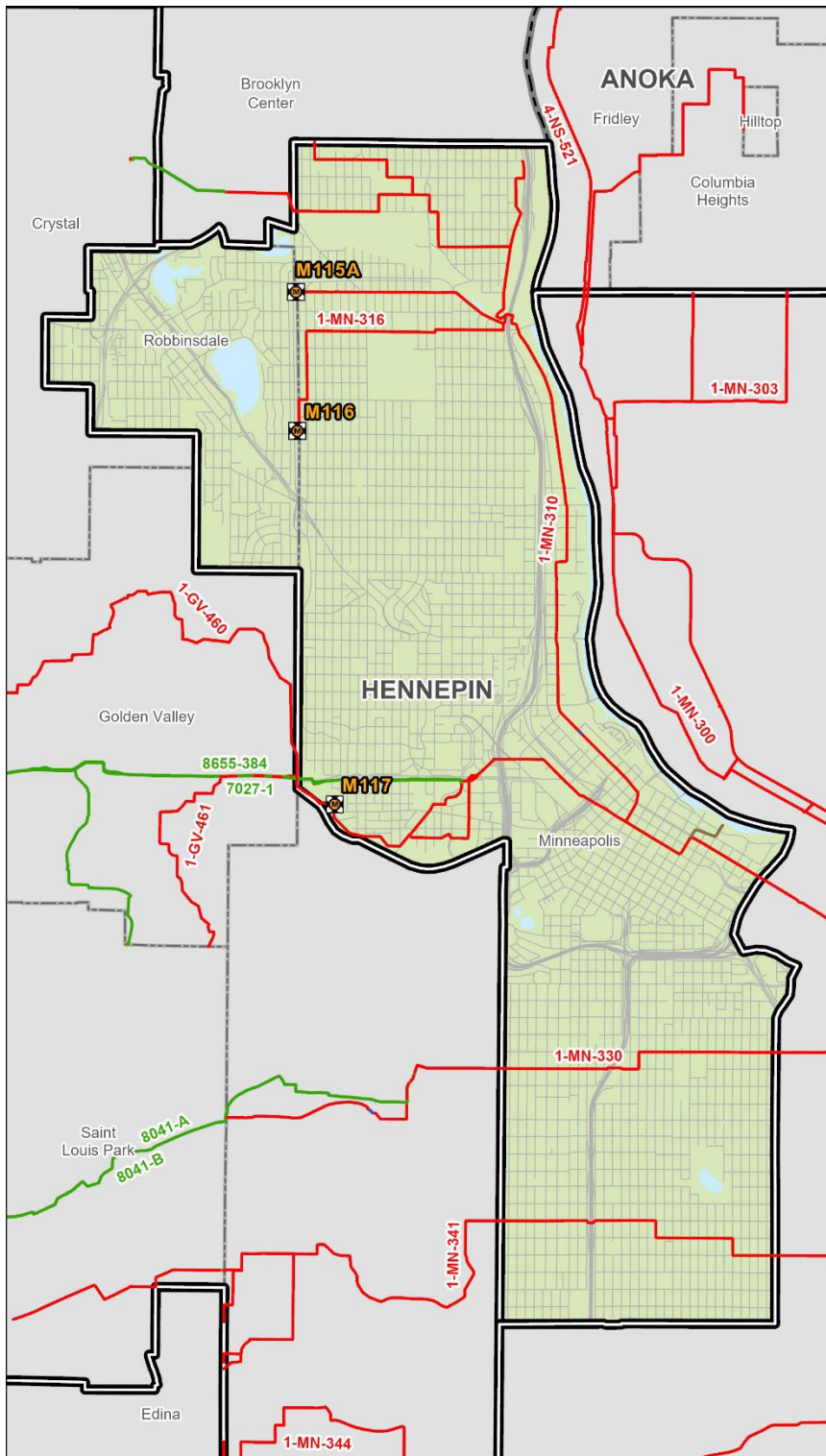
Programs in this District

- 8041: Hopkins System Improvements
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8076: Mpls. Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation
- 8092: Minneapolis Interceptor System Improvements
- 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.



Wastewater Infrastructure

- Meters
- ⊠ Liquid Waste Hauler Disposal Sites

Interceptors

- Gravity
- Forcemain
- Siphon
- Effluent

- ▭ Metropolitan Council Districts

Long Term Wastewater Service Area

- Metro

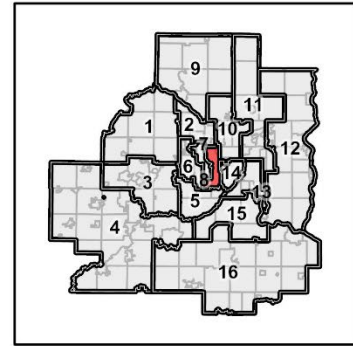
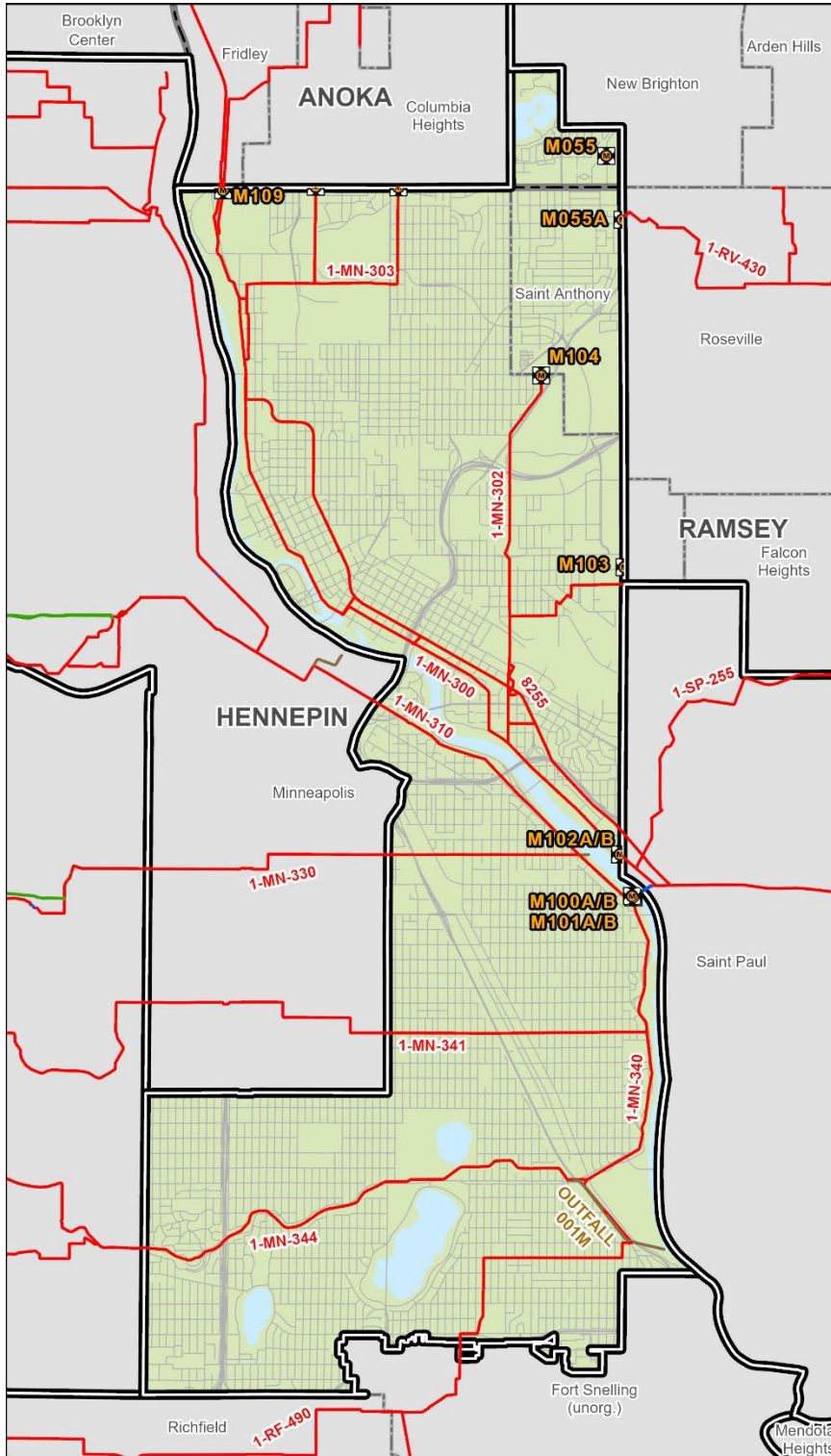
Programs in this District

- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8076: Mpls. Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation
- 8092: Minneapolis Interceptor System Improvements

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.



Wastewater Infrastructure

- Meters
- ⊠ Liquid Waste Hauler Disposal Sites
- Interceptors*
- Gravity
- Forcemain
- Siphon
- Effluent
- ▭ Metropolitan Council Districts
- Long Term Wastewater Service Area**
- Metro

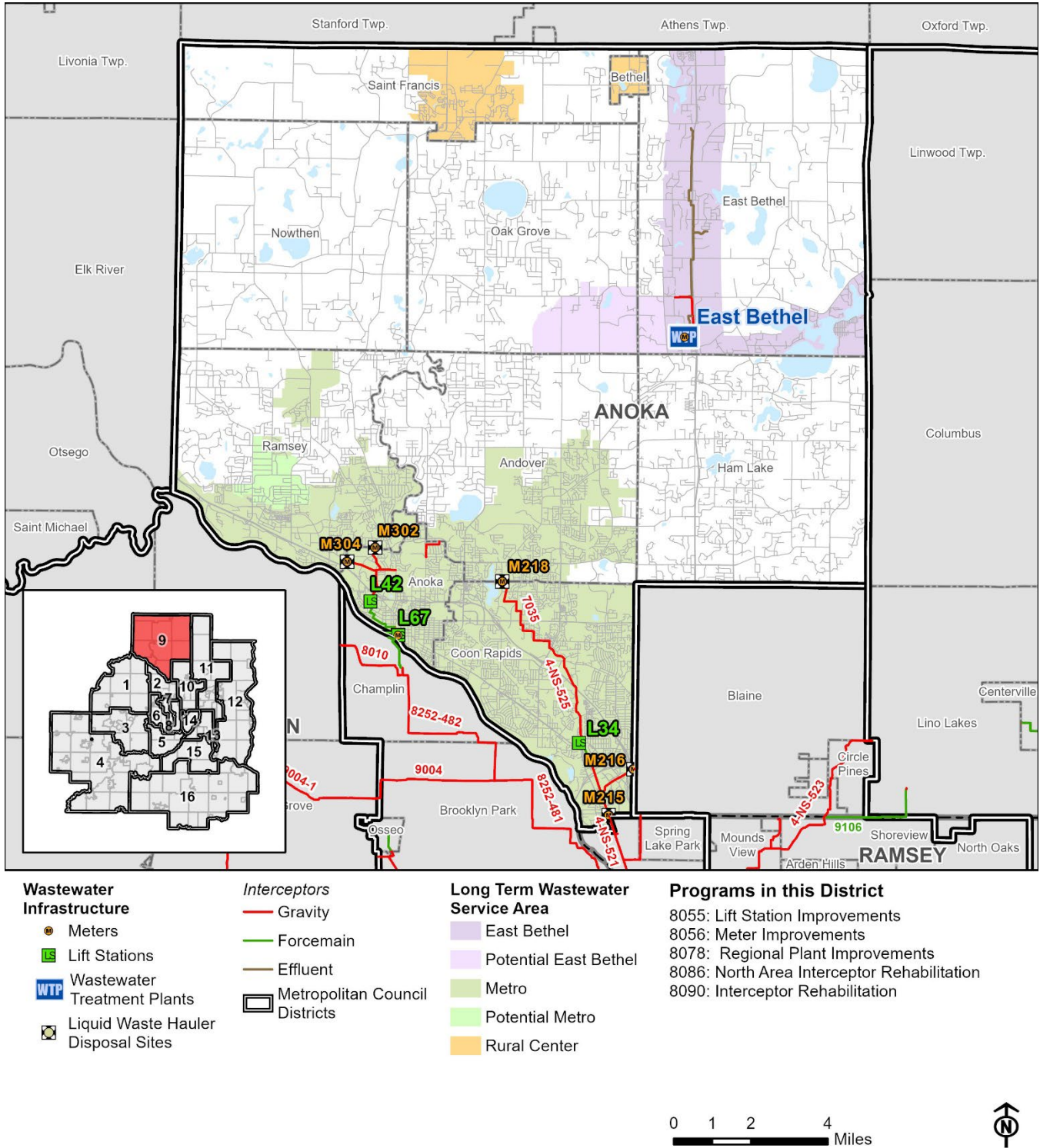
Programs in this District

- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8076: Mpls. Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation
- 8092: Minneapolis Interceptor System Improvements

District 9

Capital Program & Projects

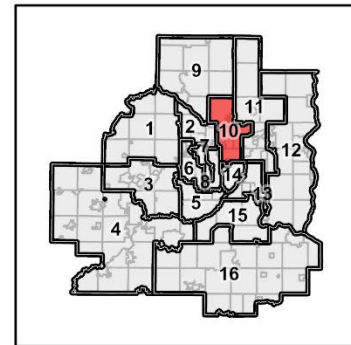
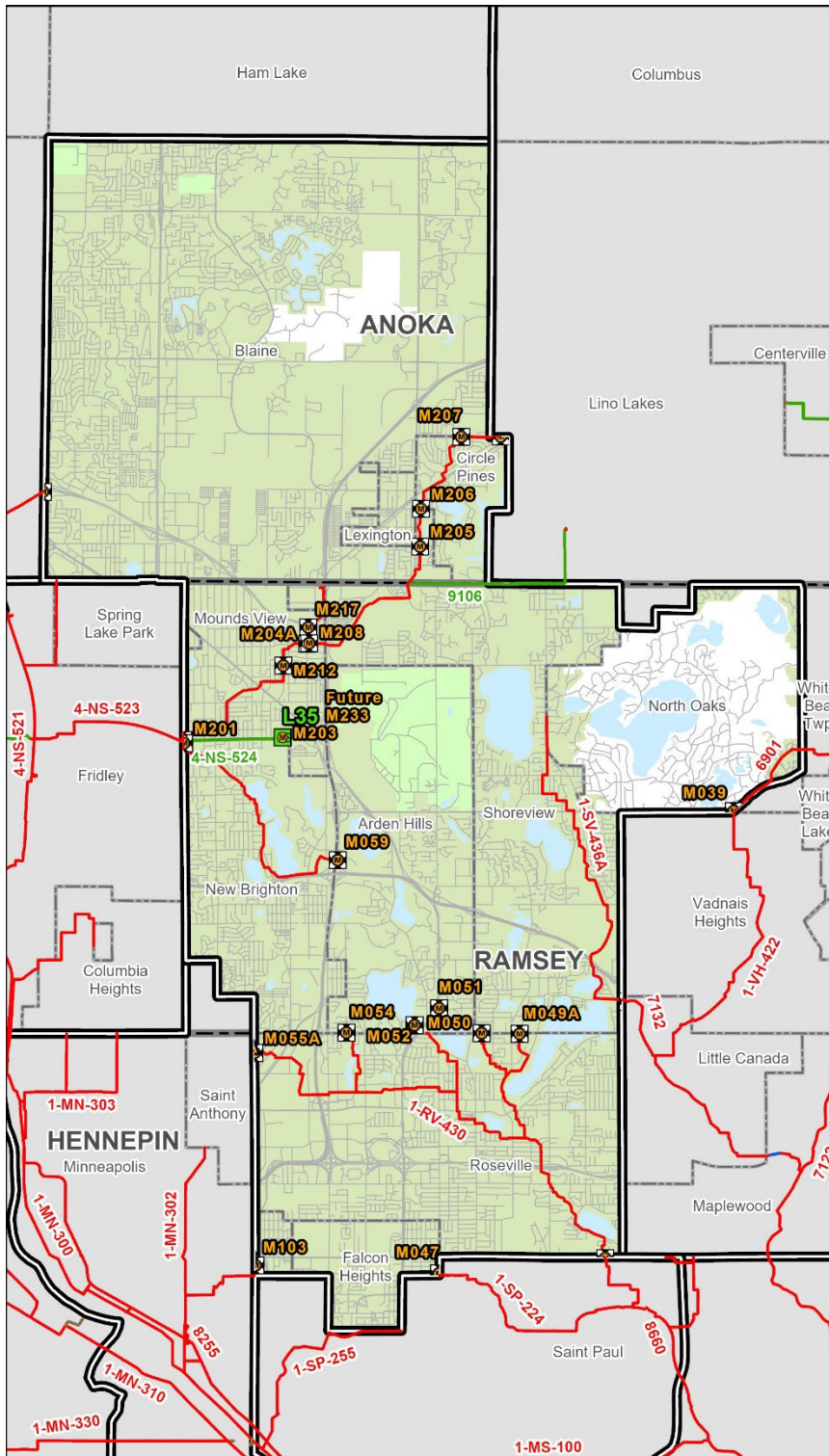
District 9 includes, in Anoka County, the cities of Andover, Anoka, Bethel, Coon Rapids, East Bethel, Ham Lake, Nowthen, Oak Grove, Ramsey, and St. Francis.



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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Liquid Waste Hauler Disposal Sites

Interceptors

- Gravity
- Forcemain

Metropolitan Council Districts

- Metro
- Potential Metro

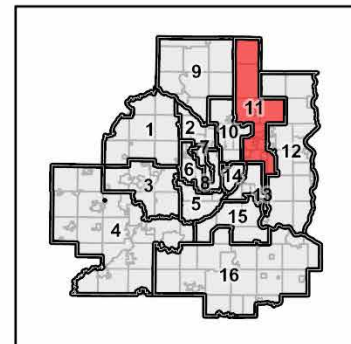
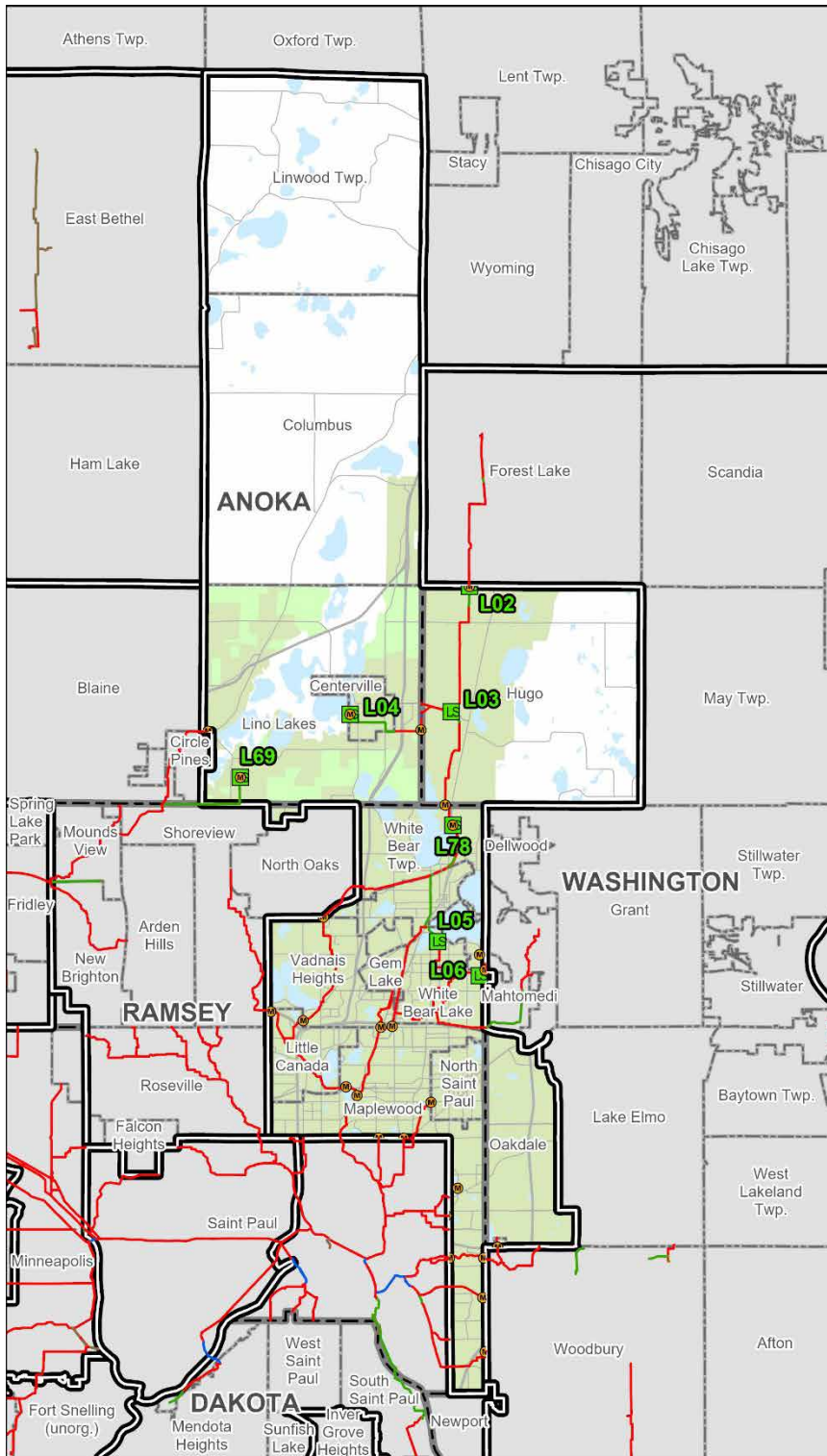
Programs in this District

- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8086: North Area Interceptor Rehabilitation
- 8088: St Paul Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation

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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Interceptors*
- Gravity
- Forcemain
- Siphon
- Metropolitan Council Districts

Long Term Wastewater Service Area

- Metro
- Potential Metro

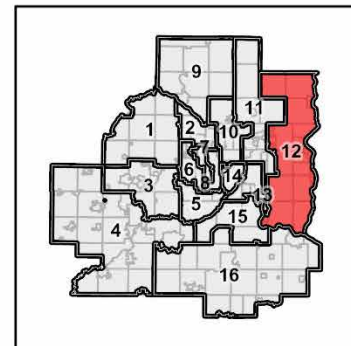
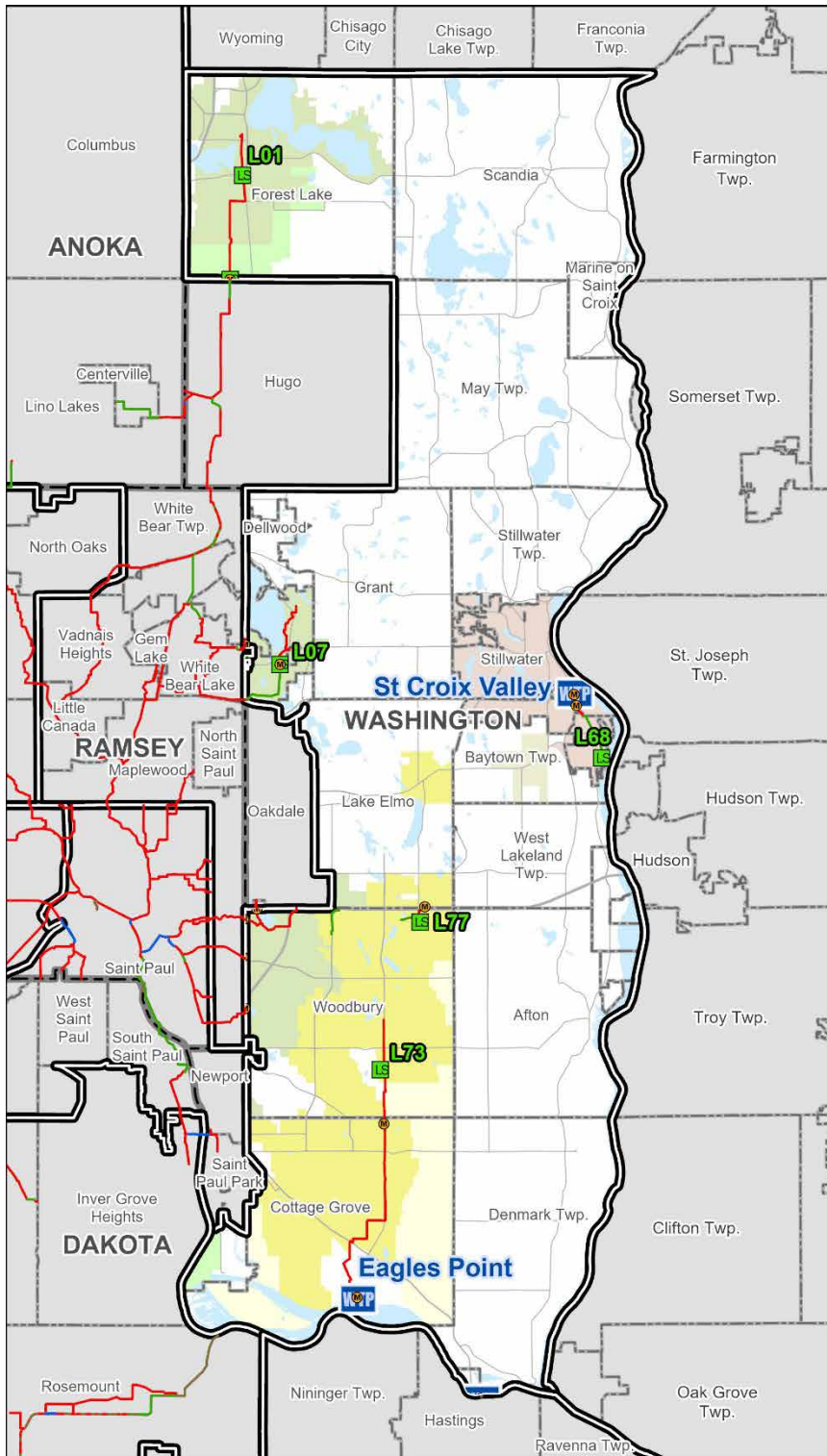
Programs in this District

- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8086: North Area Interceptor Rehabilitation
- 8088: St Paul Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation

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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Wastewater Treatment Plants

Interceptors

- Gravity
- Forcemain
- Effluent

Metropolitan Council Districts

Long Term Wastewater Service Area

- Eagles Point
- Potential Eagles Point
- Metro
- Potential Metro
- St. Croix Valley
- Potential St. Croix Valley

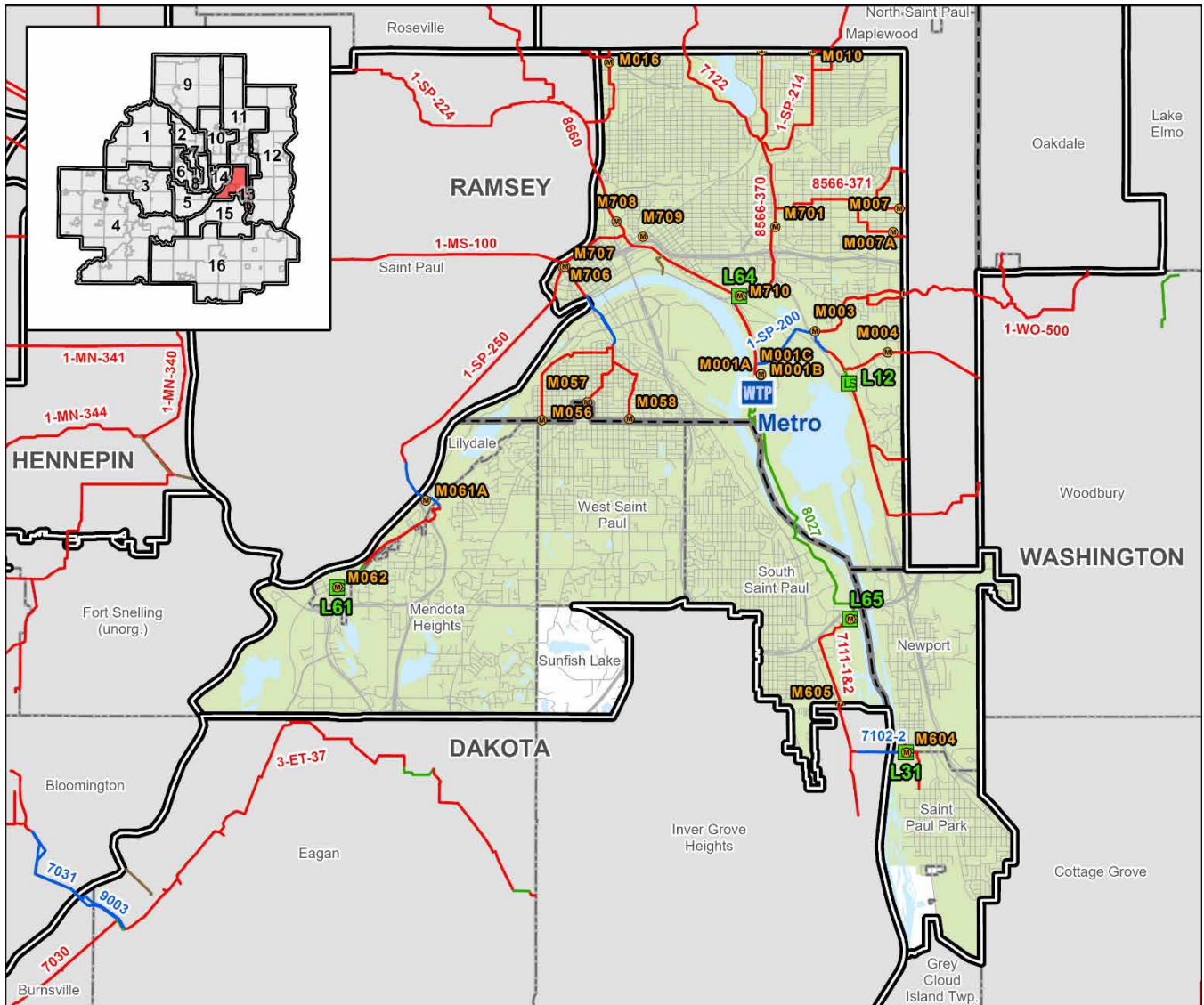
Programs in this District

- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8063: East Area Interceptor Improvements
- 8078: Regional Plant Improvements
- 8090: Interceptor Rehabilitation

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.



Wastewater Infrastructure

- Meters
- Lift Stations
- Wastewater Treatment Plants

Interceptors

- Gravity
- Forcemain
- Siphon
- Effluent

Metropolitan Council Districts

Long Term Wastewater Service Area

- Metro

Programs in this District

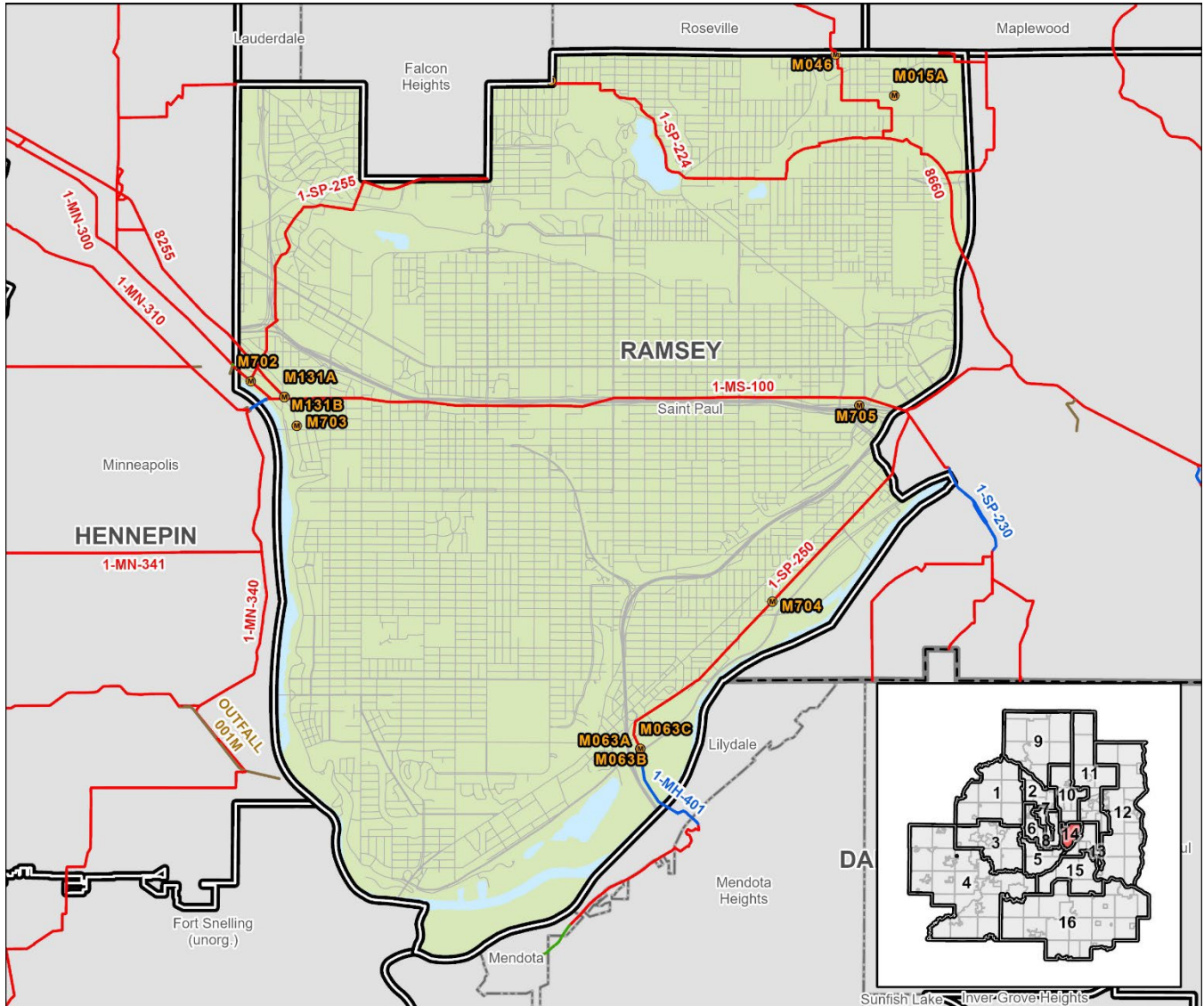
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8059: Metro Rehabilitation & Facilities Improve
- 8062: Metro Solids Improvements
- 8088: St Paul Interceptor System Rehabilitation
- 8089: MWWTP Asset Renewal
- 8090: Interceptor Rehabilitation



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.



Wastewater Infrastructure

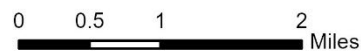
- Meters
- Interceptors*
- Gravity
- Siphon
- Effluent

Metropolitan Council Districts

- Long Term Wastewater Service Area
- Metro

Programs in this District

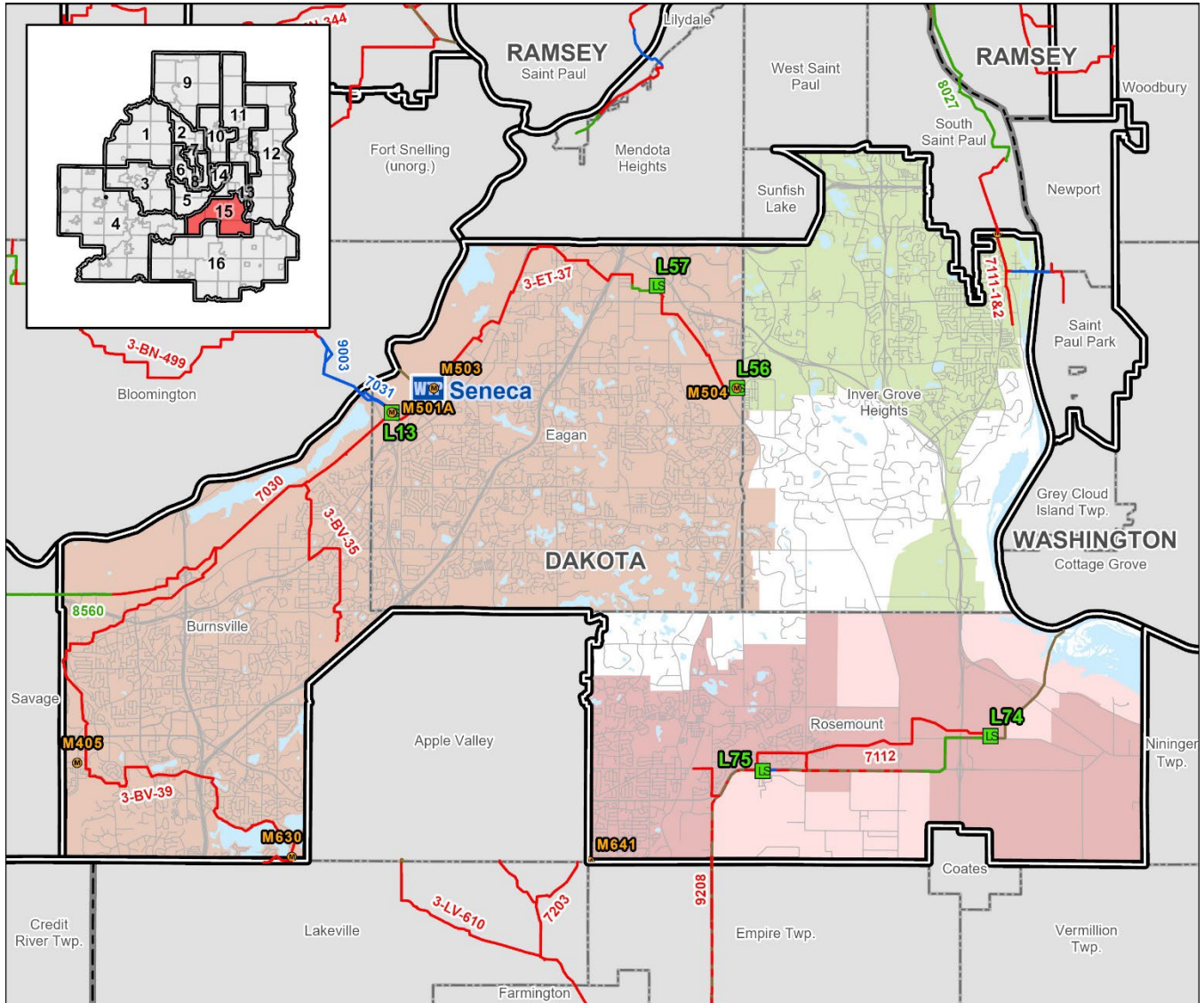
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8076: Mpls. Interceptor System Rehabilitation
- 8088: St Paul Interceptor System Rehabilitation
- 8090: Interceptor Rehabilitation



District 15

Capital Program & Projects

District 15 includes the cities of Burnsville, Eagan, Inver Grove Heights, and Rosemount in Dakota County.



Wastewater Infrastructure

- Meters
- Lift Stations
- Wastewater Treatment Plants

Interceptors

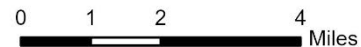
- Gravity
- Forcemain
- Siphon
- Effluent
- Metropolitan Council Districts

Long Term Wastewater Service Area

- Empire
- Potential Empire
- Metro
- Seneca

Programs in this District

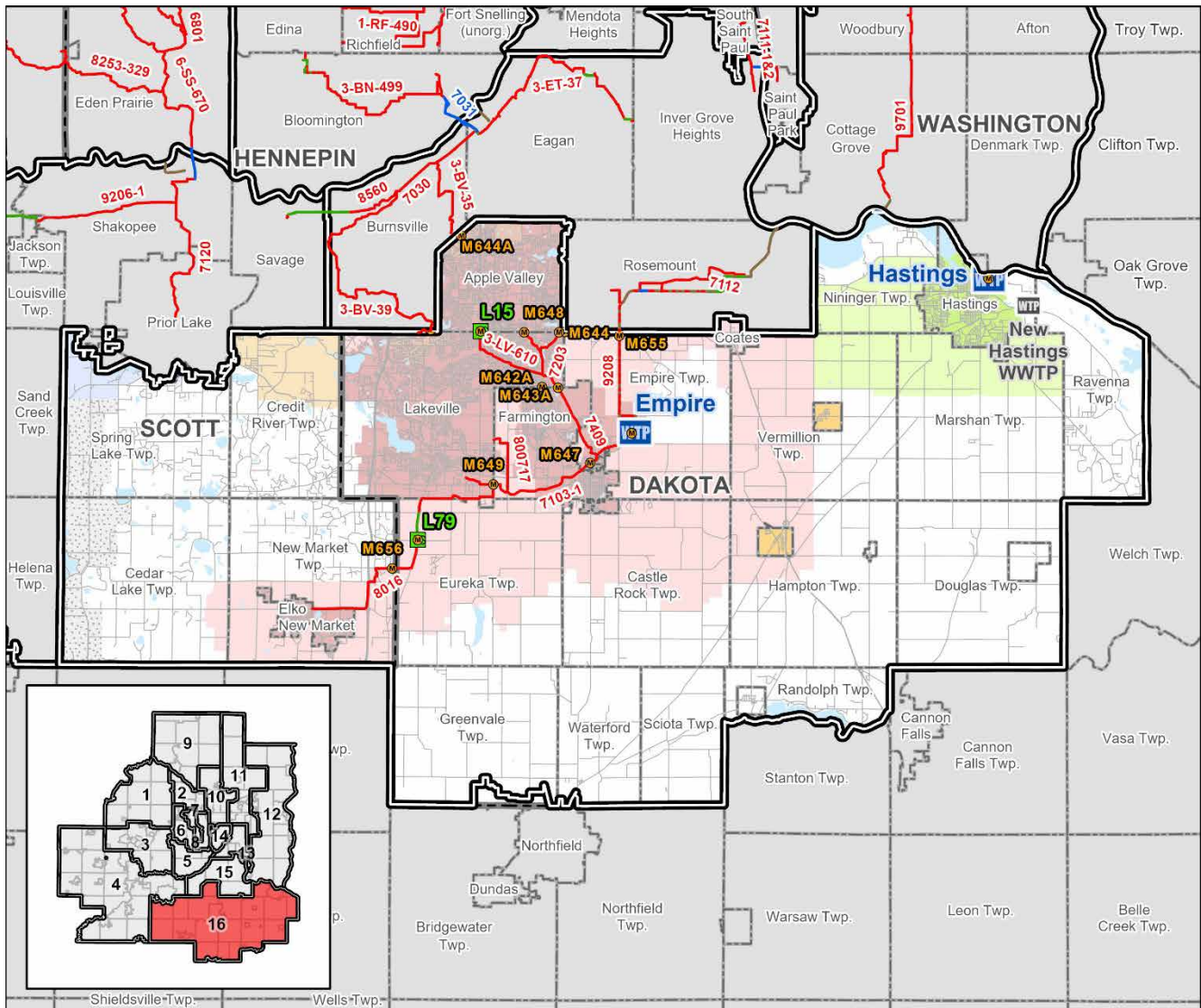
- 8055: Lift Station Improvements
- 8056: Meter Improvements
- 8078: Regional Plant Improvements
- 8090: Interceptor Rehabilitation
- 8091: Wastewater Reclamation Facilities
- 8095: South Area Interceptor Improvements



District 16

Capital Program & Projects

District 16 includes, in Dakota County, the cities of Apple Valley, Castle Rock Twp. Coates, Douglas Twp., Empire Twp., Eureka Twp., Farmington, Greenvale Twp., Hampton, Hampton Twp., Hastings, Lakeville, Marshan Twp., Miesville, New Trier, Nininger Twp., Randolph, Randolph Twp., Ravenna Twp., Sciota Twp., Vermillion, Vermillion Twp., and Waterford Twp. In Scott County, Cedar Lake Twp., Credit River Twp., Elko New Market, New Market Twp., and Spring Lake Twp. Excluded are the Dakota County portions of the city of Northfield.



<p>Wastewater Infrastructure</p> <ul style="list-style-type: none"> Meters Lift Stations Wastewater Treatment Plants Future Wastewater Treatment Plants 	<p>Interceptors</p> <ul style="list-style-type: none"> Gravity Forcemain Effluent Metropolitan Council Districts <p>Long Term Wastewater Service Area</p> <ul style="list-style-type: none"> Potential Blue Lake Empire 	<ul style="list-style-type: none"> Potential Empire Hastings Potential Hastings Seneca Potential Seneca Rural Center Scott Co. Urban Expansion 	<p>Programs in this District</p> <ul style="list-style-type: none"> 8055: Lift Station Improvements 8056: Meter Improvements 8074: Empire Plant Solids Improvements 8078: Regional Plant Improvements 8090: Interceptor Rehabilitation 8095: South Area Interceptor Improvements 8098: Hastings WWTP
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Appendix A: Project Summaries by Program – Treatment Plant

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Program 8059 Metro Rehabilitation and Facilities Improvements

View of Metro WWTP

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

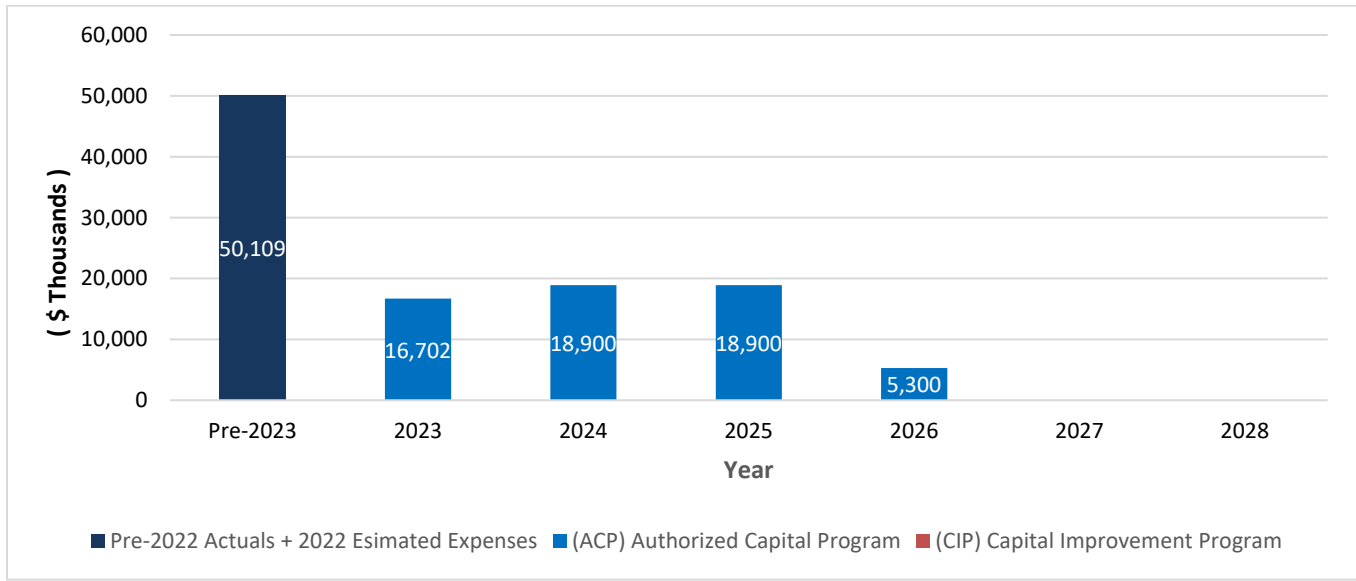
Active Projects in Program:

Project Number	Project Title
805947	Metro WWTP Solids Renewal and Improvements
805990	Metro WWTP Site Preparation and Improvements
805998	Metro WWTP Services Buildings

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$109,910,880	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8059
Project # 805947

Metro WWTP Solids Renewal and Improvements

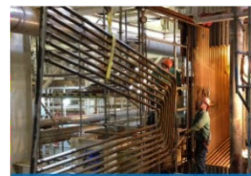
Project Location:
Council District # 13
City of Saint Paul
Metro WWTP



Fluid Bed Incinerator Air Distribution



Baghouse Stainless Steel Liner



Waste Heat Boiler Tube Replacement



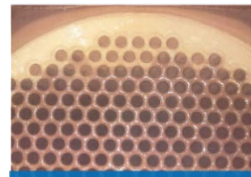
Scrubber Modifications



Cake Pumping Modifications



Alkaline Loadout Improvements



Auxiliary Condenser Improvements



Sludge Storage Mixing Improvements

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	The project 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
2020-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$1,600,000	Current ACP \$23,380,000	2023 – 2028 Cash Flow \$1,600,000	Total Project Cost \$23,380,000
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Program Family: 8059
Project # 805990

Metro WWTP Site Preparation and Improvements

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



5th and 5th Road Rehabilitation



Closed Loop Cooling System at SMB

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Lead by Example
SCOPE:	The project rehabilitates roads, Primary Settling tanks, Gravity Thickening tanks and parts of the influent channel; installs a waterline; renews the Solids storage pad and installs a closed loop cooling system for instrument air compressors.
PROJECT NEED:	There is a need to replace or rehabilitate assets throughout the Metro Plant to extend service life.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$4,000,000	Current ACP \$14,423,000	2023 – 2028 Cash Flow \$4,000,000	Total Project Cost \$14,423,000
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Program Family: 8059
Project # 805998

Metro WWTP Services Buildings

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



Future location of Services Building and Field Service Annex Concept Drawing

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Quality Improvements
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



Planning
2006-2009



Design
2020-2022



Construction
2023-2026

FINANCIAL ANALYSIS

2023 Cash Flow \$10,700,000	Current ACP \$55,796,000	2023 – 2028 Cash Flow \$53,800,000	Total Project Cost \$55,796,000
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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

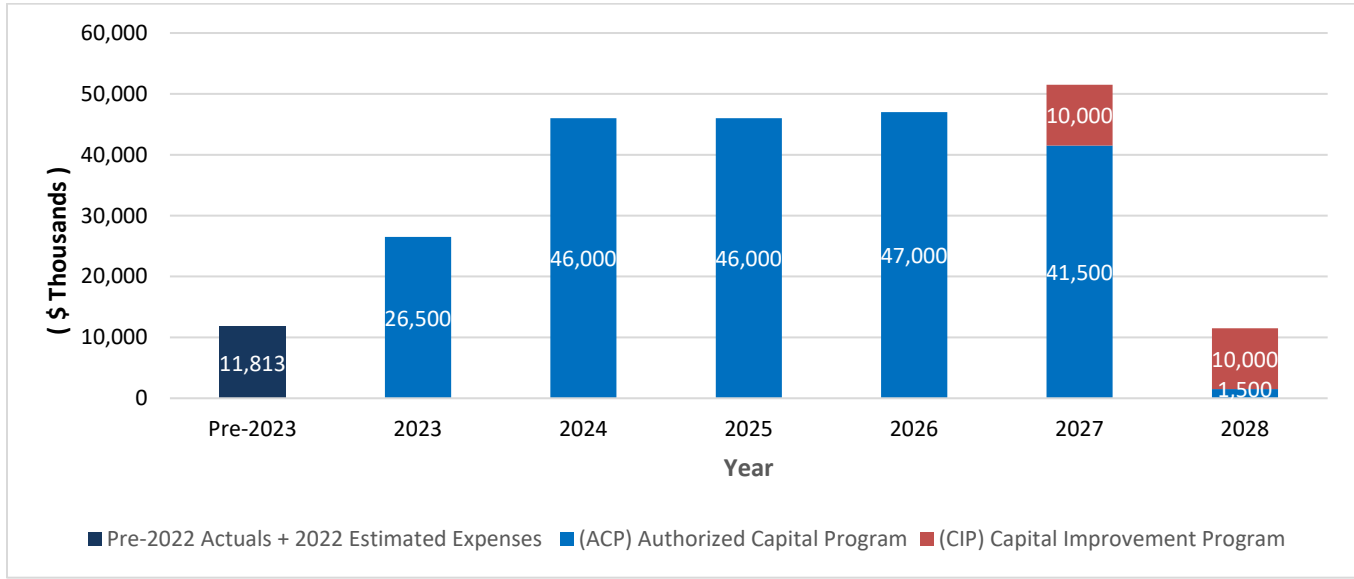
Active Projects in Program:

Project Number	Project Title
806210	Metro WWTP Solids Management Improvements Facility Plan
806230	Metro WWTP Fluid Bed Reactor 4
806240	Metro WWTP Renewal of Fluid Bed Reactors 1, 2 & 3

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$220,313,198	Capital Improvement Plan (CIP) \$20,000,000
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Estimated Program Cash Flow 2023 - 2028:

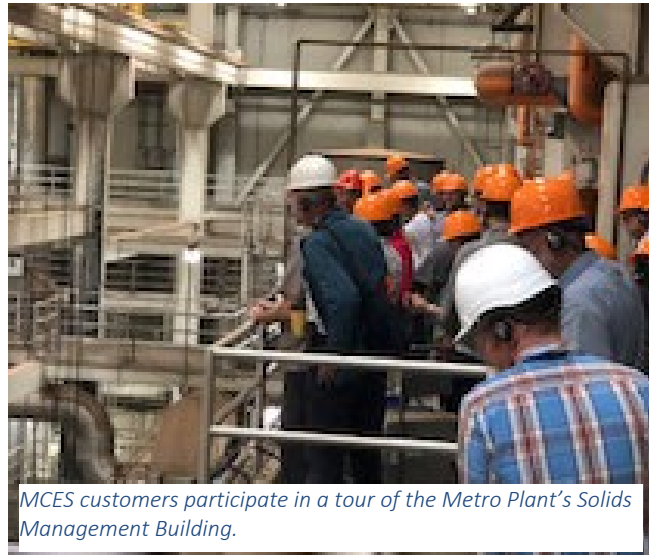


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8062
Project # 806210

Metro WWTP Solids Management Improvements Facility Plan

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



MCES customers participate in a tour of the Metro Plant's Solids Management Building.

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Comply with Permits, Minimize Impacts, Lead by Example, Be A Good Neighbor, Optimize Budget Plan, Preserve Assets, and Meet Capacity Needs
SCOPE:	<p>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.</p> <p>Develop and execute a communications plan for internal and external outreach, including a public hearing for facility plan review.</p>
PROJECT NEED:	The Metro WWTP needs additional solids treatment capacity to preserve existing wastewater infrastructure and to serve regional population growth.

PROJECT SCHEDULE



Planning

2011-2023



Design

N/A



Construction

N/A

FINANCIAL ANALYSIS

2023 Cash Flow \$500,000	Current ACP \$4,304,000	2023 – 2028 Cash Flow \$500,000	Total Project Cost \$4,304,000
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Program Family: 8062
Project # 806230

Metro WWTP Fluid Bed Reactor 4

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



PROJECT TYPE:	Plants
OBJECTIVES:	Asset Preservation and System 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



FINANCIAL ANALYSIS

2023 Cash Flow \$25,000,000	Current ACP \$202,500,000	2023 – 2028 Cash Flow \$200,000,000	Total Project Cost \$202,500,000
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Program Family: 8062
Project # 806240

Metro WWTP Renewal of Fluid Bed Reactors 1, 2 & 3

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



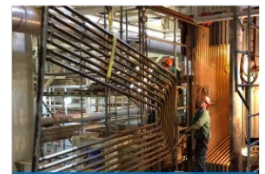
Sludge Storage Pumping Improvements



Fluid Bed Incinerator Rehabilitation



Primary Heat Exchanger Renewal



Waste Heat Boiler Renewal



Baghouse Renewal



Wet ESP Improvements



Turbine Generator Improvements



Sludge Feed Improvements

PROJECT TYPE:	Plants
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	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.
PROJECT NEED:	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.

PROJECT SCHEDULE



Planning
N/A



Design
2025-2026



Construction
2026-2028

FINANCIAL ANALYSIS

2023 Cash Flow \$0	Current ACP \$0	2023 – 2028 Cash Flow \$20,000,000	Total Project Cost \$30,000,000
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Program 8074 Empire WWTP Solids Improvements



Solids Improvements



Aerial View of Empire WWTP

Description:

This program provides funding for planning and implementation of improvements to the 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

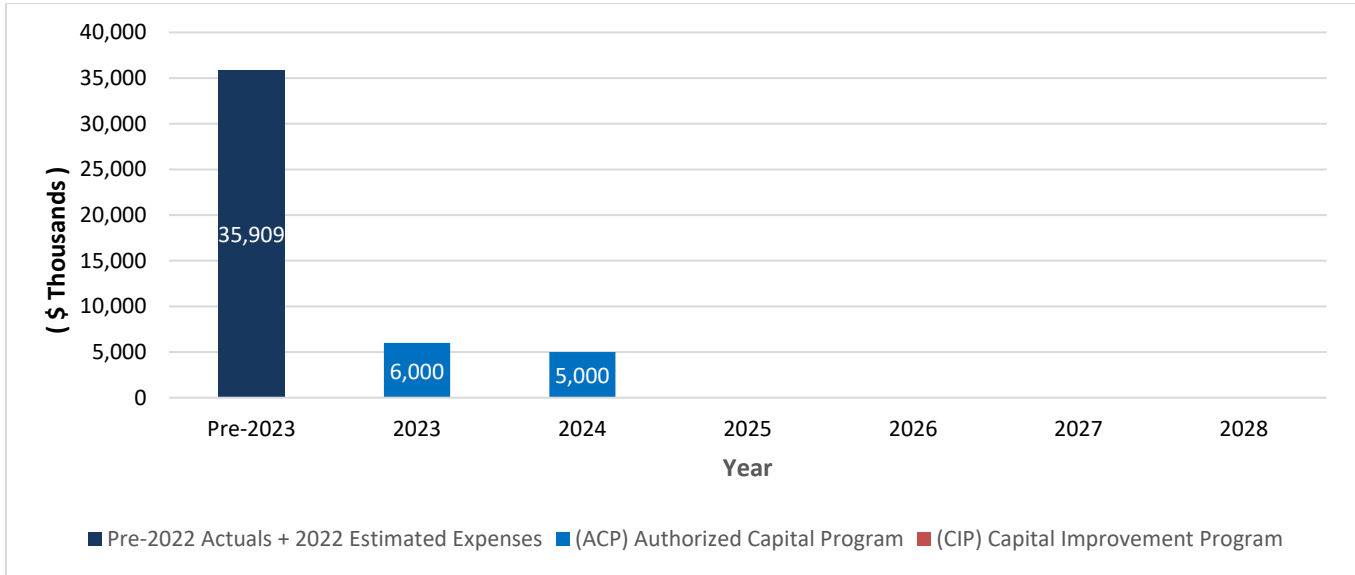
Active Projects in Program:

Project Number	Project Title
807400	Empire WWTP Solids Improvements Phase I
807401	Empire WWTP Solids Improvements Phase II
807415	Empire WWTP High Strength Waste Receiving Pilot

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$46,908,762	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8074
Project # 807400

Empire WWTP Solids Improvements Phase I

Project Location:
Council District # 16
Empire Township
Empire WWTP



A pad cover has been constructed to improve solids processing

PROJECT TYPE:	Plant Expansion
OBJECTIVES:	Asset Preservation, System Expansion and Quality Improvements
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



Planning
2011-2013



Design
2014-2019



Construction
2020-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$1,000,000	Current ACP \$27,995,000	2023 – 2028 Cash Flow \$1,000,000	Total Project Cost \$27,995,000
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Program Family: 8074
Project # 807401

Empire WWTP Solids Improvements Phase II

Project Location:
Council District # 16
Empire Township
Empire WWTP



Image of biogas flare and Digesters 4 & 5 at Empire WWTP

PROJECT TYPE:	Plant Expansion
OBJECTIVES:	Asset Expansion and Quality Improvements
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



Planning
2011-2013



Design
2019-2020



Construction
2022-2024

FINANCIAL ANALYSIS

2023 Cash Flow \$5,000,000	Current ACP \$18,052,000	2023 – 2028 Cash Flow \$10,000,000	Total Project Cost \$18,052,000
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Program Family: 8074
Project # 807415

Empire WWTP High Strength Waste Receiving Pilot

Project Location:
Council District # 16
Empire Township
Empire WWTP



HSW Receiving Tanks



HSW Receiving Station

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Quality Improvements
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 pilots 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$10,000	\$862,000	\$10,000	\$862,000

Program 8078 Regional Plant Improvements

Aerial view of the Rogers Wastewater Treatment Facility acquired by MCES in 2018

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:

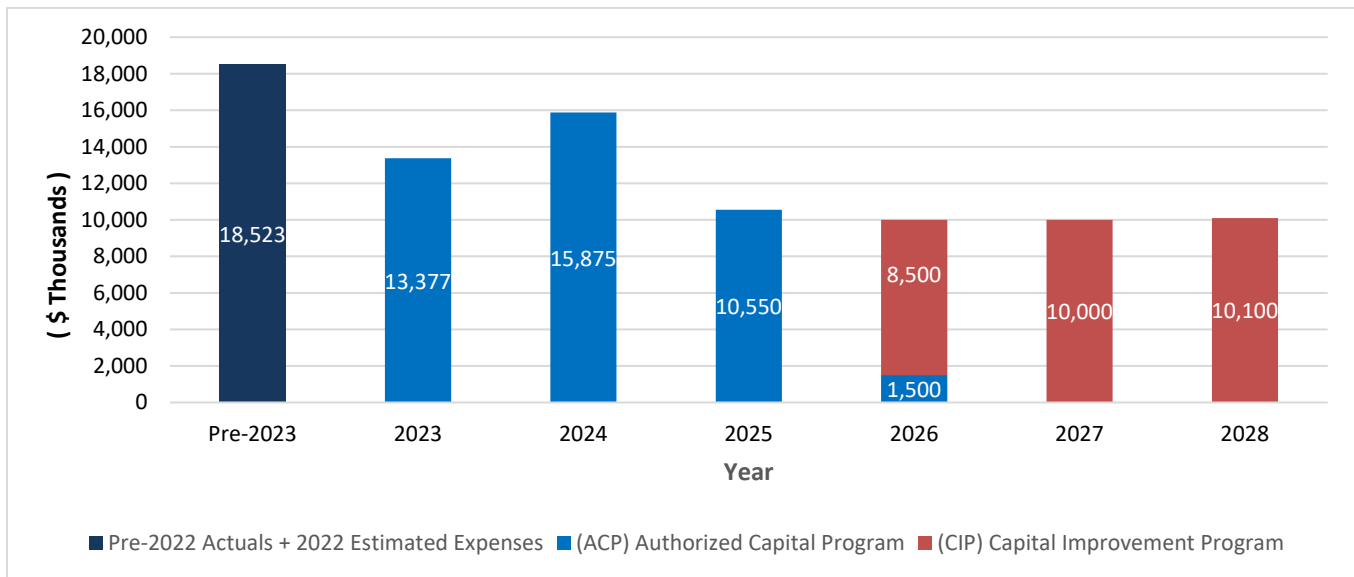
Project Number	Project Title
807803	Blue Lake Administration Building.
807805	East Bethel WRF Improvements.
807818	Hastings WWTP Aeration & HVAC Renewal.
807826	Empire WWTP Arc Flash Improvements Phase 1.
807858	Blue Lake FSF and Solids Renewal.
807863	Rogers WWTF Pond Solids Removal.
807865	Treatment Plant PLC Renewal.
807899	Regional Plant Planning.
8078XX	SCV WWTP HVAC & Gravity Thickener Metals Renewal.

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP)
\$59,825,296

Capital Improvement Plan (CIP)
\$28,600,000

Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8078
Project # 807803

Blue Lake WWTP Administration Building

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



Blue Lake WWTP Administration Building

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation and System 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$2,000,000	\$4,000,000	\$4,000,000

Program Family: 8078
Project # 807805

East Bethel WRF Improvements

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



East Bethel Water Reclamation Plant

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Lead by Example
SCOPE:	Modify the piping to adjust to start up flows and 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 to accommodate increasing flows as new connections are made. MCES is also working to achieve high effluent quality for a variety of potential reclaimed uses.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$100,000	Current ACP \$1,759,000	2023 – 2028 Cash Flow \$1,000,000	Total Project Cost \$1,759,000
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Program Family: 8078
Project # 807818

Hastings WWTP Aeration & HVAC Renewal

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



Aerial View of Hastings WWTP

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$400,000	\$2,017,000	\$400,000	\$2,017,000

Program Family: 8078
Project # 807826

Empire WWTP Arc Flash Improvements Phase 1

Project Location:
Council District # 16
Empire Township
Empire WWTP



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow \$10,000	Current ACP \$2,470,000	2023 – 2028 Cash Flow \$10,000	Total Project Cost \$2,470,000
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Program Family: 8078
Project # 807858

Blue Lake FSF and Solids Renewal

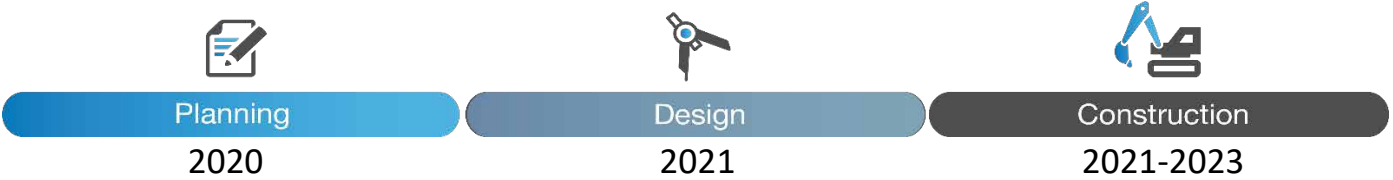
Project Location:
Council District # 4
City of Shakopee
Location:
Blue Lake WWTP



Existing Regenerative Thermal Oxidizer

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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 has completed 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



FINANCIAL ANALYSIS

2023 Cash Flow \$2,000,000	Current ACP \$5,201,000	2023 – 2028 Cash Flow \$2,000,000	Total Project Cost \$5,201,000
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Program Family: 8078
Project # 807863

Rogers WWTF Pond Solids Removal

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs
SCOPE:	Remove solids from the solids holding pond and grit from the oxidation ditches.
PROJECT NEED:	The solids holding pond at the MCES Rogers WWTF needs to have solids removed to ensure sufficient capacity in the pond prior to decommissioning of the facility. Additionally, there is a significant accumulation of grit in the oxidation ditches that needs to be removed to recover aeration capacity.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$1,500,000	Current ACP \$6,000,000	2023 – 2028 Cash Flow \$2,500,000	Total Project Cost \$6,000,000
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Program Family: 8078
Project # 807865

Treatment Plant PLC Renewal

Project Location:
Council District:
Regional Project



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	Replace out-of-date process control systems at Regional Wastewater Treatment Plants.
PROJECT NEED:	Key elements in the process control system for regional wastewater treatment plants are out-of-date and in need of replacement in order to continue to provide reliable treatment plant process control.

PROJECT SCHEDULE



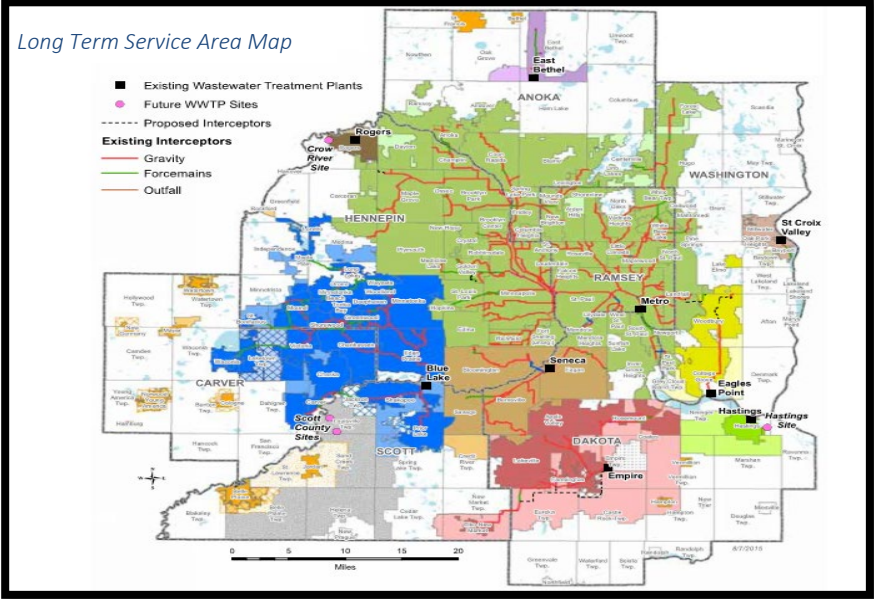
FINANCIAL ANALYSIS

2023 Cash Flow \$2,500,000	Current ACP \$9,500,000	2023 – 2028 Cash Flow \$8,000,000	Total Project Cost \$9,500,000
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Program Family: 8078
Project # 807899

Regional Plant Planning

Project Location:
Regional



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$100,000	\$460,000	\$600,000	\$760,000

Program Family: 8078
Project # 8078XX

SCV WWTP HVAC & Gravity Thickener Metals Renewal

Project Location:
Council District # 12
City of Stillwater
St. Croix Valley WWTP



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	Renew metals and improve access and ventilation at the gravity thickener. Replace obsolete ultraviolet disinfection system. Renew bar screen and provide system redundancy. Replace obsolete electrical and HVAC equipment.
PROJECT NEED:	The covered gravity thickener requires metals renewal and improved access and ventilation to maintain a safe work environment. Components of the existing UV system are obsolete and cannot be replaced. Where possible, MCES constructs improvements to minimize impacts and reduce risk to its maintenance personnel.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$2,100,000	\$2,000,000	\$22,100,000

Program Family: 8078
Project # 8078XX

Seneca Piping and Site Rehabilitation

Project Location:
Council District # 15
City: Eagan
Seneca WWTP



Aerial View of Seneca WWTP

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	The project includes replacement of the final section of the RAS line returning to the aeration basins as well as rehabilitation of the main influent line into the plant. There will also be some site drainage improvements.
PROJECT NEED:	Two large pipes have reached the end of life. The main influent to the plant was poured along with the Administration Building foundation and has been labeled as a level 5 by the interceptor group, meaning immediate attention is needed. Also, the RAS line has corroded and needs to be replaced.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$2,000,000	Current ACP \$3,000,000	2023 – 2028 Cash Flow \$3,000,000	Total Project Cost \$3,000,000
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Program 8089 Metro WWTP Asset Renewal

Metropolitan Wastewater Treatment Plant (MWWTP)

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:

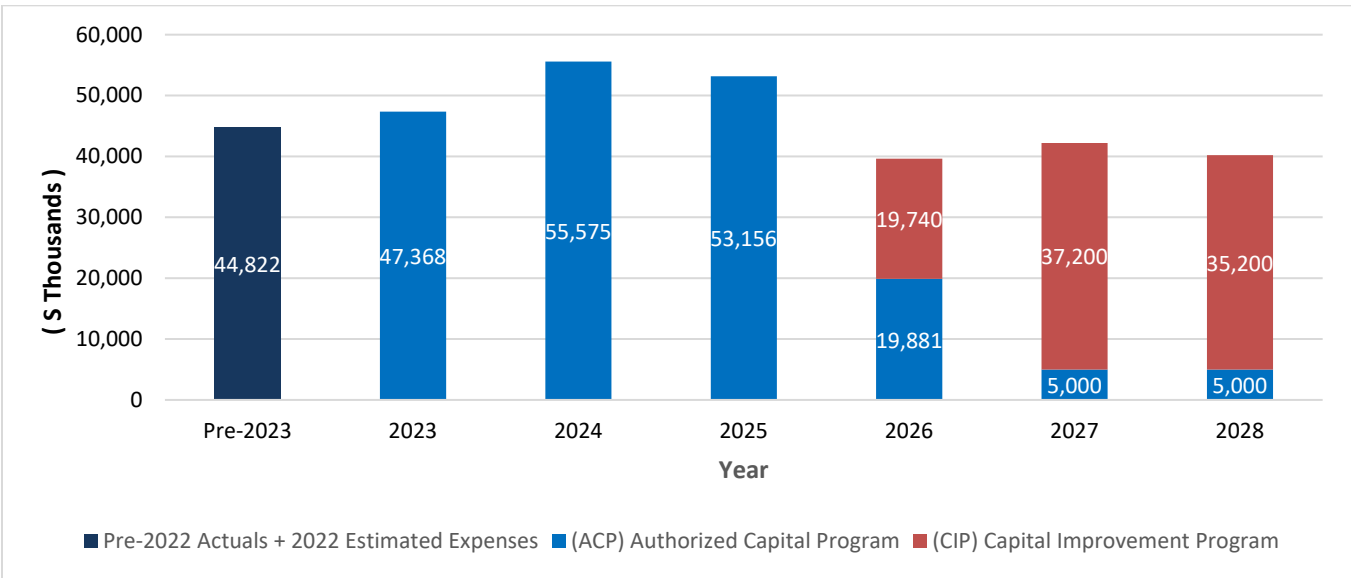
Project Number	Project Title
808915	Metro WWTP Electrical Distribution Renewal Phase 2
808916	Metro WWTP Electrical Distribution Renewal Phase 3
808921	MWWTP Primary Settling Tank Chain
808923	MWWTP Site Preparation and Improvements - Phase 2
808925	Metro PLC Renewal
808930	Metro WWTP Secondary Renewal
808935	Metro WWTP Secondary & Primary Renewal
808963	Metro WWTP Water Systems Renewal and Improvements Phase 1: Distribution System Renewal
8089XX	MWWTP Roof Replacement
8089XX	Metro WWTP Electrical Distribution Renewal – Phase 4

8089XX	Metro WWTP Water Systems Renewal & Improvements Phase 2 – Reclaimed Water
8089XX	Metro WWTP Effluent Pump Station Rehabilitation
8089XX	Metro Exterior Buildings Improvements
8089XX	Metro WWTP Water Systems Renewal and Improvements Phase 3: City Water Renewal
8089XX	Metro 408 and F&I#2 Building Envelope Rehabilitation
8089XX	Metropolitan WWTP Primary Scum Improvements

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$230,802,073	Capital Improvement Plan (CIP) \$92,140,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8089
Project # 808915

Metro WWTP Electrical Distribution Renewal Phase 2

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow \$1,260,000	Current ACP \$5,047,851	2023 – 2028 Cash Flow \$1,260,000	Total Project Cost \$5,047,851
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Program Family: 8089
Project # 808916

Metro WWTP Electrical Distribution Renewal Phase 3

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation, System Expansion and Quality Improvements
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 assessments 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



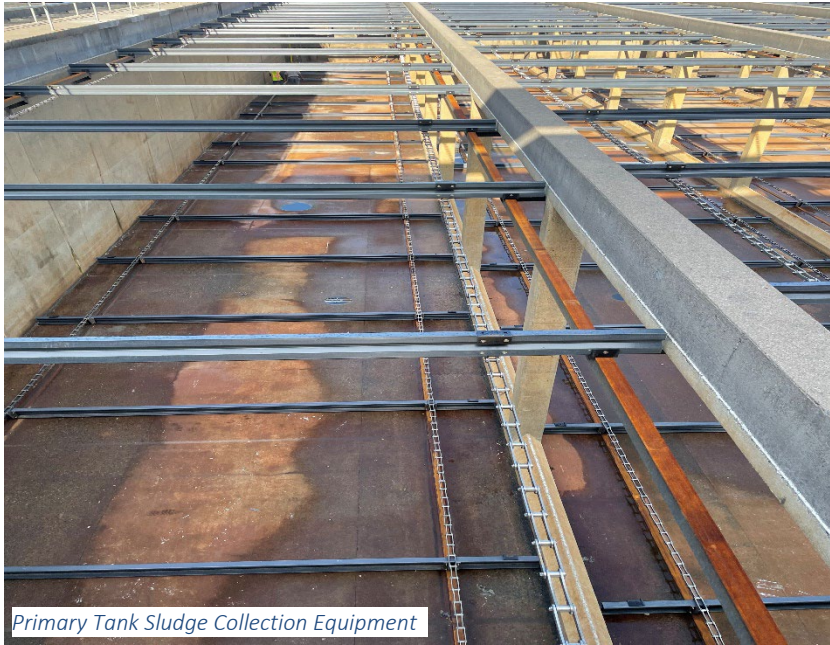
FINANCIAL ANALYSIS

2023 Cash Flow \$12,000,000	Current ACP \$59,645,327	2023 – 2028 Cash Flow \$46,800,000	Total Project Cost \$59,645,327
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Program Family: 8089
Project # 808921

MWWTP Primary Settling Tank Chain

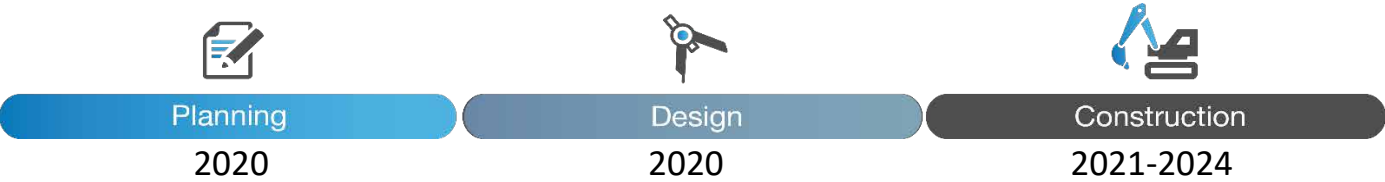
Project Location:
Council District # 13
City of St. Paul
Metro WWTP



Primary Tank Sludge Collection Equipment

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



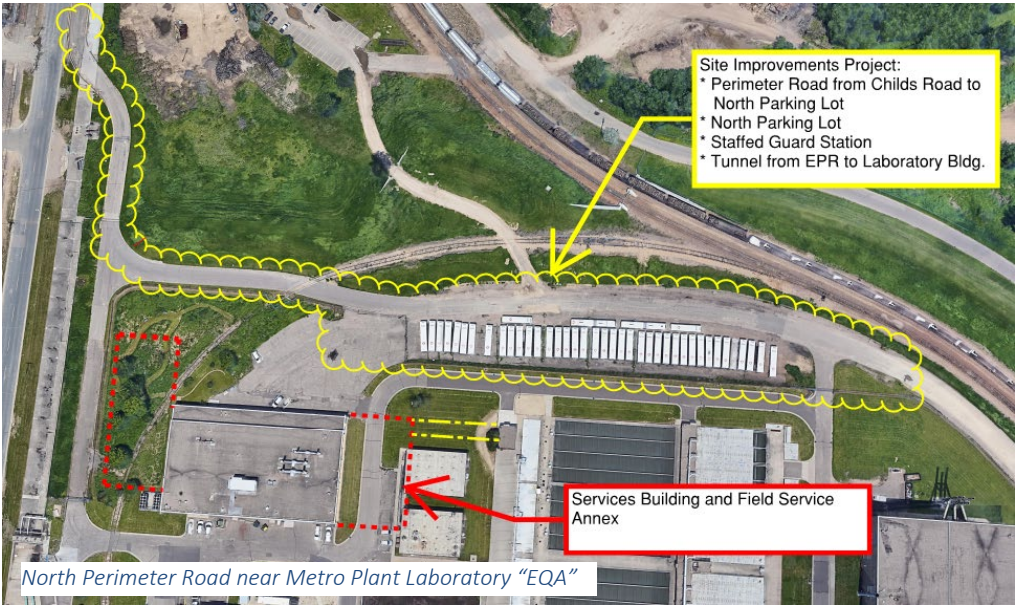
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$500,000	\$2,456,326	\$500,000	\$2,456,326

Program Family: 8089
Project # 808923

MWWTP Site Preparation & Improvements – Phase 2

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



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



FINANCIAL ANALYSIS

2023 Cash Flow \$2,000,000	Current ACP \$8,037,328	2023 – 2028 Cash Flow \$6,500,000	Total Project Cost \$8,037,328
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Program Family: 8089
Project # 808925

Metro PLC Renewal

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	Replace out-of-date process control systems at the Metropolitan Wastewater Treatment Plant.
PROJECT NEED:	Key elements in the process control system for the Metropolitan Wastewater Treatment Plant are out-of-date and in need of replacement to continue to provide reliable treatment plant process control.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$1,500,000	\$3,000,000	\$4,000,000	\$6,500,000

Program Family: 8089
Project # 808930

Metro WWTP Secondary Renewal

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	This project replaces the aeration tank diffusers, install aeration control upgrades, rehabilitate underdrain, and meter pits, install final settling tank backfill gates and air header leak assemblies.
PROJECT NEED:	The aeration system equipment was last replaced in the early 2000s and needs replacement. The new aeration equipment will result in significant energy savings due to improvements in air transfer efficiency.

PROJECT SCHEDULE



Planning
2019-2020



Design
2020-2021



Construction
2021-2025

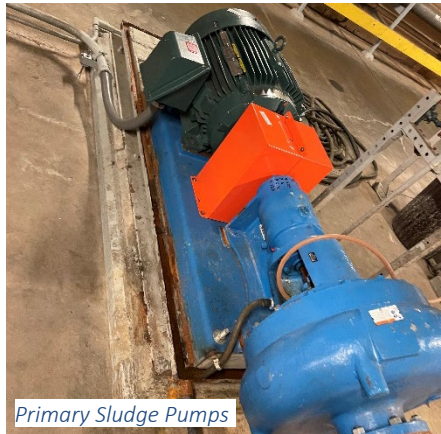
FINANCIAL ANALYSIS

2023 Cash Flow \$10,000,000	Current ACP \$42,011,485	2023 – 2028 Cash Flow \$24,500,000	Total Project Cost \$42,011,485
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Program Family: 8089
Project # 808935

Metro WWTP Secondary and Primary Renewal

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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, and odor control improvements.
PROJECT NEED:	Primary and Secondary equipment is approaching 40 years old and needs replacement. The odor control systems for Pretreatment and Sludge Storage need to be rehabilitated to mitigate odors.

PROJECT SCHEDULE



Planning
2019-2020



Design
2021-2023



Construction
2023-2025

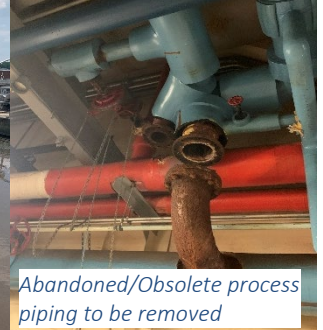
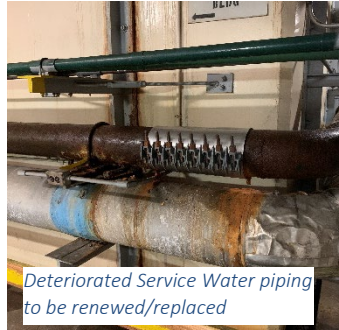
FINANCIAL ANALYSIS

2023 Cash Flow \$3,757,000	Current ACP \$9,193,246	2023 – 2028 Cash Flow \$9,183,000	Total Project Cost \$9,193,246
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Program Family: 8089
Project # 808963

Metro WWTP Water Systems Renewal and Improvements Phase I: Distribution System Renewal

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow \$2,000,000	Current ACP \$26,000,000	2023 – 2028 Cash Flow \$26,000,000	Total Project Cost \$26,000,000
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Program Family: 8089
Project # 8089xx

Metro Roof Replacements

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset 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



FINANCIAL ANALYSIS

2023 Cash Flow \$1,000,000	Current ACP \$2,000,000	2023 – 2028 Cash Flow \$1,000,000	Total Project Cost \$2,000,000
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Program Family: 8089
Project # 8089XX

Metro WWTP Electrical Distribution Renewal Phase 4

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



Motor Control Center

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation, System Expansion and Quality Improvements
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.
PROJECT NEED:	Condition assessment determined that electrical equipment in various buildings throughout the plant are at or nearing the end of useful service life and need to be replaced.

PROJECT SCHEDULE



Planning

2012-2023



Design

2023-2024



Construction

2024-2027

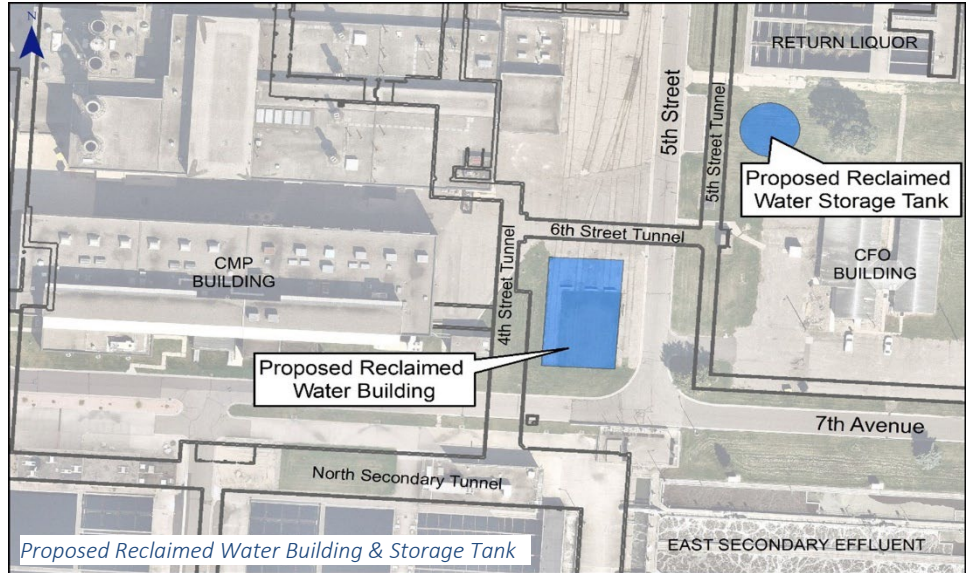
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$20,500,000	\$20,500,000	\$20,500,000

Program Family: 8089
Project # 8089XX

MWWTP Water Systems Renewal & Improvements Phase 2 – Reclaimed Water

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	This project constructs a new reclaimed water system to replace the water source for processes which are currently served by the Prairie du Chien aquifer through the plant service water system
PROJECT NEED:	There is a need to rehabilitate and repurpose the Metro Plant water systems and reduce use of the Prairie du Chien aquifer.

PROJECT SCHEDULE



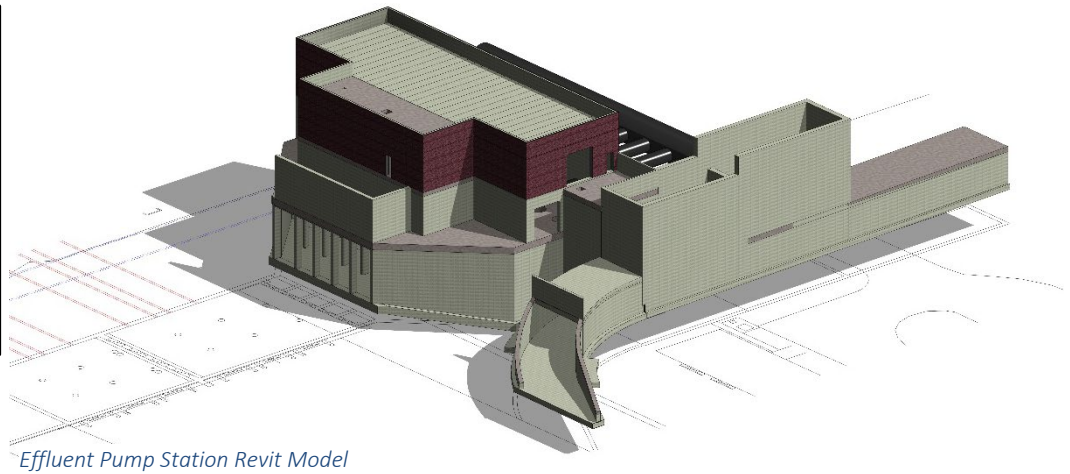
FINANCIAL ANALYSIS

2023 Cash Flow \$0	Current ACP \$0	2023 – 2028 Cash Flow \$11,000,000	Total Project Cost \$25,621,000
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Program Family: 8089
Project # 8089XX

Metro Effluent Pump Station Rehabilitation

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



Effluent Pump Station Revit Model

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
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 condition assessment of structures and piping associated with the Effluent Pump Station; upgrades to address pump vibration issue; interior and exterior building improvements; structural repairs; replacing switchgear, transformers, MCCs and other electrical equipment; replacing PLC, HAVC equipment, and sluice gates; demolition of unused structures and decommissioned processes.
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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$5,081,000	\$15,486,000	\$15,486,000	\$15,486,000

Program Family: 8089
Project # 8089XX

Metro Exterior Building Improvements

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	This project rehabilitates the exterior façade for several buildings based on condition assessment.
PROJECT NEED:	The building envelopes for several buildings are over 40 years old and in need of renewal.

PROJECT SCHEDULE



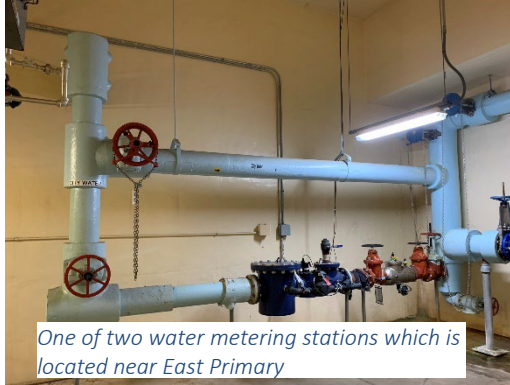
FINANCIAL ANALYSIS

2023 Cash Flow \$500,000	Current ACP \$1,000,000	2023 – 2028 Cash Flow \$1,000,000	Total Project Cost \$1,000,000
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Program Family: 8089
Project # 8089XX

Metro WWTP Water Systems Renewal and Improvements Phase 3: City Water

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



One of two water metering stations which is located near East Primary



City water hydrant and isolation valve at final sedimentation tanks

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Lead by Example and Preserve Assets
SCOPE:	This project replaces the city water piping network throughout the Plant with a new piping network.
PROJECT NEED:	Rehabilitate the Metro Water System that was installed beginning in the 1930s.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$0	\$11,000,000	\$21,000,000

Program Family: 8089
Project # 8089XX

Metro 408 and F&I#2 Building Envelope Rehab

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



408 Building looking west



F&I # 2 building looking east

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	This project rehabilitates, removes portions of buildings, or demolishes the 408 and F&I#2 buildings based on condition assessments and a business case evaluation.
PROJECT NEED:	The 408 and F&I#2 buildings are over 45 years old and in need of renewal or demolition.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$4,000,000	Current ACP \$0	2023 – 2028 Cash Flow \$15,000,000	Total Project Cost \$15,000,000
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Program Family: 8089
Project # 8089XX

Metropolitan WWTP Primary Scum Improvements

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



Scum collection Inside Metro WWTP East Scum Building

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.

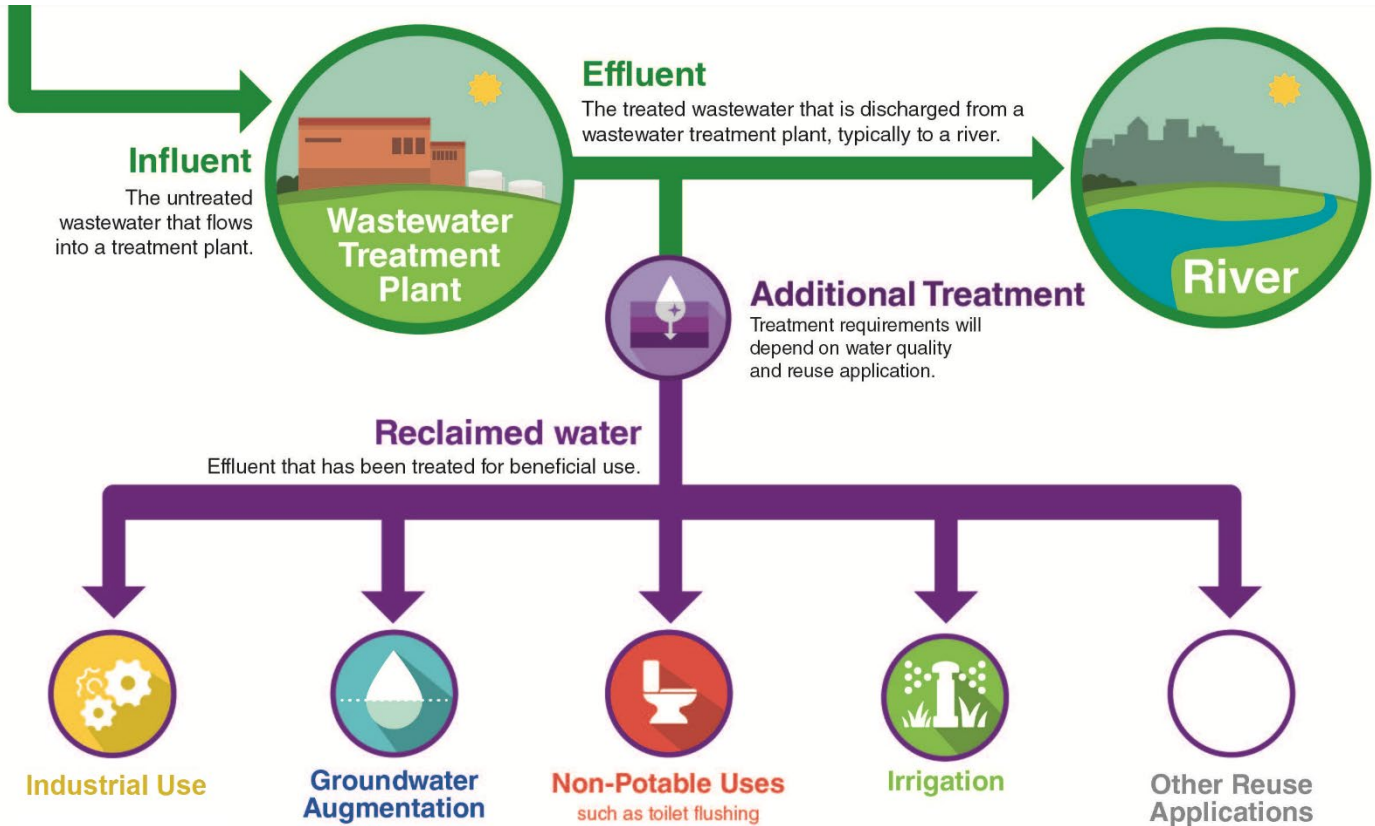
PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$0	Current ACP \$1,000,000	2023 – 2028 Cash Flow \$0	Total Project Cost \$1,000,000
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Program 8091 Wastewater Reclamation Facilities



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 close 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.

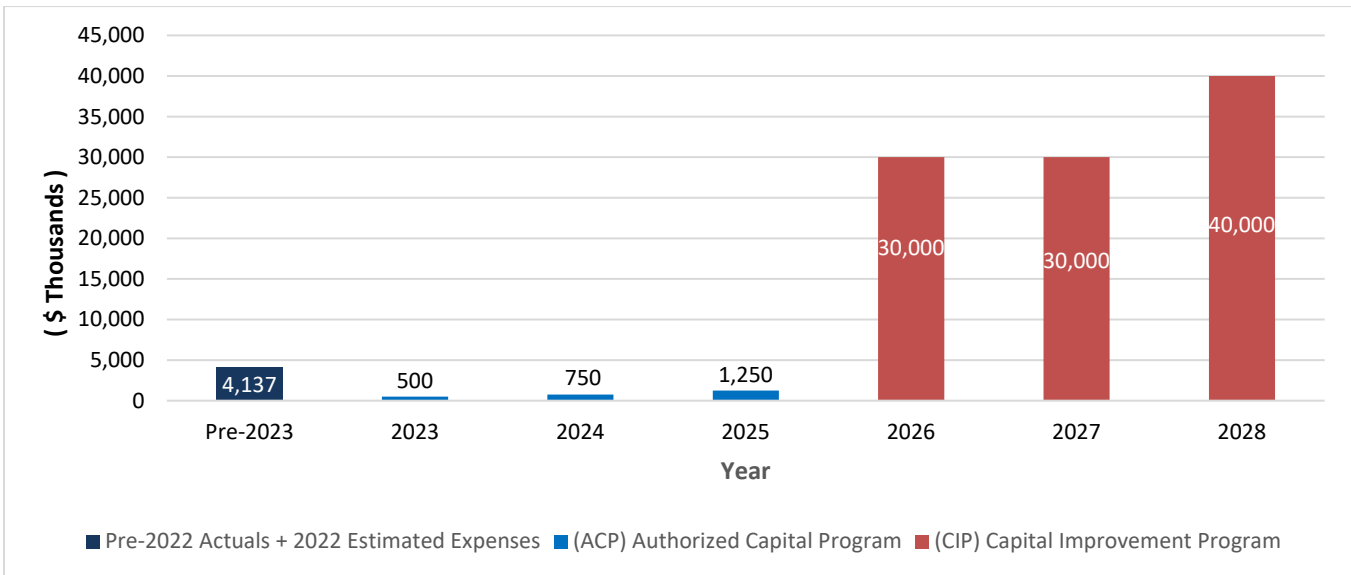
Active Projects in Program:

Project Number	Project Title
809110	Crow River Wastewater Reclamation Plant

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$6,636,788	Capital Improvement Plan (CIP) \$100,000,000
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Estimated Program Cash Flow 2023 - 2028:

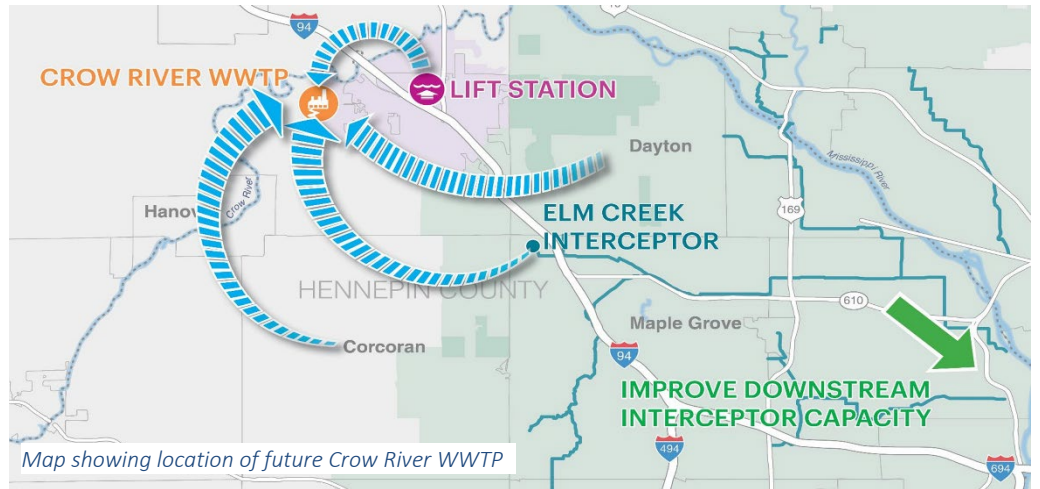


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8091
Project # 809110

Crow River Wastewater Treatment Plant

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Comply with Permits, Minimize /Impacts, Lead by Example, Be A Good Neighbor, Meet Capacity Needs, Communicate Information, Engage Customers, and Collaborate 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



Planning

N/A



Design

2023-2025



Construction

2025-2027

FINANCIAL ANALYSIS

2023 Cash Flow \$500,000	Current ACP \$4,582,310	2023 – 2028 Cash Flow \$102,000,000	Total Project Cost \$104,582,310
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Program 8097 Blue Lake WWTP Improvements

Blue Lake WWTP

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

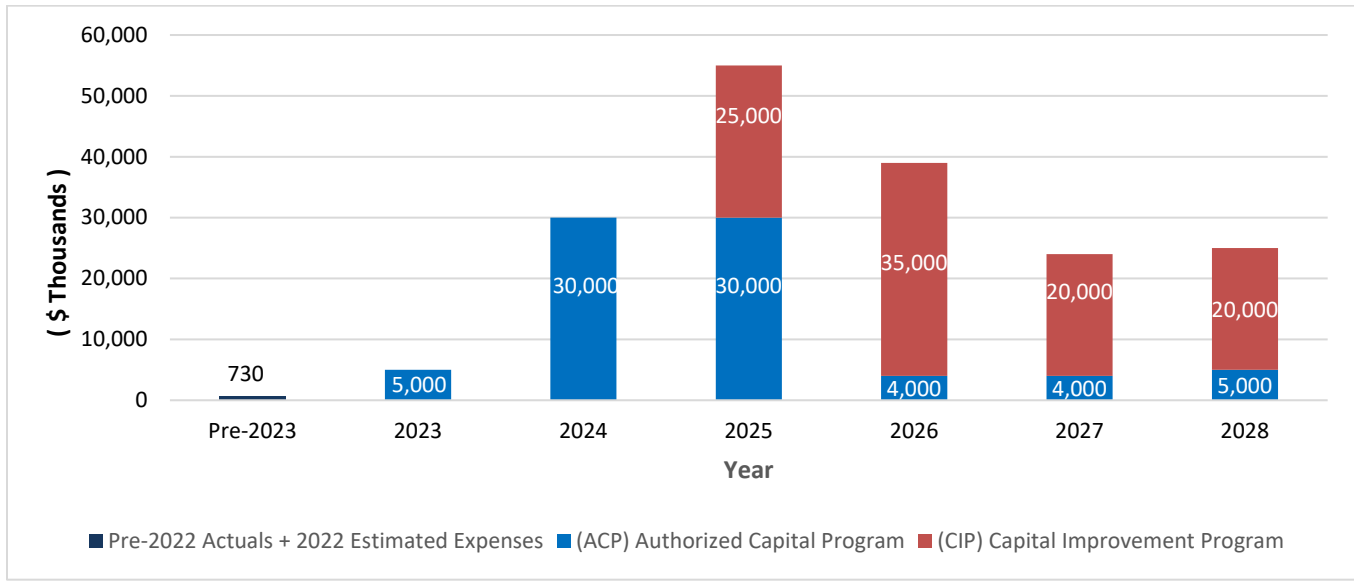
Active Projects in Program:

Project Number	Project Title
8097XX	Final Stabilization Facility
8097XX	Digestion
8097XX	Liquids Process Upgrades

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$80,819,595	Capital Improvement Plan (CIP) \$100,000,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8097
Project # 8097XX

Blue Lake WWTP – Final Stabilization Facility

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	The footprint for the Final Stabilization Building will be increased and a second process train will be added to include another dryer and associated pollution control and building system improvements.
PROJECT NEED:	The existing dryer has reached the end of life and a second dryer will be built for continuity of operation.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$0	\$50,000,000	\$50,000,000

Program Family: 8097
Project # 8097XX

Blue Lake WWTP – Digestion

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



Blue Lake Digester Complex

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets
SCOPE:	There are currently 3 digesters and a sludge storage tank for regulating gas production. This project will add a fourth digester to provide capacity for the region.
PROJECT NEED:	The existing three digesters are nearing capacity and the required SRT cannot be met at the current flows during maintenance or at future flows during normal operation.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$0	Current ACP \$0	2023 – 2028 Cash Flow \$50,000,000	Total Project Cost \$50,000,000
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Program Family: 8097
Project # 8097XX

Blue Lake WWTP – Liquids Process Upgrades

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



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	System Expansion and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs, Lead by Example and Collaborate with Others
SCOPE:	The project includes aeration basin improvements for improved DO control and air distribution. The secondary clarification process will also be expanded with two new tanks and improved baffling for flow distribution.
PROJECT NEED:	The aeration system has reached end of life and the plant is having difficulty maintaining DO while reducing energy in the system. The secondary clarifiers have reached design capacity and more tanks are needed to accommodate growth in the region.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$0	\$30,000,000	\$50,000,000

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. The new site will allow the plant to expand to meet long-term regulatory and future requirements. The long-term service area identified in the 2040 Water Resources Policy Plan may include land areas in the township of Marshan, Nininger, or Vermillion.

Program Location:

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

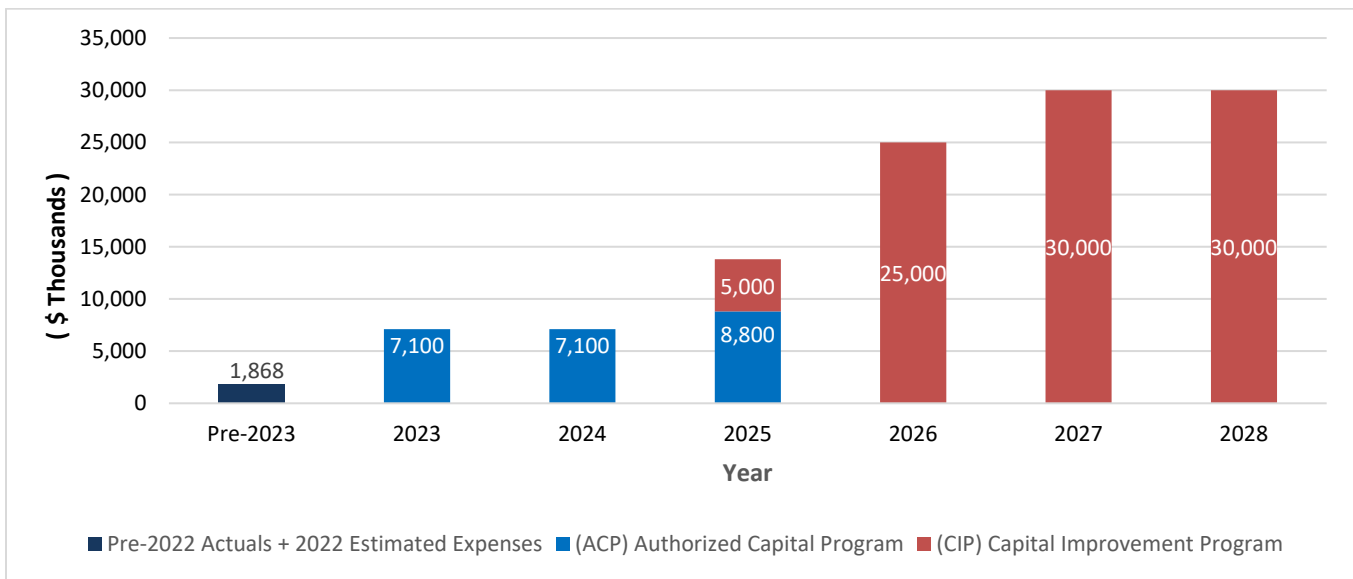
Active Projects in Program:

Project Number	Project Title
809800	Hastings WWTP
809810	Hastings WWTP – Interceptor Improvements
809821	Hastings WWTP – Utilities Relocation

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$27,867,626	Capital Improvement Plan (CIP) \$90,000,000
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Estimated Program Cash Flow 2023 - 2028:

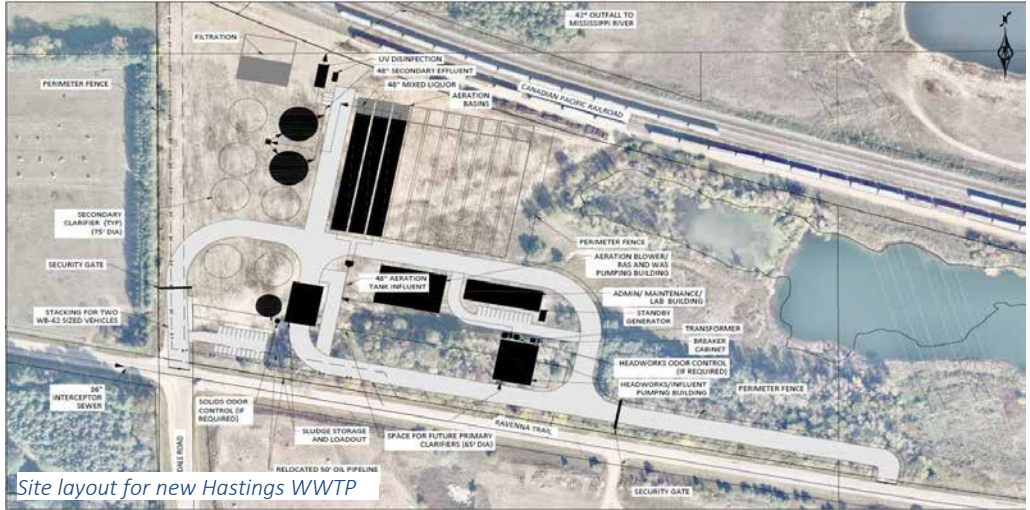


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8098
Project # 809800

Hastings WWTP

Project Location:
Council District # 16
Hastings
Relocated Hastings WWTP



Site layout for new Hastings WWTP

PROJECT TYPE:	Plant Improvements
OBJECTIVES:	System Expansion and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs, Lead by Example and Collaborate with Others
SCOPE:	Construct a new wastewater treatment plant in Hastings
PROJECT NEED:	The existing plant site, located in downtown Hastings, presents challenges to major renewal, land use compatibility, expandability of the plant to respond to growth and changes in regulatory requirements.

PROJECT SCHEDULE



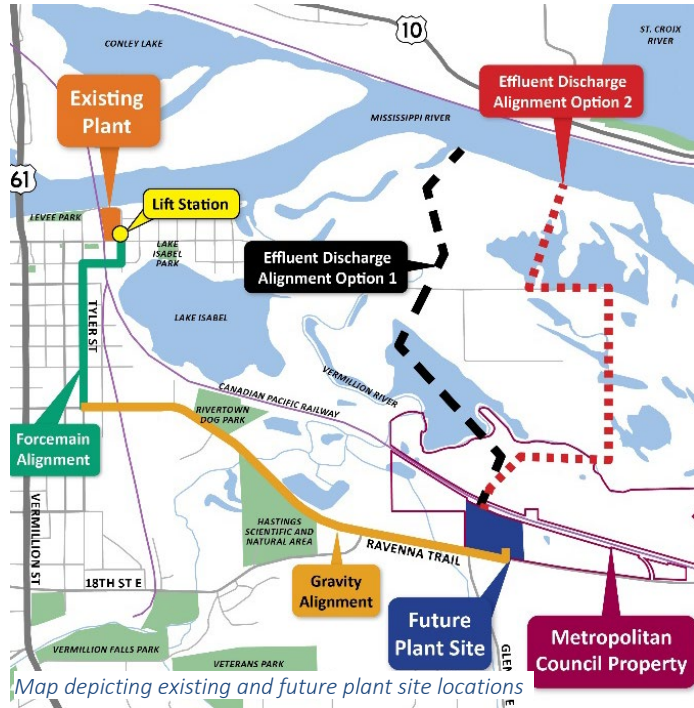
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$0	\$0	\$60,000,000	\$100,000,000

Program Family: 8098
Project # 809810

Hastings WWTP – Interceptor Improvements

Project Location:
Council District # 16
Hastings, MN



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs and Collaborate with Others
SCOPE:	Construct a sewer pumping station at the existing WWTP. Construct 6,000 LF of forcemain, 8,800 LF of trunk gravity sewer, and 7,600 LF of treated water discharge to the Mississippi River. Following final acceptance of the new plant, the existing WWTP will be decommissioned, and the property turned back to the City.
PROJECT NEED:	The existing plant has reached its treatment capacity. A new plant is required to accommodate growth. All wastewater currently flowing to the existing downtown treatment plant needs to be conveyed to the new plant site.

PROJECT SCHEDULE



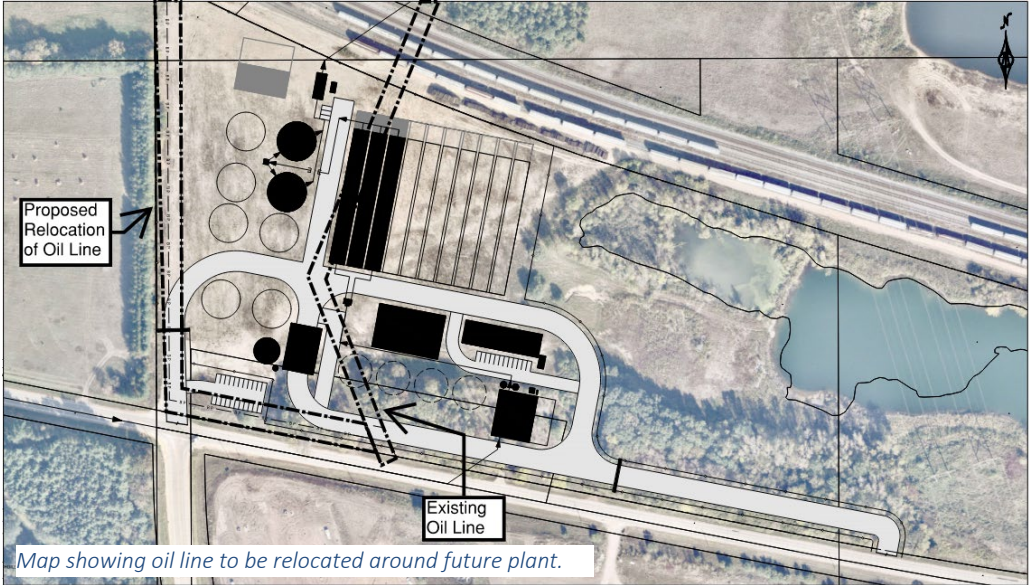
FINANCIAL ANALYSIS

2023 Cash Flow \$1,100,000	Current ACP \$8,618,755	2023 – 2028 Cash Flow \$38,000,000	Total Project Cost \$38,618,755
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Program Family: 8098
Project # 809821

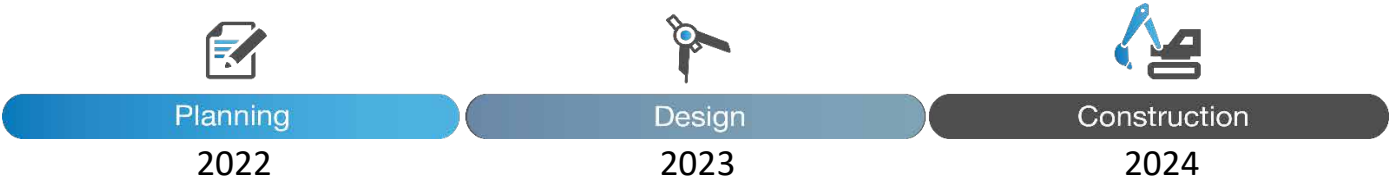
Hastings WWTP – Utilities Relocation

Project Location:
Council District # 16
Hastings, MN



PROJECT TYPE:	Plant Improvements
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Collaborate with Others
SCOPE:	Relocate 10-inch British Petroleum oil line.
PROJECT NEED:	Relocation of the 10-inch British Petroleum oil line is required to construct the new Hastings Wastewater Treatment Plant most efficiently.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$3,000,000	\$6,000,000	\$6,000,000	\$6,000,000

**Program 8100
Industrial Pretreatment Incentive Program**



Northern Star staff observes new pre-treatment system



High Strength Waste enters a holding tank at the Empire WWTP

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 and 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 and enhancing ability to grow.

Program Location:

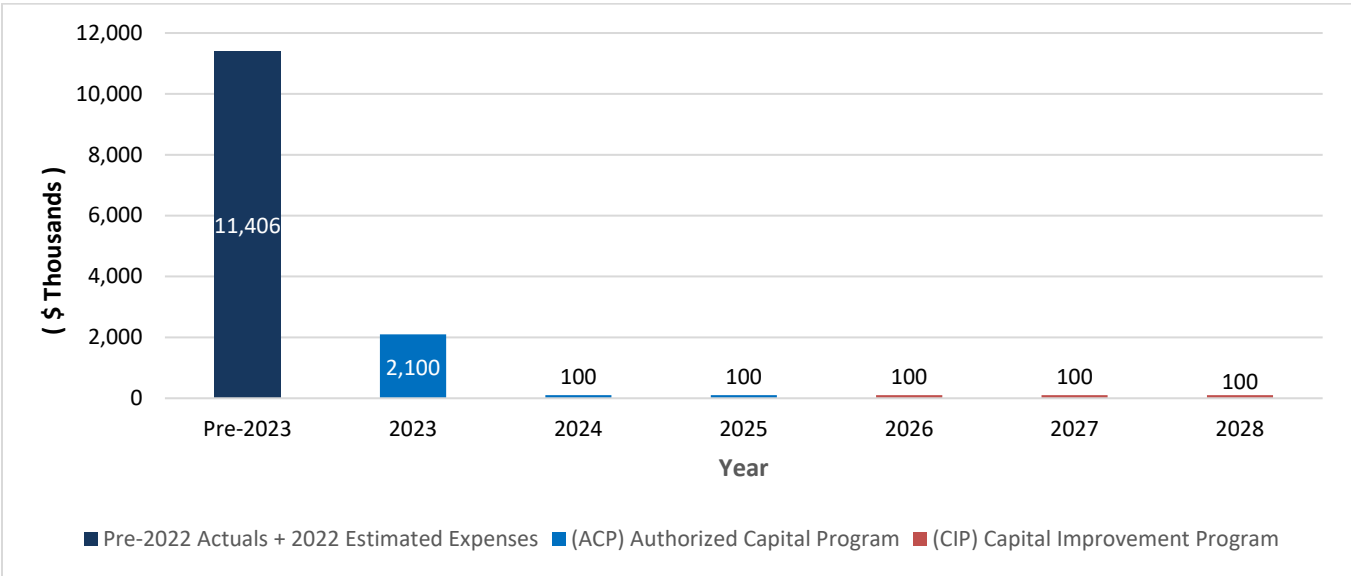
Current applications with pending projects

Active Projects in Program: None

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$13,705,777	Capital Improvement Plan (CIP) \$300,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Appendix B: Project Summaries by Program - Interceptor

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**Program 8028
Blue Lake Interceptor Improvements**



Description:

This project provides improvements to meet the long-term conveyance capacity, reliability, and rehabilitation/replacement needs of the Blue Lake Interceptor System. This system includes gravity sewers, 29 lift stations, and forcemains from each lift station. The major project areas are located in Victoria, Excelsior, Orono, Excelsior 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 and 4.

Active Projects in Program:

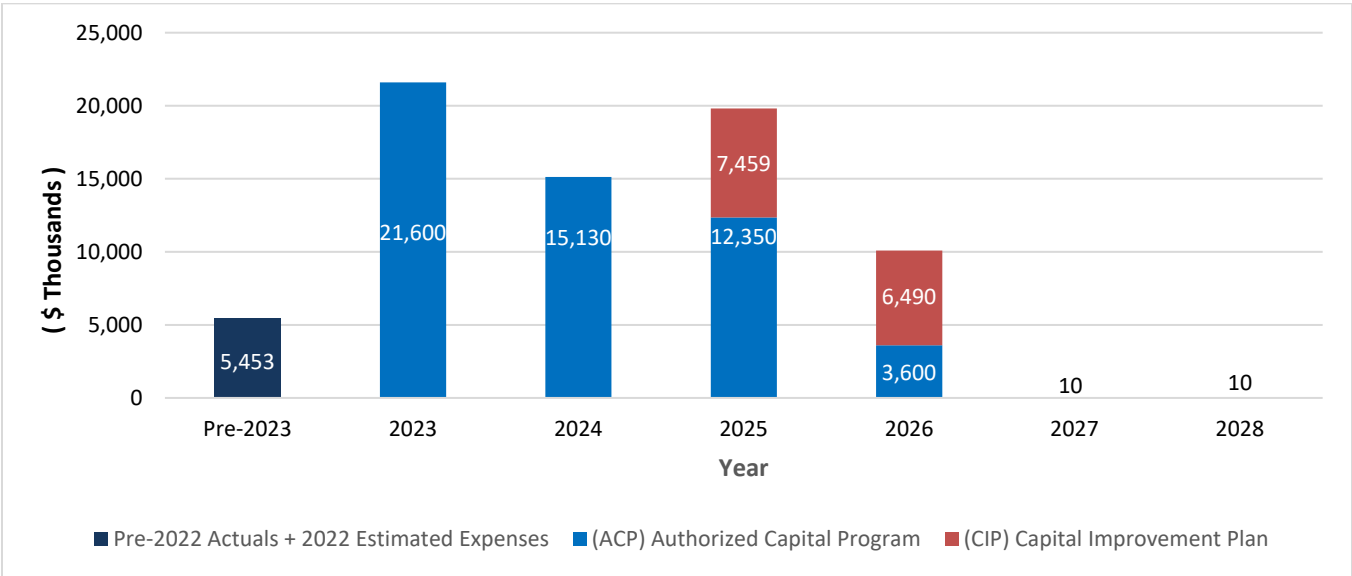
Project Number	Project Title
802800	Lake Minnetonka Area (Parent Project)
802801	West Area Rehabilitation – Sites 1, 2, 3, 4 and 5
802831	Lift Station L46 and L49
802834	L48 Rehab and 6-DH-645 FM replacement
802856	Excelsior Area Lift Station L-20
802863	8567 Channel Crossings Replacement

802897	Orono 7113 FM Replacement
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MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$58,133,316	Capital Improvement Plan (CIP) \$13,969,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8028
Project # 802801

West Area Rehab – Forcemain 8253-327

Project Location:
Council District # 3
City: Shorewood and Chanhassen, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate forcemain due to pipe corrosion and improve system reliability.
PROJECT NEED:	Forcemain 8253-327 was built in 1988 and runs from L21 in the City of Shorewood to the discharge approximately 3 miles to the east. An external ultrasonic thickness gauge survey conducted in 2021 found locations of pipe loss. Additional planning will be conducted to recommend reliability improvements.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$300,000	\$6,065,000	\$6,065,000	\$6,065,000

Program Family: 8028
Project # 802801

West Area Rehab – Forcemain 8352

Project Location:
Council District # 3
Cities: Maple Plain, Orono, Medina, and Long Lake, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Site 2 of the West Area Improvements. This project includes rehabilitation and/or replacement of approximately 4.1 miles of forcemain due to deterioration of pipe walls.
PROJECT NEED:	<p>Forcemain 8352 was constructed in 1985 as a single-barrel, 12-inch ductile iron pipe which runs approximately 5.1 miles from L63 in the City of Maple Plain to the discharge MH 172 in Long Lake. A one-mile segment of the forcemain at the intersection of Mn Hwy 12 and County Rd 6 was replaced in 2011 with dual barrel 14-inch HDPE pipes.</p> <p>Forcemain 8352 was evaluated using ultrasonic testing in 2021 and determined to have wall thickness loss. This reduction in wall thickness will require rehabilitation to extend forcemain service life. Reliability and future flow needs will be evaluated as part of this project.</p>

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$300,000	Current ACP \$3,815,000	2023 – 2028 Cash Flow \$3,815,000	Total Project Cost \$3,815,000
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Program Family: 8028
Project # 802801

802801 West Area Rehab – Interceptor 6-MT-647

Project Location:
Council District # 3
City: Minnetrista, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate forcemains due to a significant sag in the pipe profile.
PROJECT NEED:	Gravity interceptor 6-MT-647 is 8” DIP and was built in 1973. It serves the area of the Minnetrista peninsula in Lake Minnetonka upstream of lift station L51. Between 2009 and 2017, CCTV-based inspection downgraded the pipe from condition 3 to 4 between MH25-17 and MH25-18 due to a sag in the pipe. This defect requires further investigation, and, if warranted, repair.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$100,000	\$2,314,800	\$2,314,800	\$2,314,800

Program Family: 8028
Project # 802801

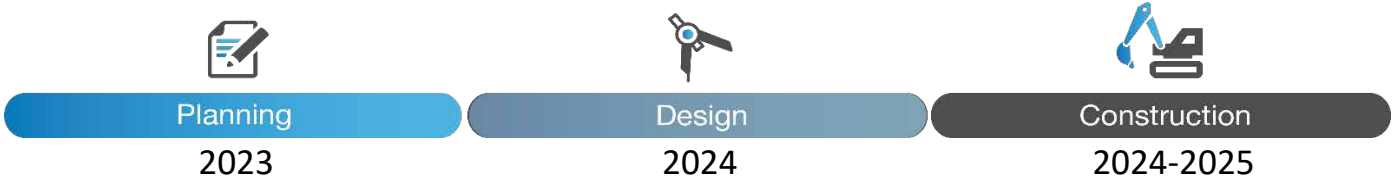
802801 West Area Rehab – Interceptor 7020

Project Location:
Council District # 3
City: St. Bonifacius, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate gravity pipe due to sag and joint separation under Highway 7 Gravity Interceptor 7020 is both 15” ABS pipe and 16” DIP and was built in 1971. It serves the area of Minnetrista and St. Bonifacius.
PROJECT NEED:	In 2020, CCTV-based inspection rated the pipe condition 4 due to joint offsets in the pipe, joint separation and corrosion in the pipe. These defects require further investigation and will require significant coordination with MNDOT to work in the Highway 7 corridor.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$100,000	Current ACP \$2,314,000	2023 – 2028 Cash Flow \$2,314,000	Total Project Cost \$2,314,000
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Program Family: 8028
Project # 802801

802801 West Area Rehab – Interceptor 9206-1 & 7120

Project Location:
Council District # 4
City: Shakopee, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate interceptors 9206-1 and 7120
PROJECT NEED:	The Metropolitan Council Environmental Services (MCES) owns and operates the Interceptors 9206-1 and 7120 in Shakopee, which were built in 1975. A 2020 condition assessment revealed over 3,500 linear feet (LF) of 72-inch piping with a condition rating of 4, between MH 1 and the junction vault between 9206-1 and 7120. There is also a 31 LF section of 72-inch piping between a previous lining project and the junction vault. This section of piping has a condition 5 rating. The junction vault will also need to be inspected and potentially rehabilitated.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$120,000	Current ACP \$3,814,000	2023 – 2028 Cash Flow \$3,814,000	Total Project Cost \$3,814,000
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Program Family: 8028
Project # 802831

Orono Lift Stations L46 and L49 Improvements

Project Location:
Council District # 3
City: Orono, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Meet Capacity Needs
SCOPE:	Replace L49 at neighboring property, and fully rehabilitate L46 through replacement of pumps, mechanical equipment, and site improvements for safety.
PROJECT NEED:	A 2009 study evaluating L46 and L49 revealed L49 is at the end of its useful life and has inadequate capacity to meet current peak flow rates. Its current location is also difficult to access for maintenance. Land has been purchased adjacent to the existing lift station to provide easier access. L46 requires pump and valve replacement, electrical panel upgrades, and site improvements to protect existing equipment from traffic.

PROJECT SCHEDULE



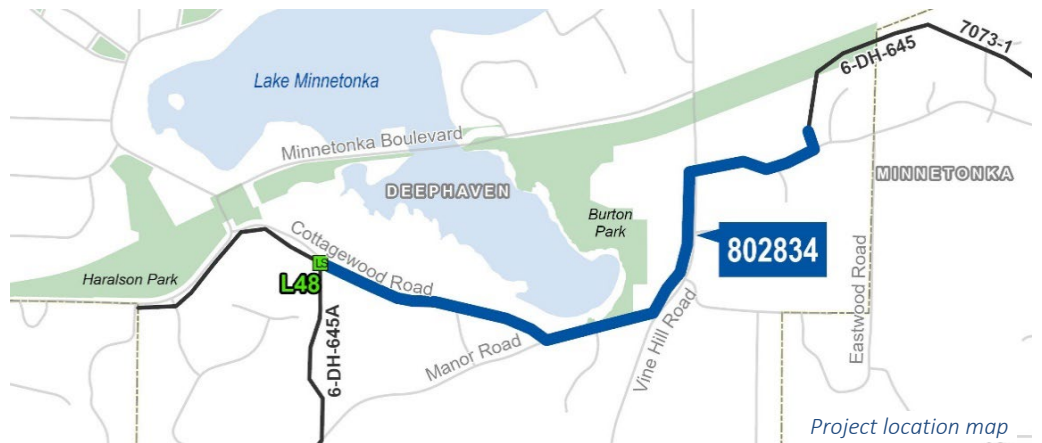
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$1,000,000	\$5,400,000	\$4,700,000	\$5,400,000

Program Family: 8028
Project # 802834

L48 Rehabilitation and 6-DH-645 Forcemain Replacement

Project Location:
Council District # 3
City: Deephaven, MN



PROJECT TYPE:	Lift Station and Interceptor Improvement
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Meet Capacity Needs
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 over 50 years old and is reaching the end of its service life.

PROJECT SCHEDULE



Planning
N/A



Design
2021-2022



Construction
2023-2025

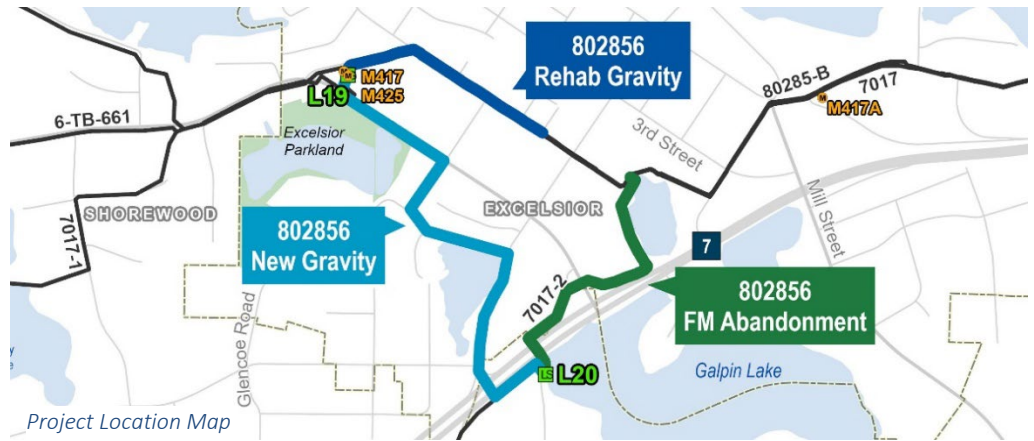
FINANCIAL ANALYSIS

2023 Cash Flow \$4,000,000	Current ACP \$ 6,253,000	2023 – 2028 Cash Flow \$ 5,620,000	Total Project Cost \$ 6,253,000
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Program Family: 8028
Project # 802856

Excelsior Area Lift Station L20

Project Location:
Council District # 3
City: Excelsior, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	Remove existing lift station L20 and install 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 2021 Lake Minnetonka Facility Plan determined that L20 should be abandoned and replaced with a gravity pipe connection to L19.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$5,000,000	\$11,928,000	\$11,000,000	\$11,928,000

Program Family: 8028
Project #802863

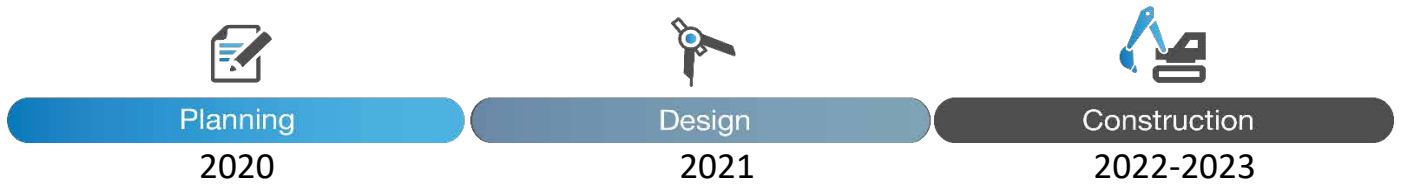
8567 Channel Crossings Replacement

Project Location:
Council District # 3
City: Orono, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	To minimize future risk, redundant parallel HDPE pipes are proposed. Directional drilling is proposed for the parallel pipes.
PROJECT NEED:	In 2022, Hennepin County replaced the Noerenberg and Hendrickson bridges on North Shore Drive. Interceptor Forcemain 8567 was suspended on the bridges and partially relocated under the Lake Minnetonka channels. This project will finish the relocation installing a parallel crossing on each channel and four structures.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$3,250,000	\$3,865,000	\$3,250,000	\$3,865,000

Program Family: 8028
Project # 802897

Orono Interceptor 7113 Forcemain Replacement

Project Location:
Council District # 3
City: Orono, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	Construction of a redundant forcemain along 7113 and the HCRAA trail corridor and rehabilitation of the existing forcemain.
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 or rehabilitation. A new redundant forcemain is proposed to increase reliability and allow the existing forcemain in Shoreline Drive to be inspected and rehabilitated or replaced.

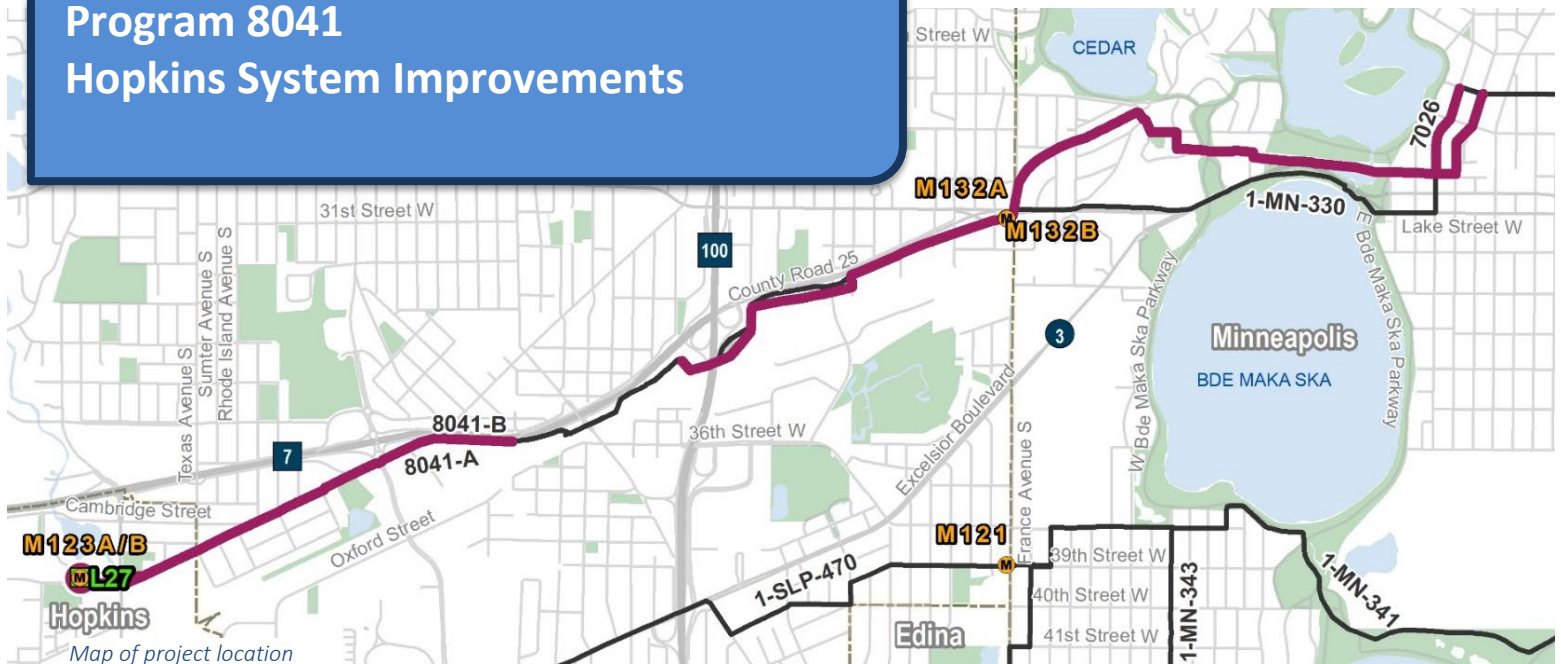
PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$450,000	Current ACP \$15,495,000	2023 – 2028 Cash Flow \$14,839,000	Total Project Cost \$9,015,000
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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 # 6

Active Projects in Program:

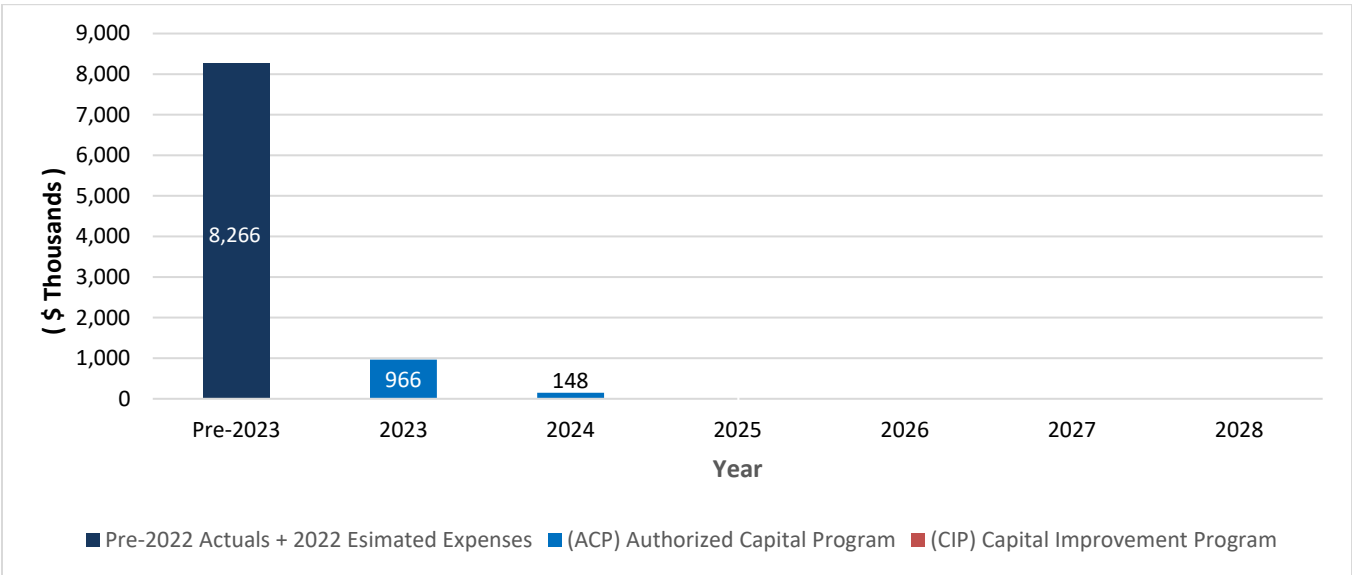
Due to funding shortages in this program, the last two construction projects in Minneapolis are planned to be funded under the Interceptor Rehabilitation Program 809000. The Hopkins System Improvements family is only used for funding the consultants and the cooperative construction agreements on the two remaining Minneapolis projects.

Project Number	Project Title
804100	Hopkins Systems Improvements (Parent Project)
819015	HIS, East Isles – Contract G
819020	HIS, East Isles – Contract H
804125	HSI East Isles Force Main Improvements (consultants)

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$9,380,809	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8041
Project # 804125

HSI East Isles Forcemain Improvements

Project Location:
Council District # 6
City: Minneapolis, MN
The Mall Park,
Humboldt Ave



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Mitigate Impacts, and Coordinate with Others
SCOPE:	The project includes only the planning and design phases for the replacement of 2500 linear feet of 24” concrete forcemain with two 24” diameter forcemains. Cooperative construction with the City of Minneapolis and Minneapolis Park and Recreation Board to complete City improvements in the area. The construction of the improvements on Humboldt Ave are under MCES project number 819015. The construction of the improvements within The Mall Park are under MCES project number 819020
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 27 th Street and Humboldt Ave. S. is severely corroded is at risk of failure.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$465,000	\$1,320,000	\$465,000	\$1,320,000

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 of 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:

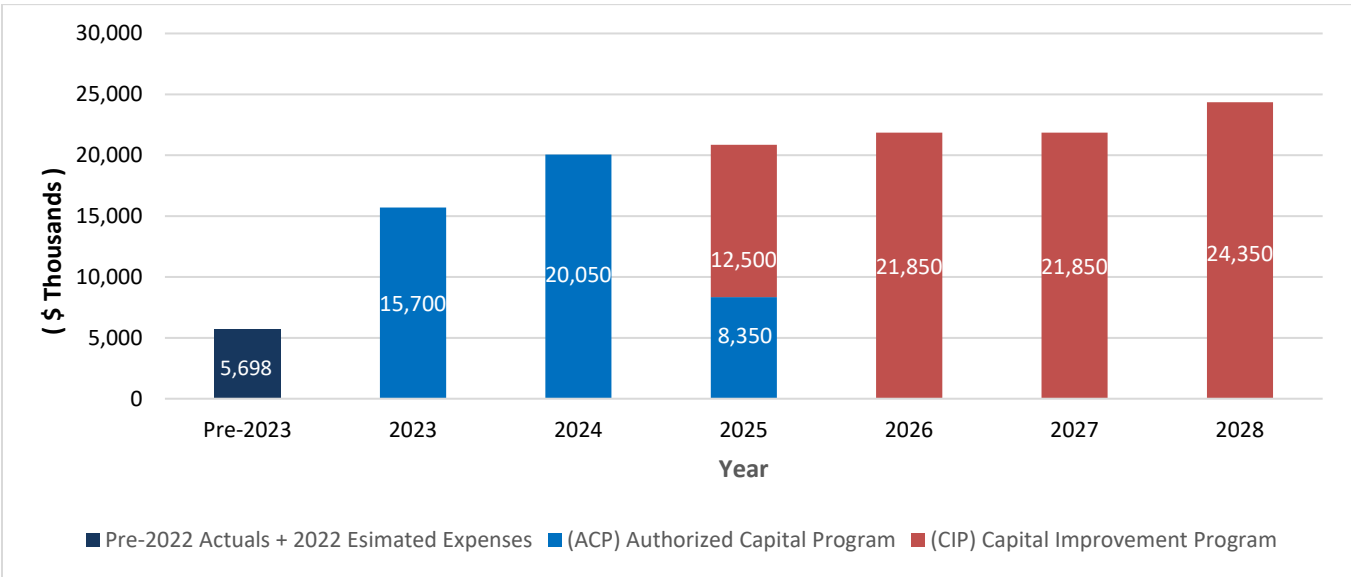
Project Number	Project Title
805500	Lift Station Rehabilitation (Parent Project)
805501	Lift Station Property Maintenance
805502	Lift Station Condition Assessments
805503	L-13 HVAC Improvements

805504	FM-Siphon-RX-Outfall Inspection Program (Sites 1 - 4)
805505	L32 Biofilter
805564	Savage L66 Lift Station Rehab
805566	Lift Station Electrical Rehabilitation (Sites 1 – 5)
805568	L71 System Improvements
805576	L29 Improvements
8055XX	Anoka Champlin Forcemain

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$49,797,785	Capital Improvement Plan (CIP) \$80,550,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8055
Project # 805501

Lift Station Property Maintenance

Project Location:
Council District # 1 - 16
City: Regional



MCES workers maintain lift station L 30, a lift station in Crystal

PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Lead by Example and Be A Good Neighbor
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



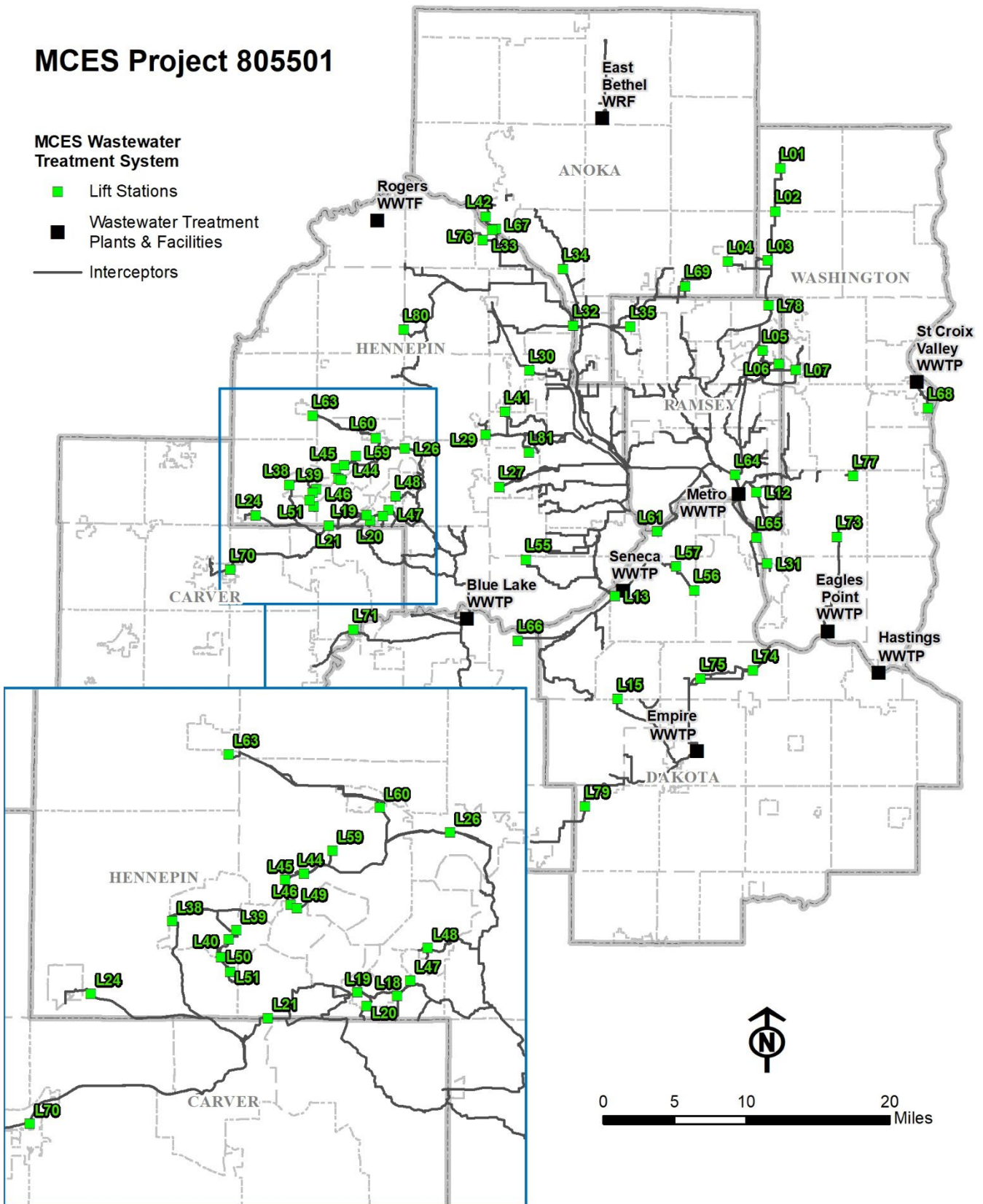
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$600,000	\$1,580,000	\$700,000	\$1,580,000

MCES Project 805501

MCES Wastewater Treatment System

- Lift Stations
- Wastewater Treatment Plants & Facilities
- Interceptors



Program Family: 8055
Project # 805502

Lift Station Condition Assessments

Project Location:
Council District # n/a
City: Regional



Interceptor service worker inspects the Rosemount Lift Station (L74)

PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation, System Expansion and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Meet Capacity Needs
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
2018-2027



Design
N/A



Construction
N/A

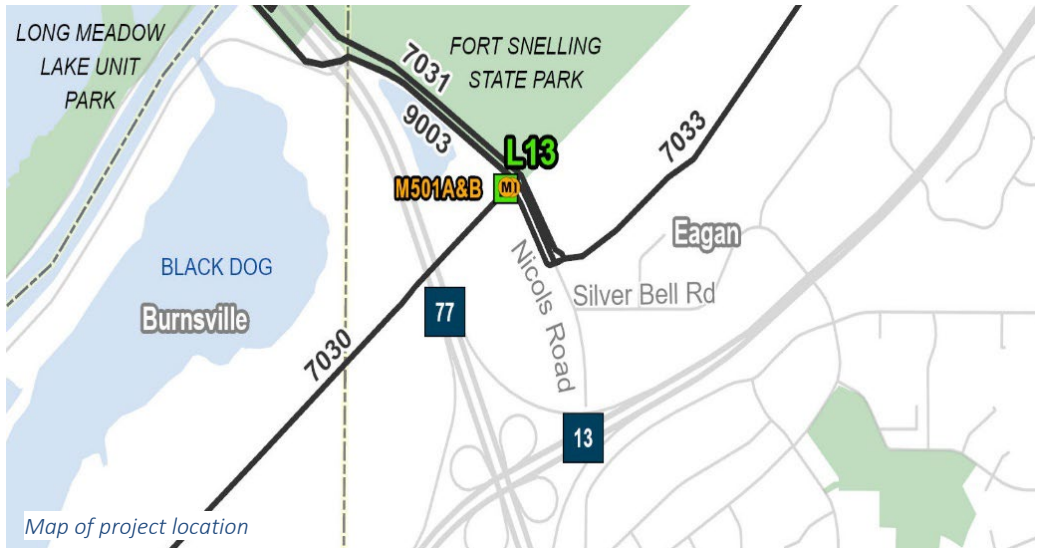
FINANCIAL ANALYSIS

2023 Cash Flow \$150,000	Current ACP \$984,215	2023 – 2028 Cash Flow \$900,000	Total Project Cost \$1,434,215
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Program Family: 8055
Project # 805503

L13 HVAC Improvements

Project Location:
Council District # 15
City: Eagan, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Be a Good Neighbor
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 odors and potential disruption of service to our customers does not meet the Council’s Level of Service goals.

PROJECT SCHEDULE



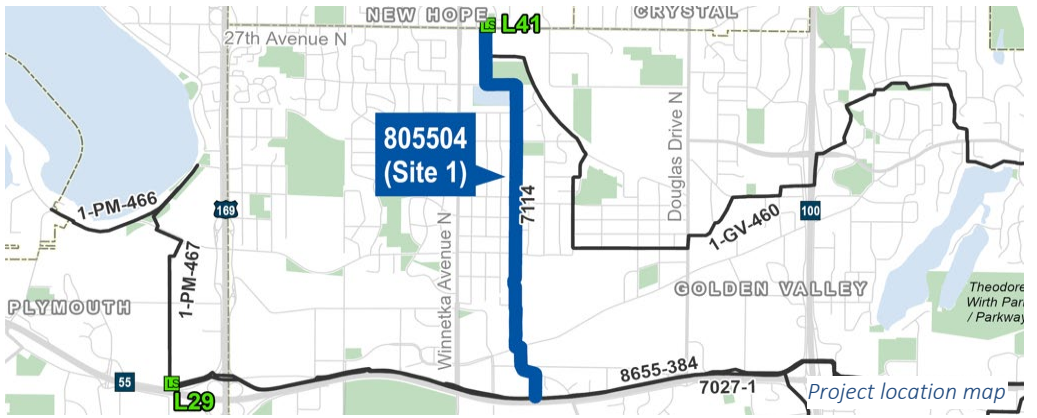
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$2,000,000	\$2,283,000	\$2,050,000	\$2,283,000

Program Family: 8055
Project # 805504

FM-Siphon-Rx-Outfall Inspection Program – Force Main 7114

Project Location:
Council District # 6
City: Golden Valley, MN



PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Inspect two miles of force main in Golden Valley.
PROJECT NEED:	Programmatic evaluation of assets in accordance with the 2022 Force Main-Siphon-River Crossing-Outfall Inspection Program Manual.

PROJECT SCHEDULE



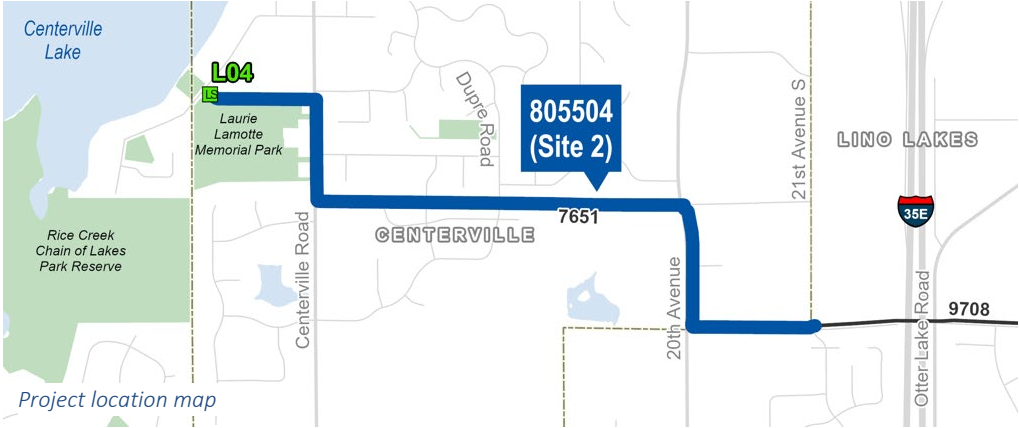
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$400,000	\$4,060,000	\$2,800,000	\$2,800,000

Program Family: 8055
Project # 805504

FM-Siphon-Rx-Outfall Inspection Program – Force Main 7561

Project Location:
Council District # 11
City: Centerville,
MN



PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Inspect 1.5 miles of force main in Centerville.
PROJECT NEED:	Programmatic evaluation of assets in accordance with the 2022 Force Main-Siphon-River Crossing-Outfall Inspection Program Manual.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$400,000	Current ACP \$4,060,000	2023 – 2028 Cash Flow \$2,800,000	Total Project Cost \$2,800,000
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Program Family: 8055
Project # 805504

FM-Siphon-Rx-Outfall Inspection Program – Site 3 Seneca Outfall 7003

Project Location:
Council District # 5
Seneca WWTP to the Mississippi River in Eagan



PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Inspect one mile of outfall at Seneca WWTP in Eagan.
PROJECT NEED:	Programmatic evaluation of assets in accordance with the 2022 Force Main-Siphon-River Crossing-Outfall Inspection Program Manual.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$400,000	Current ACP \$4,060,000	2023 – 2028 Cash Flow \$2,800,000	Total Project Cost \$2,800,000
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Program Family: 8055
Project # 805504

FM-Siphon-Rx-Outfall Inspection Program - 1-MS-100 Siphon

Project Location:
Council District # 13
City: St Paul, MN



PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Inspect the Metro Siphon in St. Paul
PROJECT NEED:	Programmatic evaluation of assets in accordance with the 2022 Force Main-Siphon-River Crossing-Outfall Inspection Program Manual.

PROJECT SCHEDULE



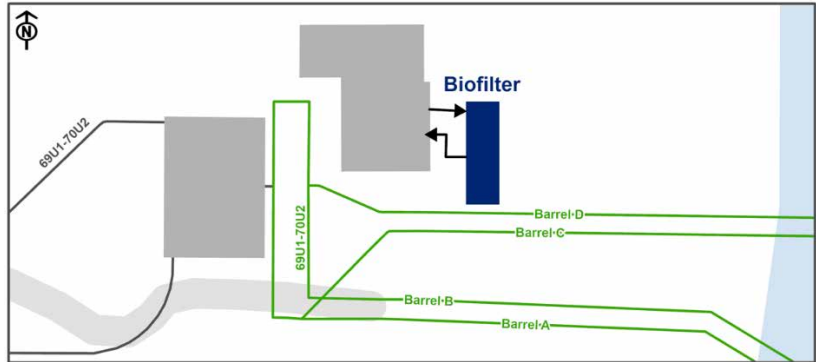
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$400,000	\$4,060,000	\$2,800,000	\$2,800,000

Program Family: 8055
Project # 805505

L32 Biofilter

Project Location:
Council District # 2
City: Brooklyn Park, MN
Location: 7700
Mississippi Lane



Project 805505
MCES Interceptors
— Gravity
— Forcemain
■ Building Footprints



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Be a Good Neighbor
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



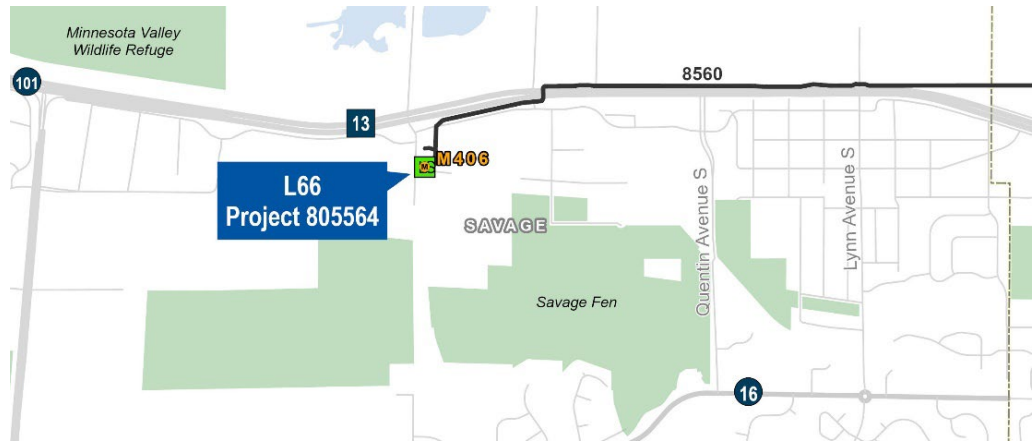
FINANCIAL ANALYSIS

2023 Cash Flow \$4,000,000	Current ACP \$4,250,000	2023 – 2028 Cash Flow \$4,000,000	Total Project Cost \$4,250,000
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Program Family: 8055
Project # 805564

L66 Rehabilitation

Project Location:
Council District # 15
City: Savage, MN



Map of project location

PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, Be A Good Neighbor, and Meet Capacity Needs
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 projected 2040 flows. The HVAC is not up to code and needs replacement.

PROJECT SCHEDULE



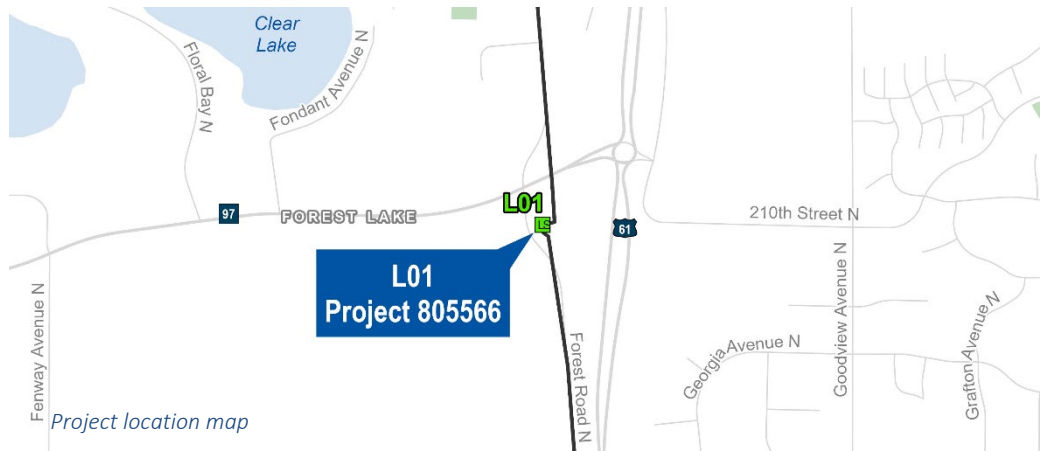
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$2,000,000	\$7,155,000	\$7,000,000	\$7,155,000

Program Family: 8055
Project # 805566

Lift Station Electrical Rehabilitation – L01

Project Location:
Council District # 12
City: Forest Lake, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 MCES 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$200,000	\$1,200,000	\$2,000,000

Program Family: 8055
Project # 805566

Lift Station Electrical Rehabilitation – L02

Project Location:
Council District # 11
City: Hugo, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 MCES 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$200,000	\$1,200,000	\$2,000,000

Program Family: 8055
Project # 805566

Lift Station Electrical Rehabilitation – L03

Project Location:
Council District # 11
City: City of Hugo, MN
Location: Lift Station L03



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$200,000	\$1,200,000	\$2,000,000

Program Family: 8055
Project # 805566

Lift Station Electrical Rehabilitation – L31

Project Location:
Council District # 13
City: St. Paul Park, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 MCES 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



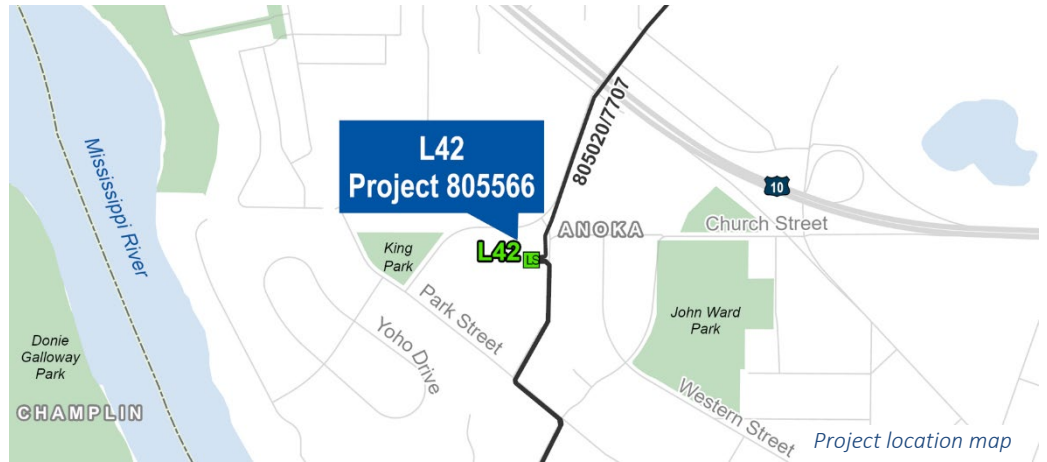
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$1,000,000	\$1,200,000	\$2,000,000

Program Family: 8055
Project # 805566

Lift Station Electrical Rehabilitation – L42

Project Location:
Council District # 9
City: Anoka, MN



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 MCES 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



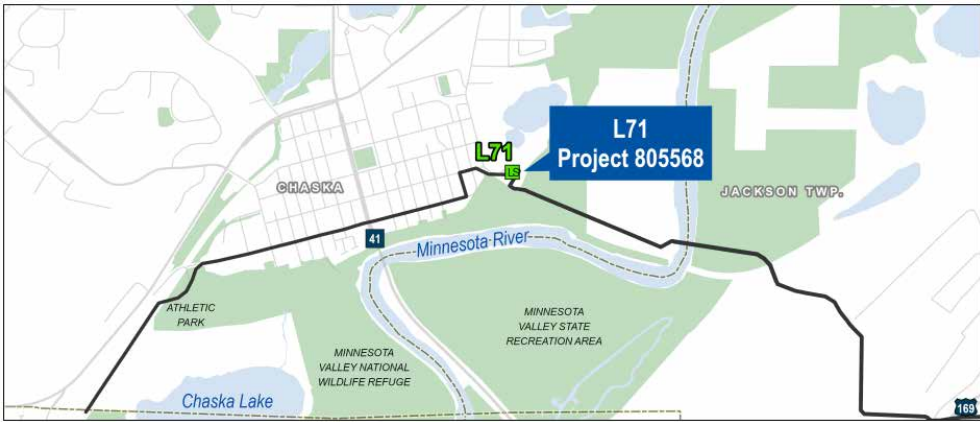
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$200,000	\$1,200,000	\$2,000,000

Program Family: 8055
Project # 805568

L71 System Improvements

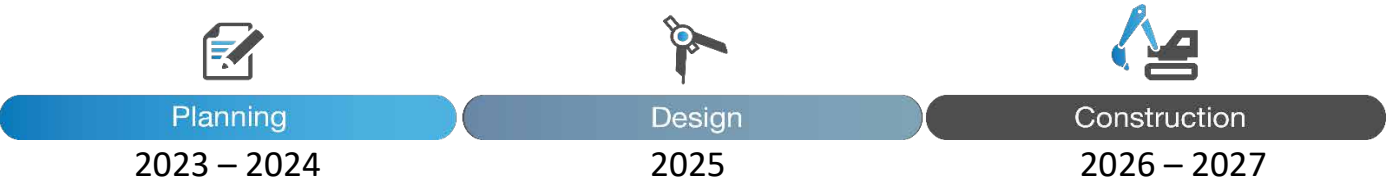
Project Location:
Council District # 4
City: Chaska, MN
Location: 600 4th St E and eastward into Shakopee



Project location map

PROJECT TYPE:	Lift Station Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Be a Good Neighbor
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 FOG pre-treatment, forcemain modifications, and odor control will be needed.
PROJECT NEED:	L71 receives high strength wastewater containing significant volumes of fats, oils, and greases (FOGs). The FOGs impact lift station and force main operations. This has resulted in decreased capacity and creates odors.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$300,000	Current ACP \$4,300,000	2023 – 2028 Cash Flow \$4,300,000	Total Project Cost \$4,300,000
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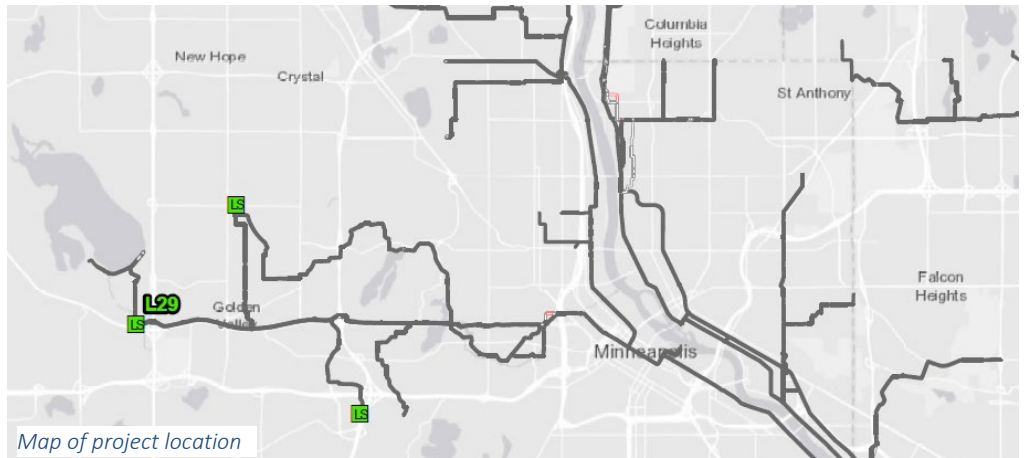
Program Family: 8055
Project # 805576

L29 Rehabilitation

Project Location: L29

Council District: # 1

City of Plymouth



PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$800,000	\$4,063,000	\$3,800,000	\$4,063,000

Program Family: 8055
Project # 8055XX

Anoka-Champlin Force Main Improvements

Project Location:
Council District # 2 & 9
City: Anoka and Champlin, MN
Location: North and south sides of the Mississippi River at Hwy



Project location map

PROJECT TYPE:	Lift Station and Interceptor Improvements
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Results of pump testing will be evaluated to determine the scope of work. Preliminary indications are that a second force main will be needed.
PROJECT NEED:	L33, L42, and L67 and their respective force mains are interconnected. Force Main 8751, downstream of all three lift stations, is an aging, single 24" barrel. Air release valves on the force main are inoperable and impacting the force main capacity. The force main and air releases cannot be inspected or repaired without major temporary conveyance.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$300,000	Current ACP \$0	2023 – 2028 Cash Flow \$4,300,000	Total Project Cost \$4,300,000
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Program 8056 Meter Improvements



Photo of typical flow meter

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 and 2.

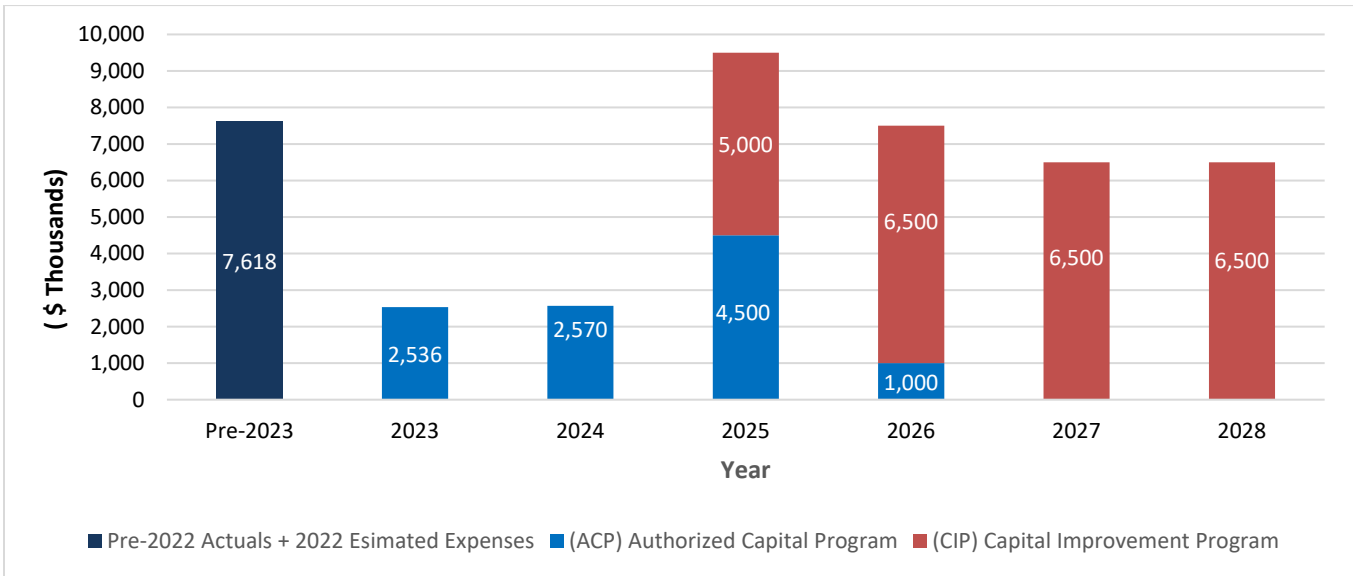
Active Projects in Program:

Project Number	Project Title
805600	Meter Improvements (Parent Project)
805603	Flow Meter Program Support
805605	Meter M106 Rehabilitation
805606	Lino Lakes Development and Future Meter
805636	Replacement Meter Vault M228

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$18,224,292	Capital Improvement Plan (CIP) \$24,500,000
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Estimated Program Cash Flow 2023 - 2028:

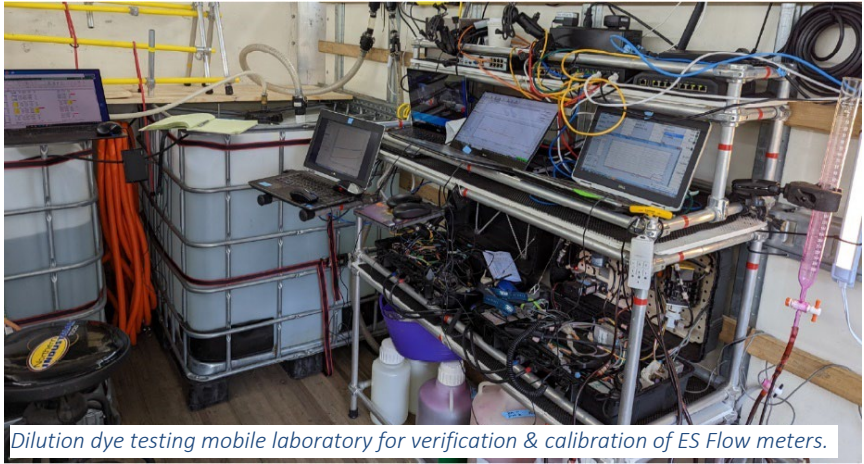


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8056
Project # 805603

Flow Meter Program Support

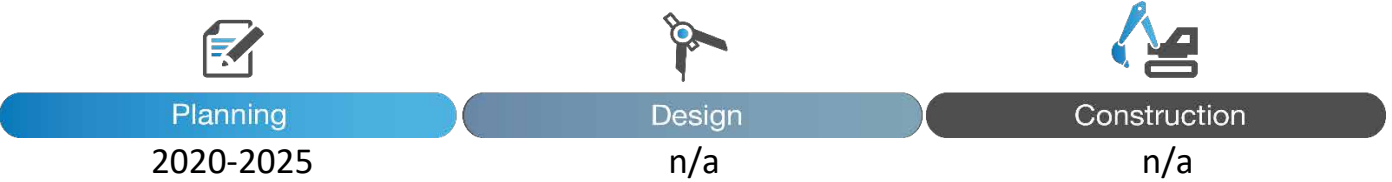
Project Location:
Council District # 1 - 16
City: Regional



Dilution dye testing mobile laboratory for verification & calibration of ES Flow meters.

PROJECT TYPE:	Condition Assessment and Study
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Be Fair and Transparent
SCOPE:	Perform annual flow meter calibration tests to verify accuracies.
PROJECT NEED:	The ES cost allocation program relies extensively on the performance and accuracy of wastewater flow meters for billing, and many meters have never had their accuracies tested.

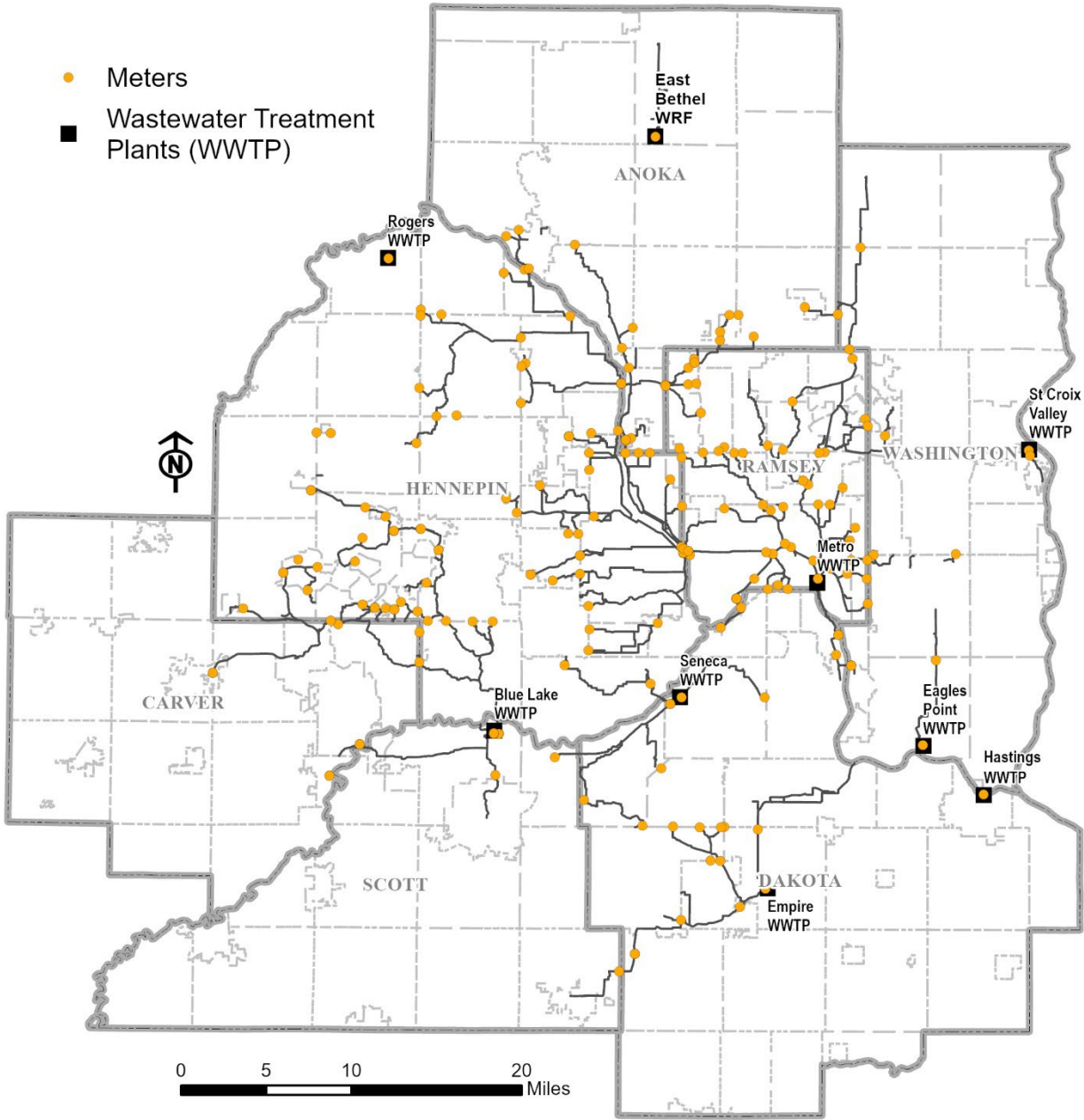
PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$500,000	\$1,500,000	\$2,500,000	\$3,530,000

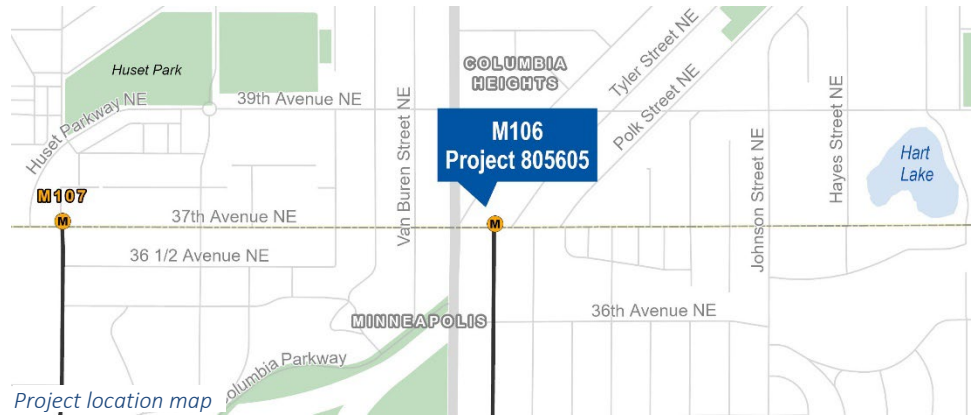
MCES Project 805603



Program Family: 8056
Project # 805605

Meter M106 Modifications

Project Location:
Council District # 2
City: Columbia Heights,
MN



PROJECT TYPE:	Meter Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Coordinate with Others
SCOPE:	Modify existing structure to accommodate road and trail improvements. Replace and update meter to improve accuracy and address condition at a later date.
PROJECT NEED:	Adjust structure to accommodate road and trail improvements to meet City's Project timeline.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$1,100,000	Current ACP \$1,295,000	2023 – 2028 Cash Flow \$1,100,000	Total Project Cost \$1,231,000
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Program Family: 8056
Project # 805606

Lino Lakes Development and Future Meter

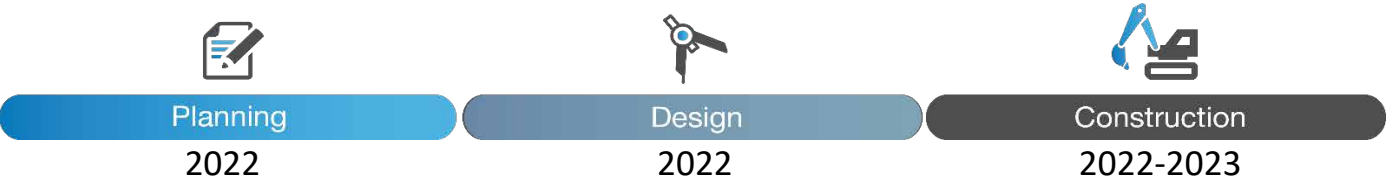
Project Location:
Council District # 11
City: Lino Lakes and Hugo, MN



Project location map

PROJECT TYPE:	Meter Improvement
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Be Fair and Transparent
SCOPE:	Construction of a new meter vault on a 24" city sewer pipe along 24 th Ave N during construction of the development in the area. The future 6" meter/Parshall flume will be installed when flows have increased.
PROJECT NEED:	A development in Lino Lakes along 24 th Ave N and Main Street includes a 24-inch sanitary sewer connecting to Interceptor 802325. A MCES meter is planned for this area to measure the flow from NE Lino Lakes and Hugo. The meter vault will be constructed as a part of the development project.

PROJECT SCHEDULE



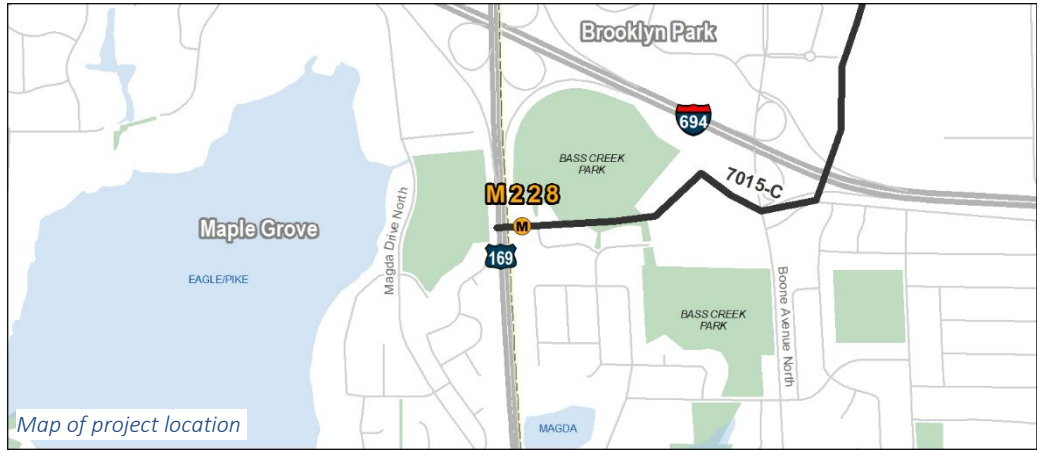
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$400,000	\$400,000	\$400,000	\$565,000

Program Family: 8056
Project # 805636

Replacement Meter Vault M228

Project Location:
Council District # 2
City: Brooklyn Park, MN



PROJECT TYPE:	Meter Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, Be Fair and Transparent
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.

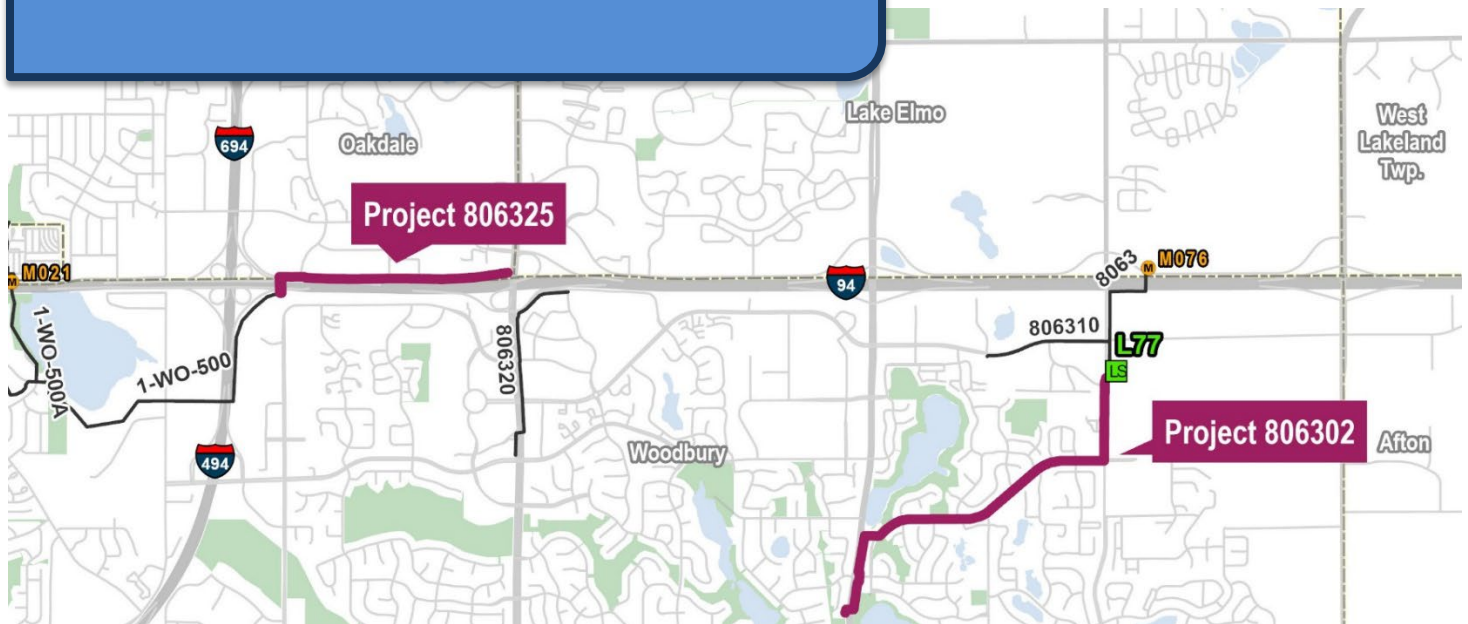
PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$500,000	\$8,193,000	\$7,500,000	\$8,193,000

Program 8063 East Area Interceptor Improvements



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.

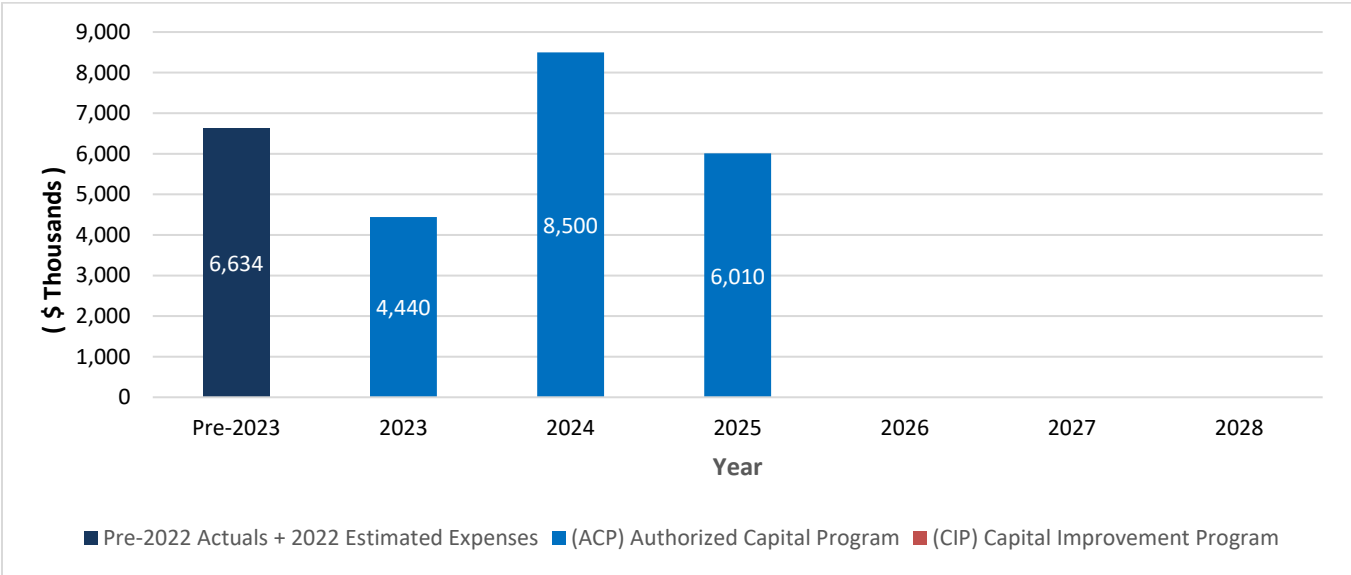
Active Projects in Program:

Project Number	Project Title
806301	East Area Interceptor Improvements (Parent Project)
806302	L77 Improvements
806325	Southwest Lake Elmo Service Extension

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$25,583,992	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:

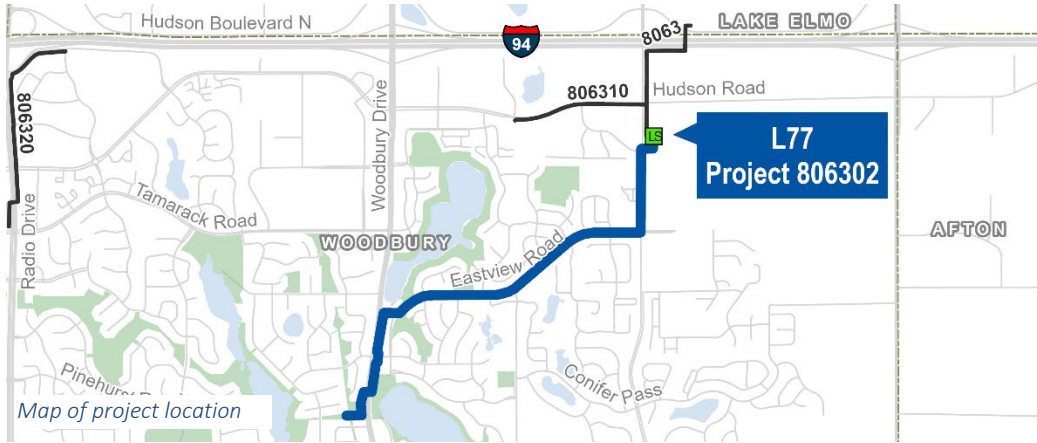


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8063
Project # 806302

Lift Station L77 Improvements

Project Location:
Council District # 12
City: Woodbury, MN



PROJECT TYPE:	Lift Station and Interceptor Improvement
OBJECTIVES:	System Expansion and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs, Asset Preservation and Minimize Impacts
SCOPE:	Expand L77 lift station and connect to larger forcemain. Work includes the addition of a emergency generator.
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



FINANCIAL ANALYSIS

2023 Cash Flow \$1,300,000	Current ACP \$3,724,000	2023 – 2028 Cash Flow \$3,300,000	Total Project Cost \$3,724,000
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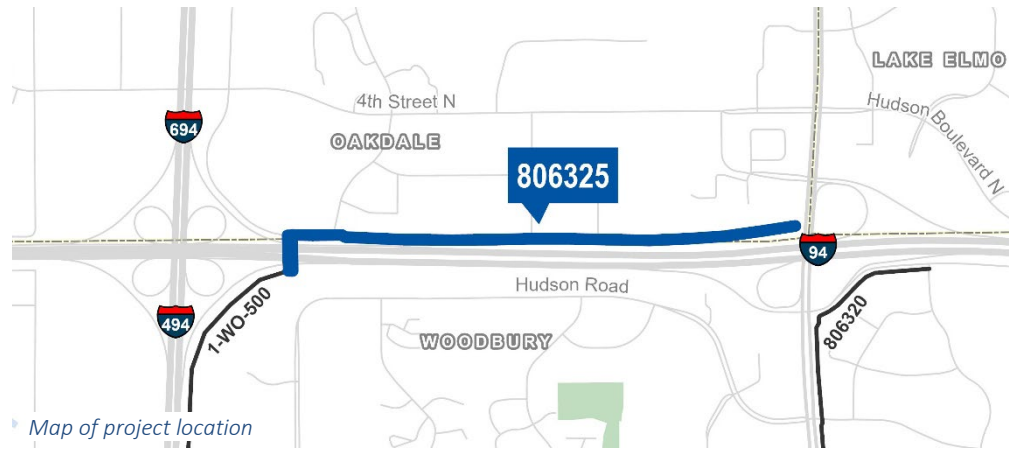
Program Family: 8063
Project # 806325

Lake Elmo West Connection

Project Location:

Council District # 12

City: Lake Elmo and
Woodbury, MN



PROJECT TYPE:	Interceptor Rehabilitation
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs
SCOPE:	Provide regional sewer service to southwestern Lake Elmo through a gravity interceptor extension from 1-WO-500. Includes the upgrade of an existing interceptor sewer crossing I-94 to accommodate current and future growth in the service area.
PROJECT NEED:	This project will provide interceptor facilities to convey wastewater from southwestern Lake Elmo and eastern Oakdale to the Metro WWTP in St Paul. The project is needed to support growth in this eastern portion of the metropolitan area.

PROJECT SCHEDULE



Planning

2020



Design

2021-2022



Construction

2023-2026

FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$3,000,000	\$15,972,000	\$15,000,000	\$15,972,000



Program 8076 Minneapolis Interceptor Rehabilitation



Description:

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

Purpose and Justification:

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

Program Location:

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

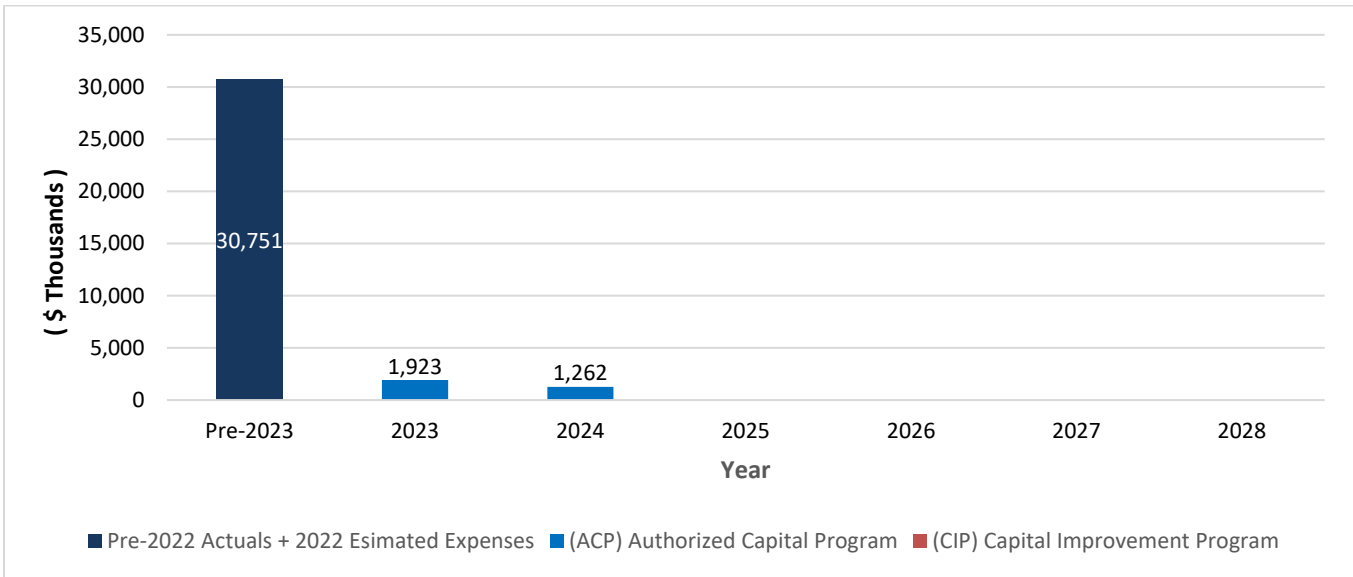
Active Projects in Program:

Project Number	Project Title
807600	Minneapolis Interceptor System Rehabilitation (Parent Project)
807618	1-MN-341 Pipe-in-Pipe Rehab
807640	Maintenance Access Structures
807643	Minneapolis East Interceptor (MEI) Diversion Structure Rehabilitation
807650	Minneapolis Joint Sewer Study
807670	Minneapolis Interceptor Odor Control Study – Phase 1

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$33,936,609	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:

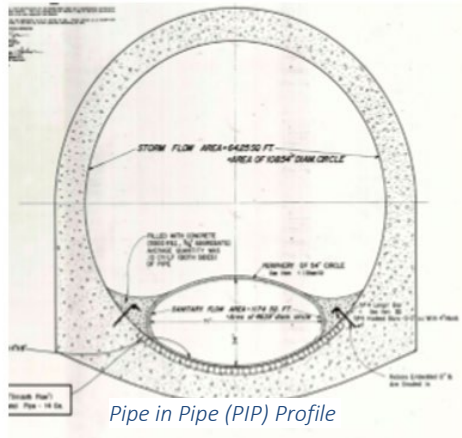


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8076
Project # 807618

Interceptor 1-MN-341 Pipe-in-Pipe Rehabilitation

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



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Repair holes in CMP pipe and pour new geopolymer crown for CMP/invert for storm sewer.
PROJECT NEED:	Interceptor 1-MN-341 was built in the early 1920's as a 102" reinforced concrete combined sanitary/storm sewer. The segment of 1-MN-341 on 38th Ave S between West River Road and 24 th Ave S 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 defects that are allowing inflow of stormwater into the sanitary sewer.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$113,000	Current ACP \$7,722,000	2023 – 2028 Cash Flow \$113,000	Total Project Cost \$7,722,000
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Program Family: 8076
Project # 807640

Maintenance Access Structures

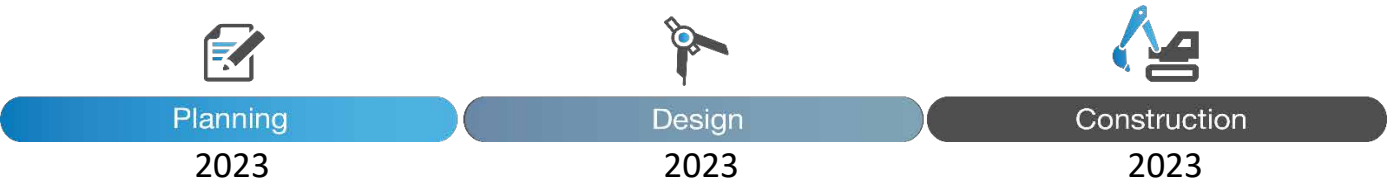
Project Location: Varies
Council Districts: 1-16
City: Various locations in the Cities of Minneapolis and St. Paul, MN



Image of typical maintenance access structure

PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Coordination with Others
SCOPE:	Repair existing maintenance holes and hatches and patch holes in CMP pipe-in-pipe.
PROJECT NEED:	Repairs required to maintain level of service related to I/I and odors.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$1,000,000	2023 – 2028 Cash Flow \$300,000	Total Project Cost \$857,000
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Program Family: 8076
Project # 807643

Minneapolis East Interceptor (MEI) Control Gate Rehabilitation

Project Location:

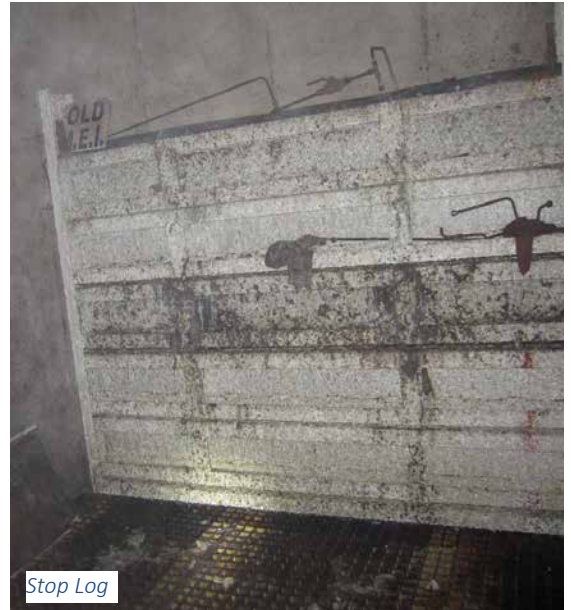
Council District # 8 & 14

City: Minneapolis and St. Paul, MN

6 locations



Deteriorated Hydraulic Gate



Stop Log

PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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. Many of the original hydraulic gates are inoperable and concrete structures were found in poor condition.

PROJECT SCHEDULE



Planning
2017



Design
2018-2020

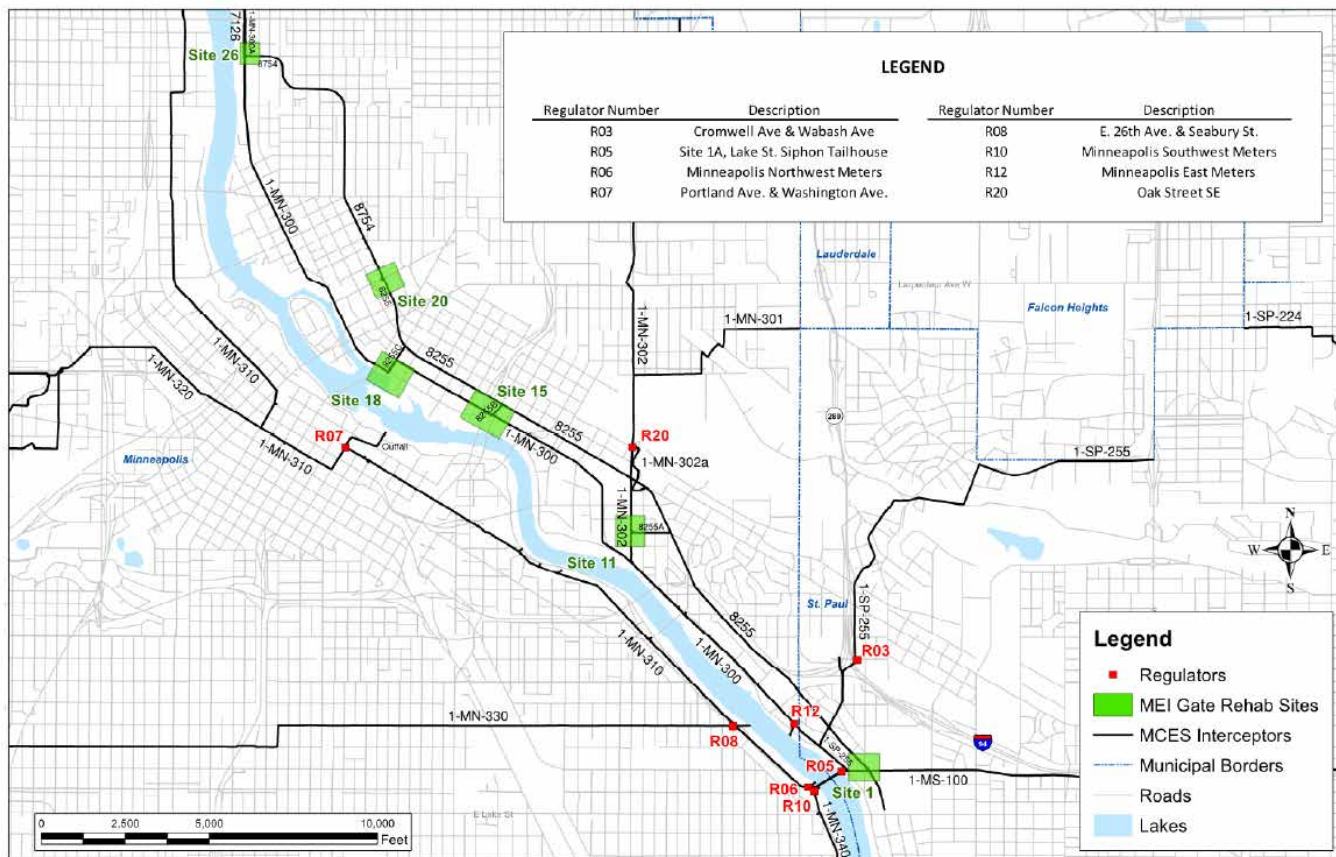


Construction
2020-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$100,000	Current ACP \$16,651,000	2023 – 2028 Cash Flow \$100,000	Total Project Cost \$16,651,000
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PROJECT LOCATION MAP



Program Family: 8076
Project # 807650

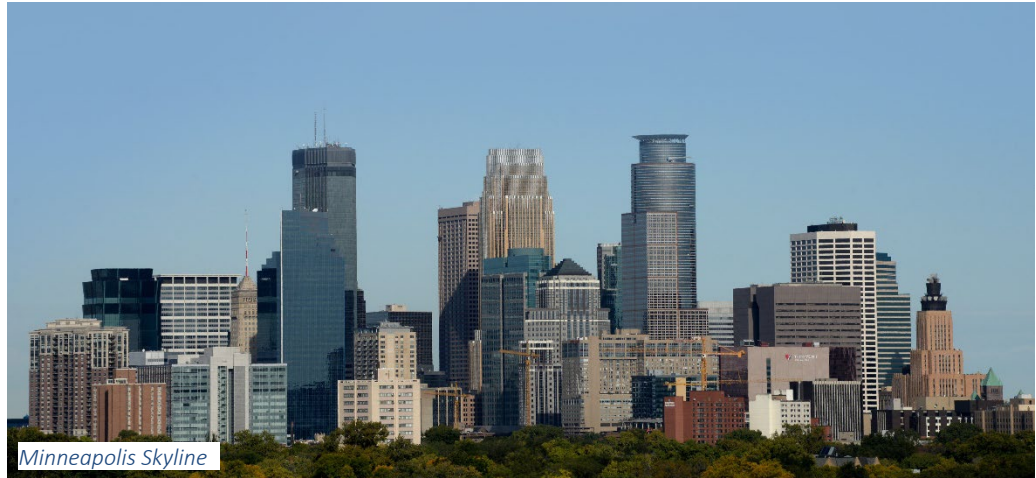
Minneapolis Joint Sewer Study

Project Location:

Council District # 6, 7, & 8

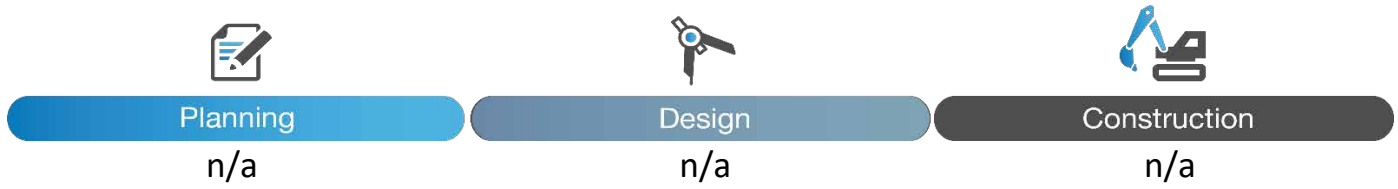
City: Minneapolis, MN

Various Sites



PROJECT TYPE:	Study
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Meet Capacity Needs and Communicate Information
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 accommodated 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 anticipated flows.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$1,000,000	\$6,030,000	\$1,762,000	\$6,030,000

Program Family: 8076
Project # 807670

Minneapolis Odor Control Study – Phase 1

Project Location:

Council District # 6,7 & 8

City: Richfield,
Minneapolis, St. Paul,
Eureka Township, and
Golden Valley, MN

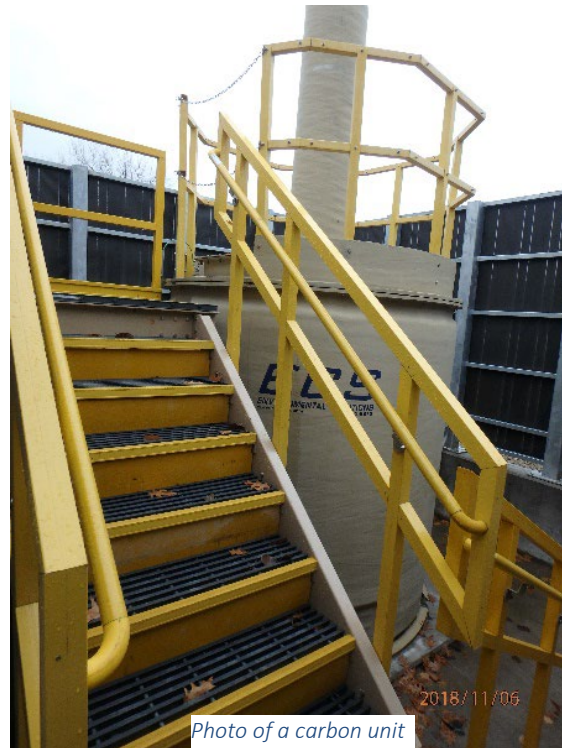


Photo of a carbon unit

PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Be A Good Neighbor
SCOPE:	Model air and wastewater flows, deploy field instruments, and collect samples to identify individual odor sources 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



Planning

2018-2023



Design

n/a



Construction

n/a

FINANCIAL ANALYSIS

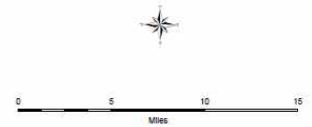
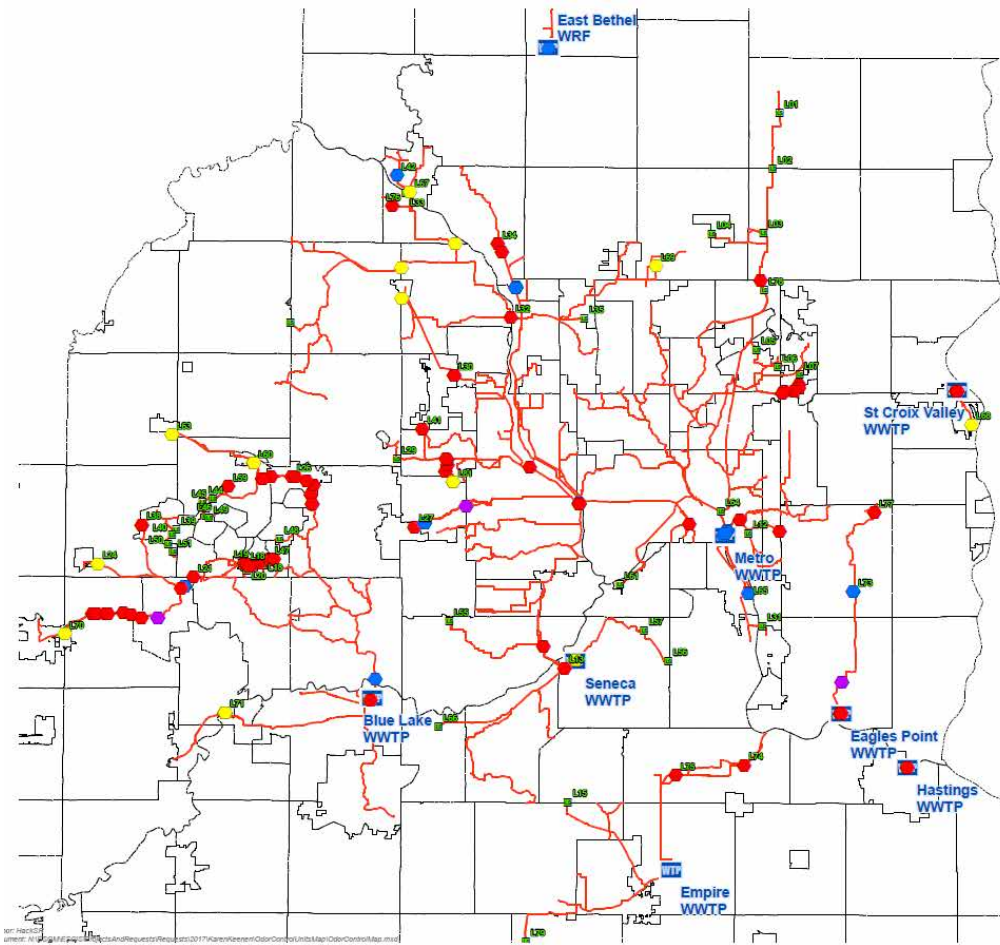
2023 Cash Flow \$360,000	Current ACP \$1,500,000	2023 – 2028 Cash Flow \$360,000	Total Project Cost \$1,500,000
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MAP of MCES ODOR CONTROL UNITS

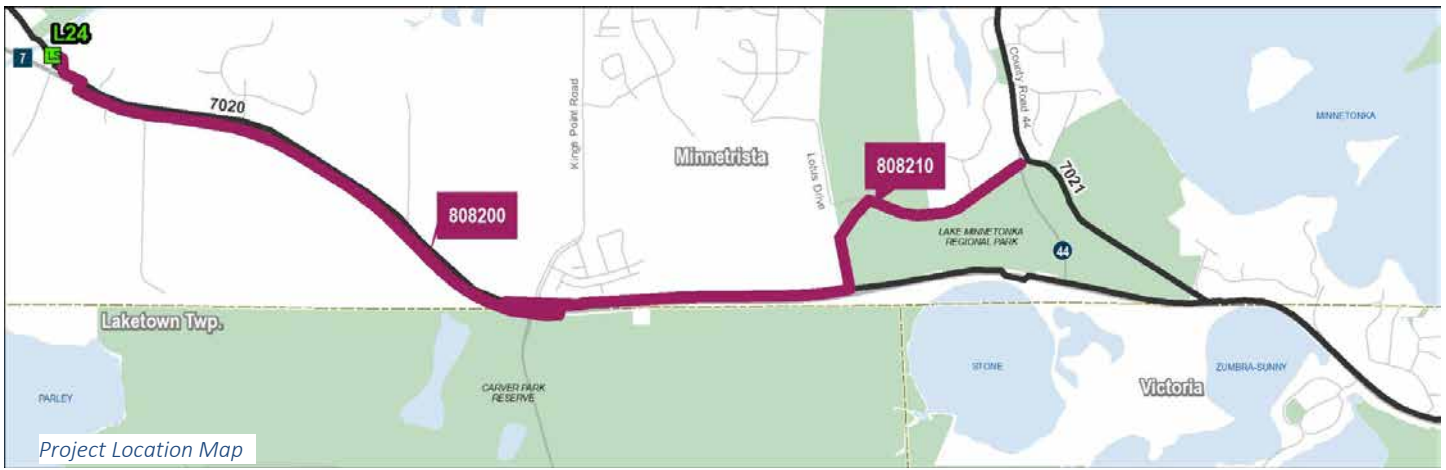
MCES Service Area - Odor Control Units -

Jan 14, 2019 - As shown in GIS

- Odor Control Units**
- Misc Odor Control (3)
- Biofilter (21)
- Bioxide (19)
- Carbon (81)
- Wastewater Treatment Plants**
- Lift Stations
- Wastewater Treatment System**
- Interceptors
- City & Township Boundaries



Program 8082 St. Bonifacius Lift Station / Forcemain Improvements



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 1,000 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 needs 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.

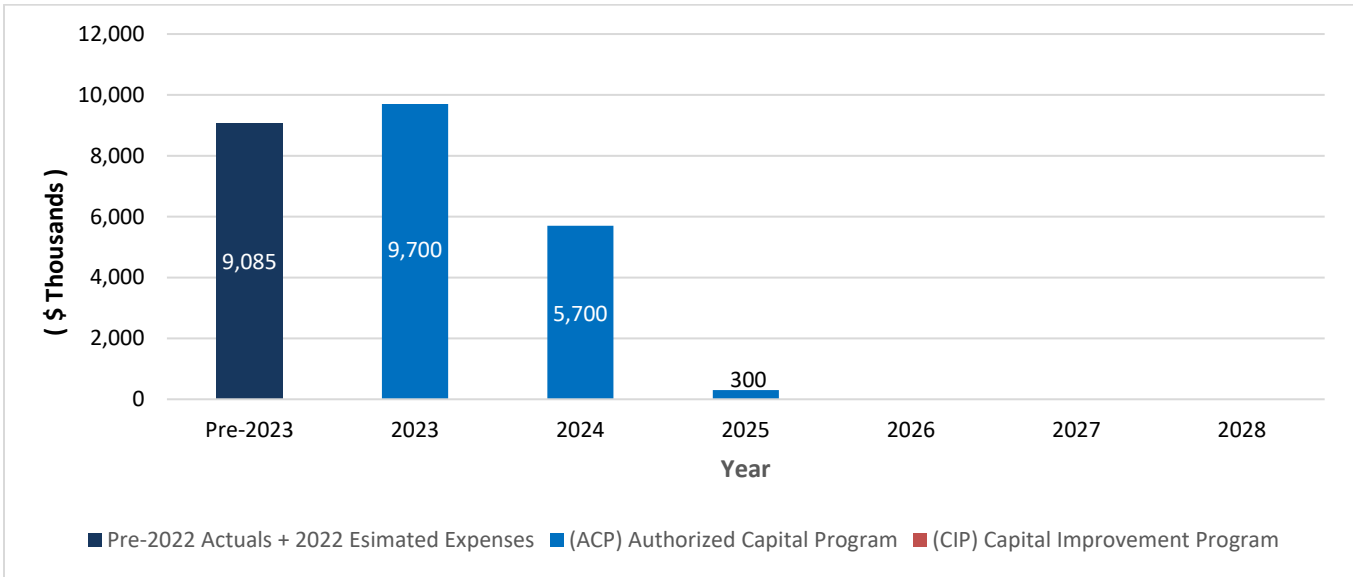
Active Projects in Program:

Project Number	Project Title
808200	St Bonifacius LS/FM Rehabilitation (Parent Project)
808200	L24 Renovation and FM 7020 Replacement

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$24,785,071	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

**Program 8083
Waconia Lift Station / Forcemain
Rehabilitation**



Contractor installing interim conveyance near the micro-tunnel pit on the west side of Carver County Highway 92

Description:

Replacement of the west 9,000' of 7508 was completed in under the Phase 2, 808320 project. The existing 14-inch cast iron pipe was replaced with 20-inch PVC and HDPE pipe.

Replacement of the east 2,000' of 7508 is planned as the Phase 3, 808330 project.

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

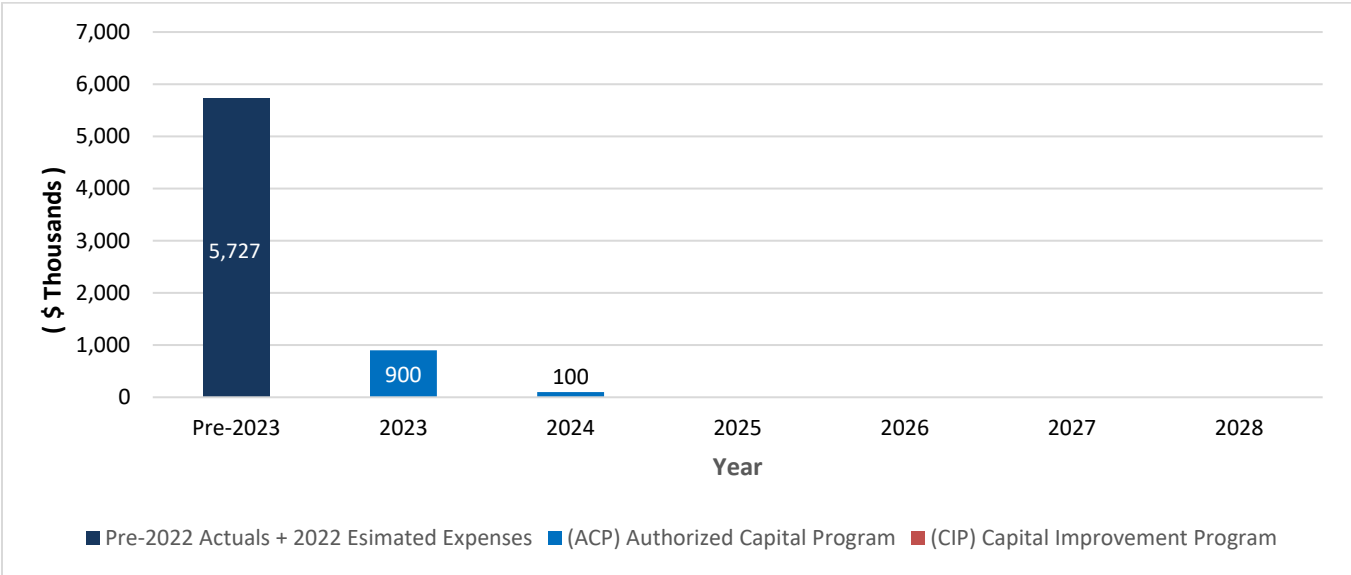
Active Projects in Program:

Project Number	Project Title
808300	Waconia Lift Station / Forcemain Rehabilitation (Parent Project)
808330	Waconia Forcemain 7508 Phase 3 West (included with 808200)

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$6,726,738	Capital Improvement Plan (CIP) \$0
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8083
Project # 808330

Waconia Forcemain 7508 Phase 3 Replacement

Project Location:

Council District # 4

City: Waconia, Victoria
and Laketown
Township, MN



Map of project location

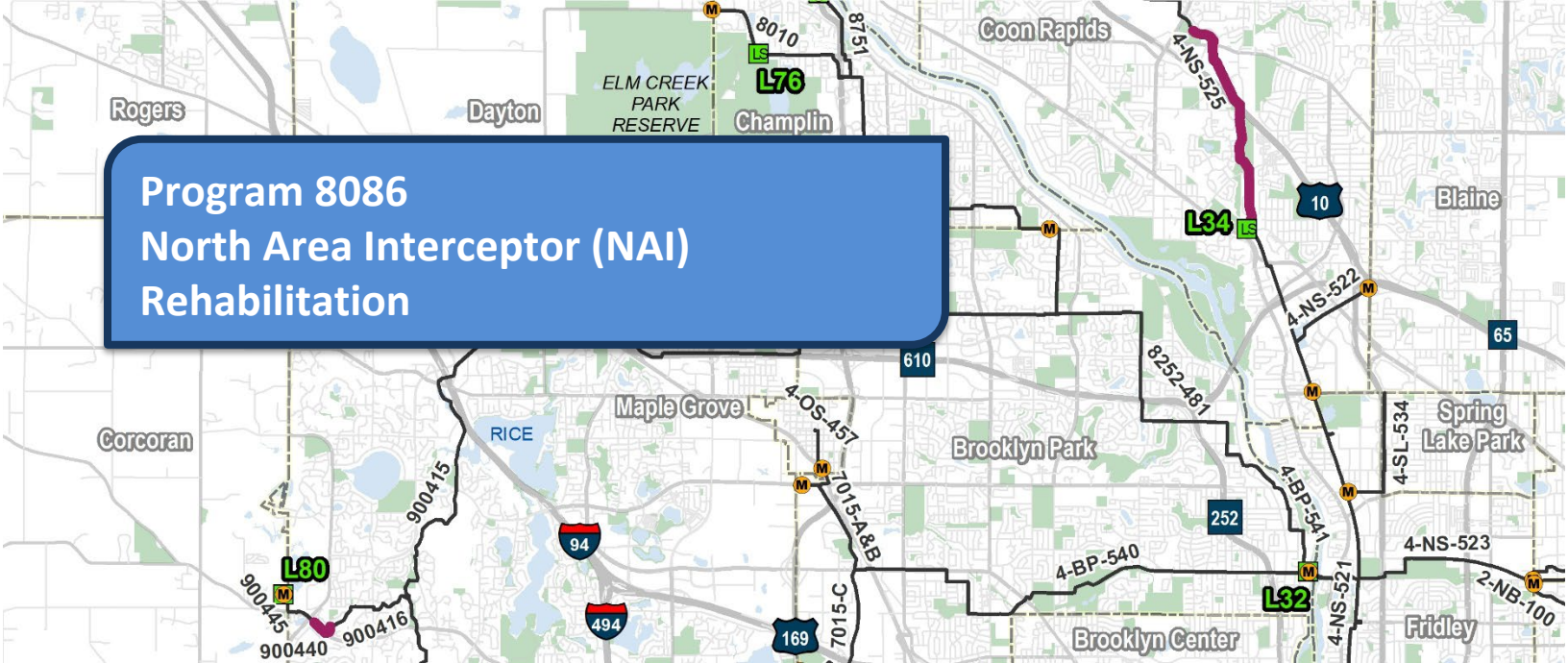
PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation, System Expansion, and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Meet Capacity Needs, Minimize Impacts, and Be A Good Neighbor
SCOPE:	Replace 2,000' of Interceptor Forcemain 7508.
PROJECT NEED:	Forcemain 7508 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



FINANCIAL ANALYSIS

2023 Cash Flow \$800,000	Current ACP \$2,501,000	2023 – 2028 Cash Flow \$800,000	Total Project Cost \$2,501,000
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Description:

The interceptor systems in Blaine, Brooklyn Park, Champlin, Circle Pines, Coon Rapids, Forest Lake Fridley, Hugo, Lexington, Lino Lakes, Maple Grove, Mounds View, 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 and 9.

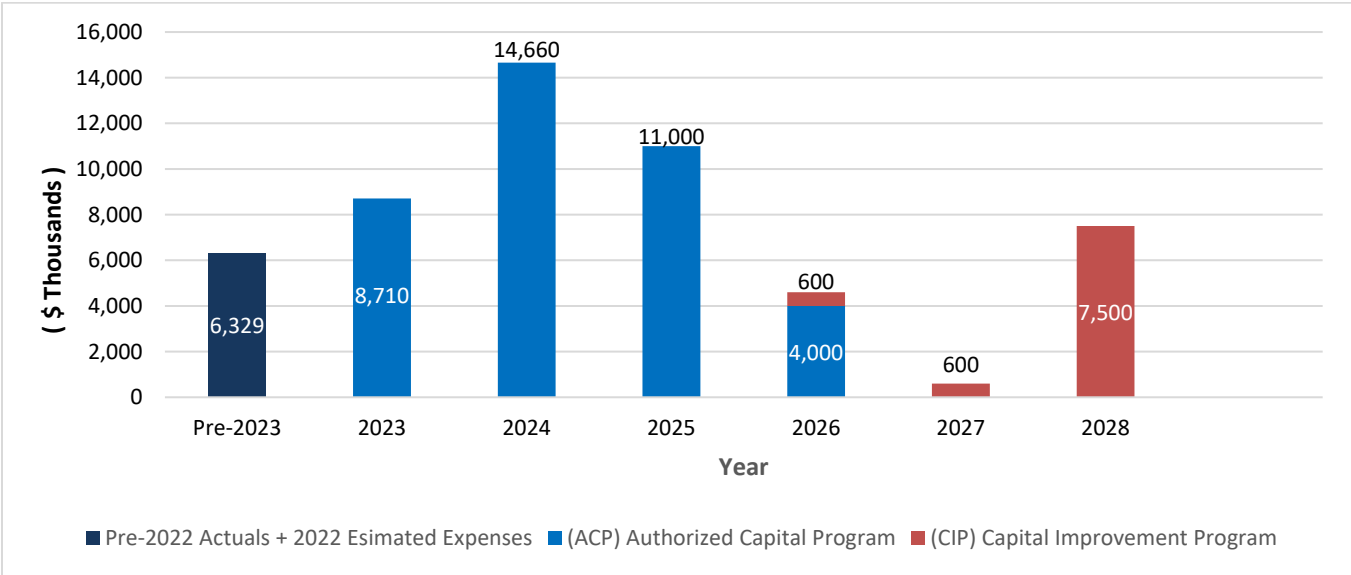
Active Projects in Program:

Project Number	Project Title
808600	North Area Interceptor (NAI) Rehabilitation (Parent Project)
808601	North Area Rehab (Sites 1 - 3, 5 - 6)
808607	Fridley Liquid Waste Receiving Improvements
808622	Elm Creek – Maple Grove Interceptor 900416 Renewal
808685	Coon Rapids: 4-NS-525 Phase I
8086XX	Blaine Relief Interceptor
8086XX	Coon Rapids: 4-NS-525 Phase II

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$44,699,439	Capital Improvement Plan (CIP) \$8,710,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8086
Project # 808601

North Area Rehab - Interceptor 7029

Project Location:
Council District # 6
City: Forest Lake, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve assets and Minimize Impacts
SCOPE:	Site 1 of the North Area Improvements. This project includes rehabilitation and/or replacement of approximately 8,000 linear feet of interceptor and associated structures.
PROJECT NEED:	Interceptor 7029 was constructed in 1970 to convey flow from the City of Forest Lake. A condition assessment was completed in 2018 of the 36-inch reinforced concrete pipe (RCP). The worst condition was between MH 99 and L 02 where a 1,000-foot segment was identified as condition 4.5 and the remaining 7,000 feet to be condition 4.

PROJECT SCHEDULE



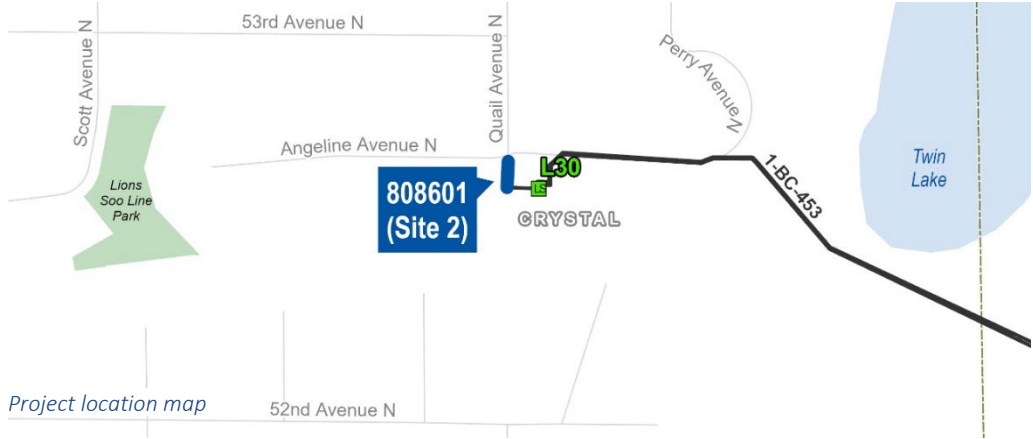
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$135,000	\$2,400,000	\$5,567,000	\$5,567,000

Program Family: 8086
Project # 808601

North Area Rehabilitation - Interceptor 1-CL-455

Project Location:
Council District # 6
City: Crystal, MN
Location:
Interceptor 1-CL-455



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate a section of pipe between Shaft 1 and MH 100
PROJECT NEED:	Condition assessment of pipe shows the pipe in this section as poor condition and a sag in the pipe. There is a severe grease build up from the city pipe coming in and need frequent cleaning.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$10,000	Current ACP \$160,000	2023 – 2028 Cash Flow \$371,000	Total Project Cost \$371,000
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Program Family: 8086
Project # 808601

North Area Rehab - Interceptor 7015-C

Project Location:
Council District # 6
City: Brooklyn Park, MN
Location: Interceptor 7015-C



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts.
SCOPE:	Site 3 of the North Area Improvements. This project includes rehabilitation and/or replacement of approximately 10 feet of interceptor that was not lined during the 2007 rehabilitation project and replacement of two structures. An extensive temporary conveyance system will be needed to repair this section.
PROJECT NEED:	Interceptor 7015-C in Brooklyn Park is a 36-inch reinforced concrete pipe (RCP) constructed in 1970 and lined in 2007. A five to ten linear foot section of pipe was found unlined on the downstream end of Section 124009 near Manhole (MH) 45. Prior to lining, the condition of the pipe was 4.5.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$50,000	\$800,000	\$1,856,000	\$1,856,000

Program Family: 8086
Project # 808601

North Area Rehabilitation – Interceptor 9004-1

Project Location:
Council District # 1
City: Maple Grove, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate 410 feet of severely corroded 48-inch RCP.
PROJECT NEED:	Condition assessment of the Interceptor has identified it as severely corroded. Rehabilitation of the interceptor is needed to prevent further deterioration and potential failure.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$35,000	\$600,000	\$1,392,000	\$1,392,000

Program Family: 8086
Project # 808601

North Area Rehabilitation – Interceptor 900415

Project Location:
Council District # 1
City: Maple Grove, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate 18 Manholes on Interceptor 900415.
PROJECT NEED:	Routine inspection of the Interceptor identified several manholes that were in poor condition. The interceptor was previously rehabilitated and is in good condition. If not addressed, further deterioration will result in failure.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$10,000	\$160,000	\$360,330	\$360,330

Program Family: 8086
Project # 808607

Fridley Liquid Waste Receiving Improvements

Project Location:
Council District # 2
City: Fridley, MN
Location:
8296 Hickory St NE



Fridley Liquid Waste Receiving Facility

PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Collaborate with Others
SCOPE:	The loadout bay discharge pipe elevation needs to be lowered to allow customers to hookup more efficiently, provide larger rock traps and replacement or recalibration of existing flow meters. Access improvements are necessary to allow large tanker trucks into the bay. The maintenance structure that is used to dump during outages needs to be upgraded to include a grit chamber.
PROJECT NEED:	There are several deficiencies and issues with the receiving, process, and treatment at the Fridley Liquid Waste Receiving Facility. Several upgrades are necessary for this to be successfully used as a regional liquid waste receiving and maintenance facility.

PROJECT SCHEDULE



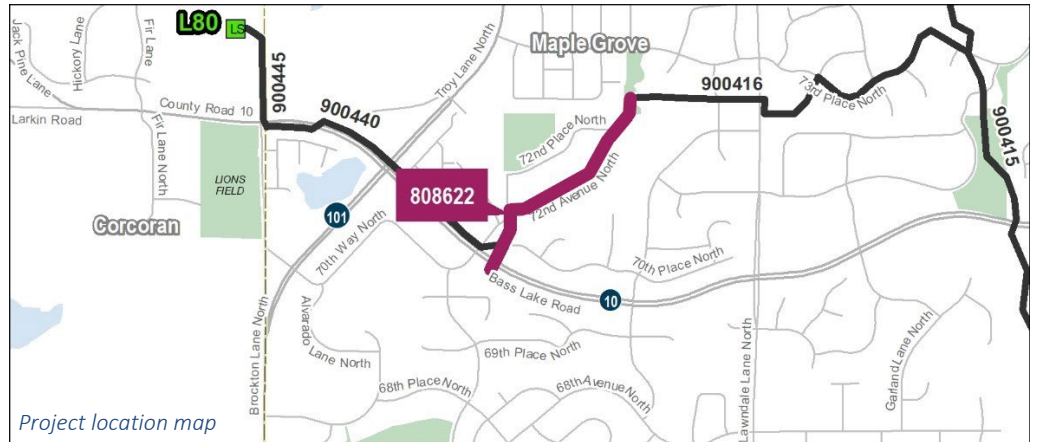
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$150,000	\$2,600,000	\$2,600,000	\$2,600,000

Program Family: 8086
Project # 808622

Maple Grove Interceptor Replacement

Project Location:
Council District # 1
City: Maple Grove, MN



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Areas of Interceptor 900416 have been identified with varies 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

2023-2026

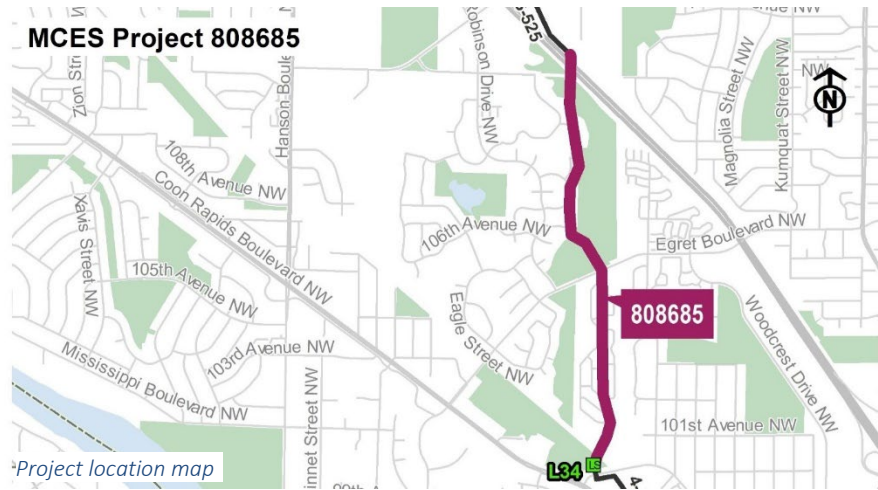
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$5,719,000	\$5,300,000	\$5,719,000

Program Family: 8086
Project # 808685

Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 1

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



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	<p>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.</p> <p>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.</p>
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



Planning
2020



Design
2020-2022



Construction
2023-2024

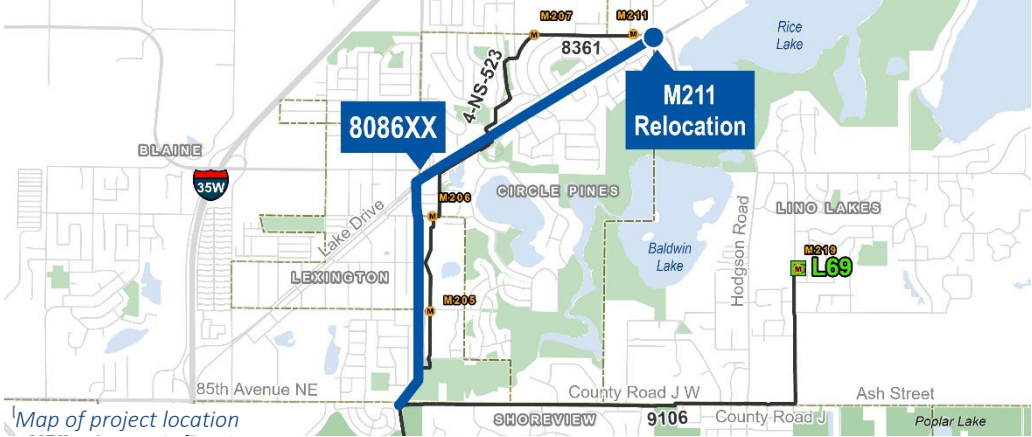
FINANCIAL ANALYSIS

2023 Cash Flow \$6,000,000	Current ACP \$17,804,000	2023 – 2028 Cash Flow \$17,000,000	Total Project Cost \$17,804,000
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Program Family: 8086
Project # 8086XX

Blaine Relief Interceptor

Project Location:
Council District # 11
City: Circle Pines, MN
Location: Lexington Ave and Lake Drive



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	System Expansion
CUSTOMER LEVEL OF SERVICE:	Meet capacity needs
SCOPE:	Construction of a new 14,000+ feet, 36-inch (approximate) interceptor in Circle Pines along Lexington Avenue between County Road J, north to Lake Drive then east, along Lake Drive to approximately the Lino Lakes corporate border. Project would include the relocation of M211 to allow for the measurement of flow from the western portion of Lino Lakes.
PROJECT NEED:	The project need was first identified in 2005 to accommodate projected growth in western Lino Lakes. Existing capacity within interceptor 4-NS-523 was insufficient to accommodate the expected increase in flow generated by the growth. An engineering report was completed in 2006 which recommended the above referenced project out of four identified alternatives. In response to the economic downturn in 2007-08 Lino Lakes revised its growth forecasts that no longer reflected the need for additional capacity. The project was then placed on hold. The city in its 2018 Comprehensive Sewer Plan added growth within its western area that once again reflects the need for additional wastewater conveyance capacity. The Council committed to having the additional capacity available for the city by the end of 2030.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

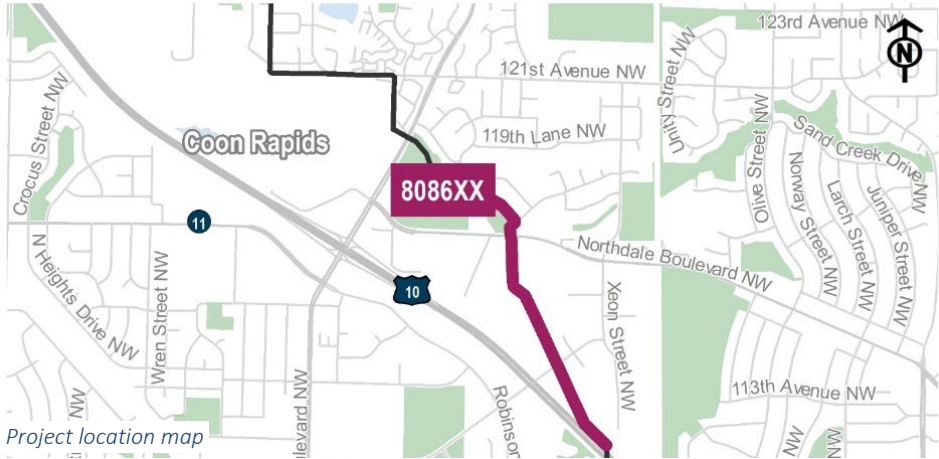
2023 Cash Flow \$50,000	Current ACP \$600,000	2023 – 2028 Cash Flow \$600,000	Total Project Cost \$16,850,000
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Program Family: 8086
Project # 8086XX

Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 2

Project Location:
Council District # 9
City: Coon Rapids, MN
Interceptor 4-N5-525

MCES Project 8086XX



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	<p>This project is the second of a two-phase interceptor rehabilitation project.</p> <p>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.</p> <p>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.</p>
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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$10,000	\$20,000	\$10,000	\$20,000

Program 8088 St. Paul Interceptor System Rehabilitation

Cured-in-place (CIP) liner being installed through a manhole

Large-diameter interceptor sewer pipe segments ready for installation

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.

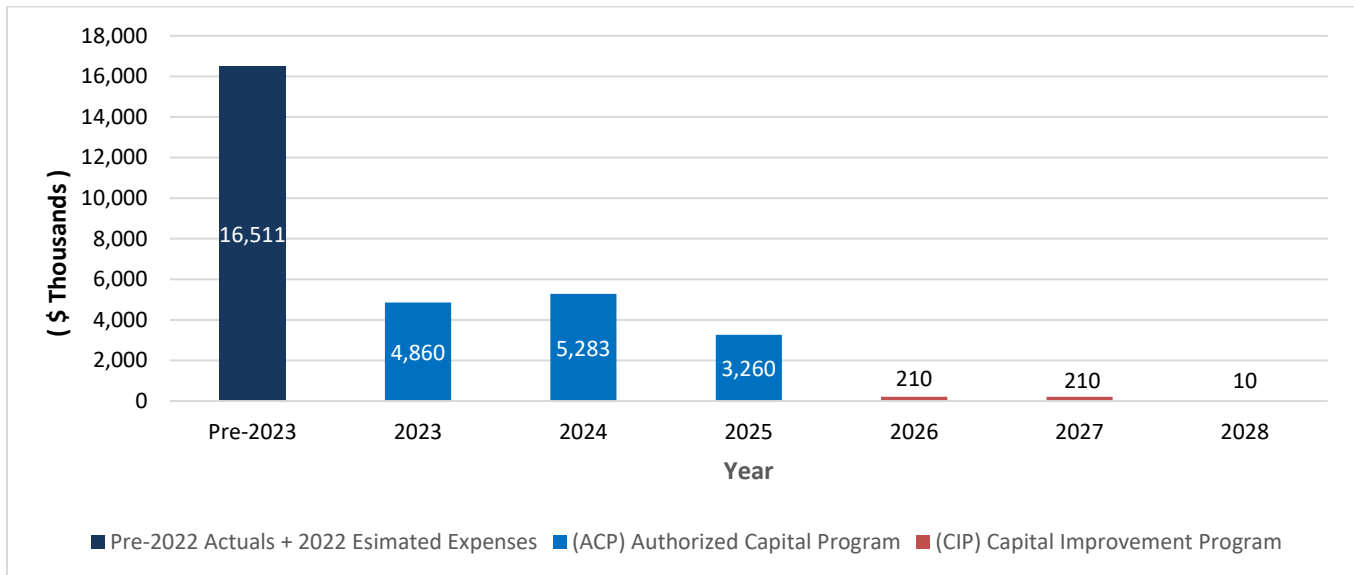
Active Projects in Program:

Project Number	Project Title
808800	St Paul Interceptor System (SPIS) Rehabilitation (Parent Project)
808823	Interceptors 1-SP-200 and 1-SP-201 Battle Creek Rehabilitation
808861	Grass Lake Interceptor Rehabilitation
808862	Long Lake Interceptor Rehabilitation
808881	R02 Site Needs Evaluation
808882	1-MS-100 Rehabilitation Feasibility Study
808883	Review Siphon Cleaning
808884	St Paul Interceptor System Study

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$29,914,098	Capital Improvement Plan (CIP) \$430,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8088
Project # 808823

Interceptors 1-SP-200 and 1-SP-201 Battle Creek Rehabilitation

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



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 project 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.

PROJECT SCHEDULE



Planning
2015-2016



Design
2019



Construction
2020-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$300,000	Current ACP \$13,153,000	2023 – 2028 Cash Flow \$300,000	Total Project Cost \$13,153,000
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Program Family: 8088
Project # 808861

Grass Lake Interceptor Rehabilitation

Project Location:
Council District # 10
City: Shoreview, MN



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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



FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$6,689,000	2023 – 2028 Cash Flow \$5,800,000	Total Project Cost \$6,689,000
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Program Family: 8088
Project # 808862

Long Lake Interceptor Rehabilitation

Project Location:
Council District # 10
City: New Brighton, MN



PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$1,700,000	\$2,360,000	\$2,033,000	\$2,360,000

Program Family: 8088
Project # 808881

Third and Commercial Site Needs Evaluation

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



PROJECT TYPE:	Study
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Be A Good Neighbor
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

		
Planning	Design	Construction
2019-2023	N/A	N/A

FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$400,000	\$2,144,000	\$500,000	\$2,144,000

Program Family: 8088
Project # 808882

1-MS-100 Rehabilitation Feasibility Study

Project Location:
Council District # 13
City: St. Paul, MN



PROJECT TYPE:	Study
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	A feasibility study is being conducted to evaluate condition assessment data for the 1-MS-100 interceptor, to understand alternative technologies for rehabilitation of this unique deep tunnel interceptor, to refine budgetary costs estimates and timelines for future inspections and eventual rehabilitation projects.
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



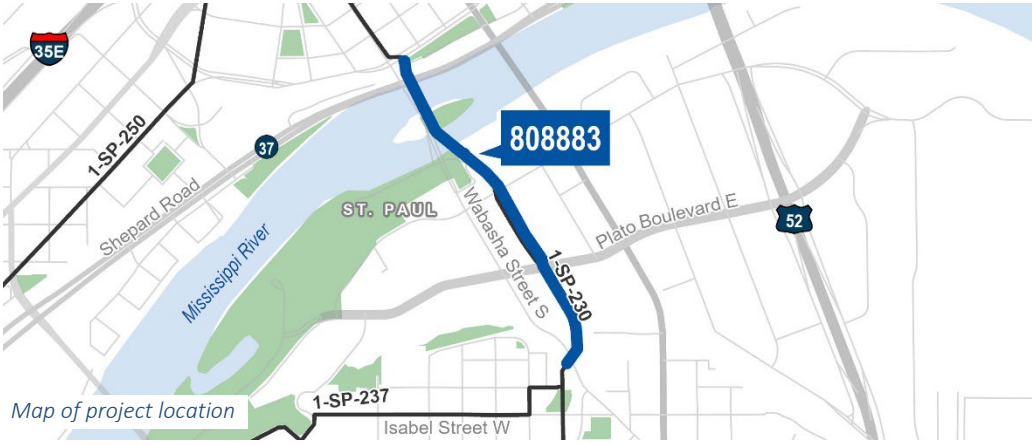
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$50,000	\$585,000	\$150,000	\$516,000

Program Family: 8088
Project # 808883

Riverview Siphon Cleaning

Project Location:
Council District # 13
City: St. Paul, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Flow in the siphons (up to four parallel pipes) will be isolated one pipe at a time to permit a cleaning. Flow performance will be tested after the cleaning to re-establish the siphon system capacity and the need for additional capacity.
PROJECT NEED:	Growth in the West Side Flats area of St. Paul, combined with evidence of past wastewater spills at the siphon headhouse as well as concerns raised by the City of St. Paul about the ability of the siphon to serve rapid redevelopment in the area, have driven an analysis to better understand siphon capacity and improvement needs.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$2,000,000	Current ACP \$3,832,000	2023 – 2028 Cash Flow \$3,500,000	Total Project Cost \$3,832,000
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Program Family: 8088
Project # 808884

St. Paul Interceptor System Study

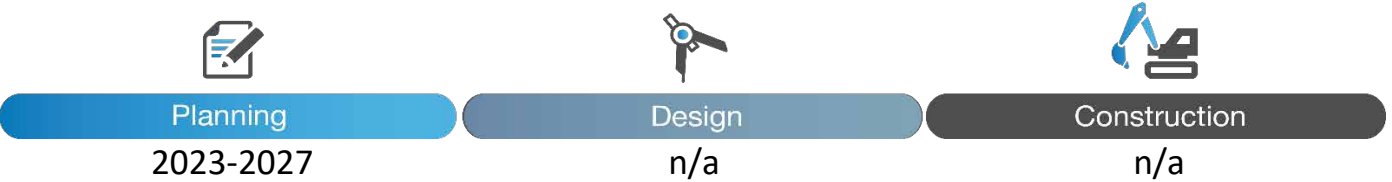
Project Location:
Council District # 13-14
City: Saint Paul, MN
Location: City Wide



Image of a LaserFlow flow monitor inside ES interceptor

PROJECT TYPE:	Study
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Meet Capacity Needs and Collaborate With Others
SCOPE:	Provide a long-term study (approximately 5 years) of the regional wastewater system in the City of Saint Paul. The consultant will install and maintain temporary flow meters across the city for two years and use that data to build a hydraulic model of the MCES system. Other tasks include identification of areas with high I/I, potential for sewer overflow, and limited hydraulic capacity. Project will also replace the M700 series planning meters which no longer function.
PROJECT NEED:	To assist in developing a quantitative understanding of flow conditions, define existing and future system limitation, and outline improvements that may be necessary for long-term reliability of the regional system.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$700,000	\$1,000,000	\$1,100,000

Program 8090 Interceptor Rehabilitation Program



Vactor truck used to clean debris from interceptors

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:

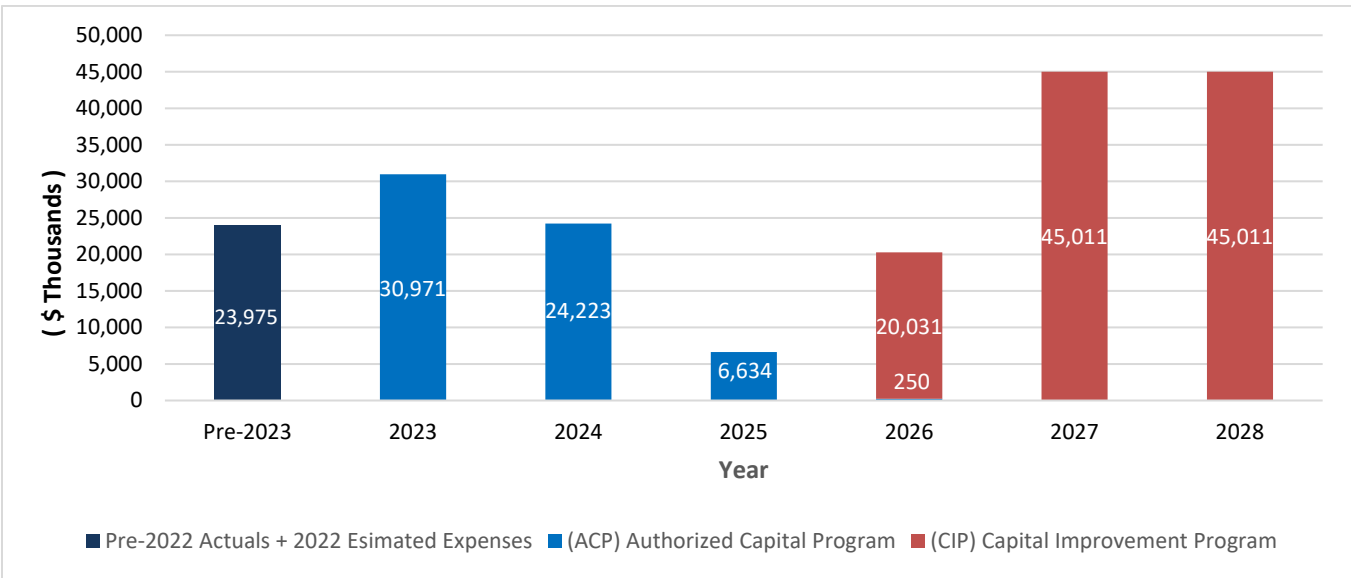
Project Number	Project Title
809099	Funds for Future Interceptor Rehabilitation Projects (Parent Project)
809083	I/I Mitigation
809089	Interceptor Inspection
809093	South Saint Paul WWTP Reconveyance

809095	Regional Maintenance Facility (RMF) Improvements
819011	Interceptor Chemical Odor Control
819015	East Isles Forcemain Improvements – Contract G
819016	Deep Tunnel Access Cleaning Phase 2
819017	7031/9003 Siphon Outlet Structure Improvements
819018	Plymouth Forcemain Relocation at Douglas Drive
819019	Vactor Waste Facility Improvements
819020	East Isles Forcemain Improvements – Contract H
819022	MCES Interceptor Rehab. Project 6-MO-650, 1-MN-320, 7122 & 8155 (Sites 1 – 4)
819025	TH 13 – MNDOT Coordination

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$86,053,216	Capital Improvement Plan (CIP) \$110,053,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8090
Project # 809083

I / I Mitigation

Project Location:

Council District # n/a

City: n/a

Project location can vary across 7 county region



Image of a sewer overflow

PROJECT TYPE:	Interceptor Improvements
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
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 and to prevent the entrance of wastewater into the environment during weather events.

PROJECT SCHEDULE



Planning

n/a



Design

n/a



Construction

n/a

FINANCIAL ANALYSIS

2023 Cash Flow \$10,000	Current ACP \$250,000	2023 – 2028 Cash Flow \$60,000	Total Project Cost \$1,250,000
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Program Family: 8090
Project # 809089

Special Interceptor Inspections

Project Location:
Council District # n/a
City: n/a
Location: Regional



UTV equipped with tracks and CCTB equipment

PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Work is identified each year during the planning for the sewer televising work that is to be completed. Work that cannot be handled in-house is contracted out. Less than 20% of the work in the last two years has been contracted.
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. Specialized equipment, permits, and coordination with the communities is needed to complete the work.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$10,000	Current ACP \$1,073,000	2023 – 2028 Cash Flow \$30,070,000	Total Project Cost \$46,093,000
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Program Family: 8090
Project # 809093

South Saint Paul WWTP Reconveyance

Project Location:
Council District # 13
City: South St. Paul, MN
Metro WWTP



Backup generator at Metro WWTP

PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Engage Customers
SCOPE:	Work includes removing unnecessary structures and materials from the site and constructing 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 of South St. Paul. MCES is obligated to clear the reconveyed land of pipes and structures in accordance with the draft acquisition agreement. In addition, the electrical, mechanical, and odor control improvements are needed to increase system reliability.

PROJECT SCHEDULE



Planning
2018



Design
2019-2020



Construction
2021-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$4,673,000	2023 – 2028 Cash Flow \$400,000	Total Project Cost \$4,673,000
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Program Family: 8090
Project # 809095

Regional Maintenance Facility (RMF) Expansion

Project Location:

Council District # 15

City: Eagan, MN

Location:
3565 Kennebec Dr.



Regional Maintenance Facility (RMF)

PROJECT TYPE:	Building Improvements
OBJECTIVES:	Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve 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



Planning

2019



Design

2019-2022



Construction

2022-2024

FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$13,000,000	\$27,711,000	\$24,700,000	\$24,711,000

Program Family: 8090
Project # 819011

Interceptor Chemical Odor Control

Project Location:
Council District # n/a
City: n/a
Location – Multiple Lift Stations and Meter Stations throughout the region



L-24 Chemical Odor Control Tank and Pumping System

PROJECT TYPE:	Odor Control Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Be a Good Neighbor
SCOPE:	Work will be performed under a design, build, operate contract where MCES will own all equipment (except for hydrogen sulfide monitoring equipment) and a vendor will operate, maintain, monitor, report, and supply chemical. This includes installing chemical deliver equipment and new HDPE tanks at most sites. The work includes operation of the systems for approximately 7 years with up to two 5-year extensions.
PROJECT NEED:	MCES currently has 16 operational chemical dosing odor control sites, including meters and lift stations. These sites are critical to reducing odor releases impacting communities and reducing corrosion within the interceptor system.

PROJECT SCHEDULE



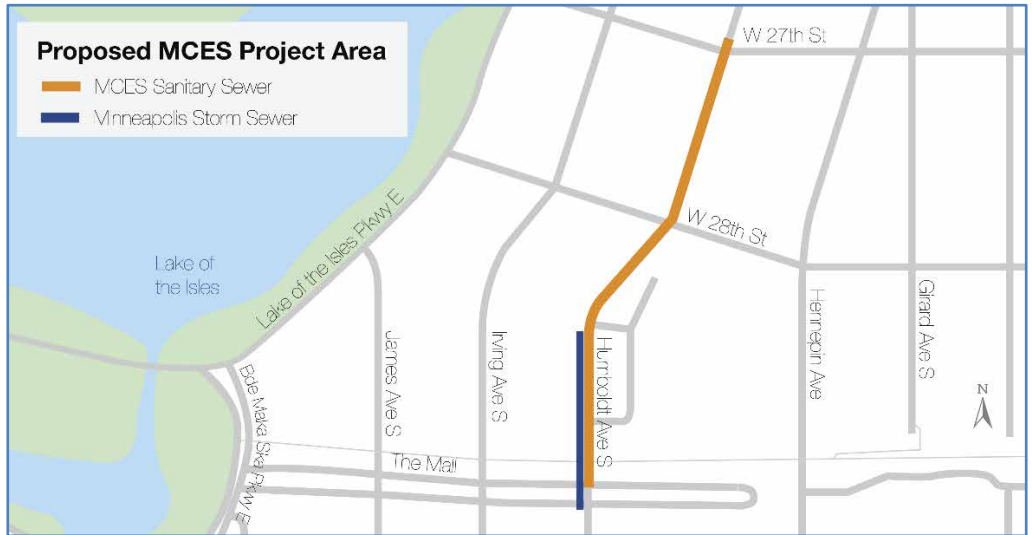
FINANCIAL ANALYSIS

2023 Cash Flow \$3,500,000	Current ACP \$7,380,000	2023 – 2028 Cash Flow \$5,800,000	Total Project Cost 7,380,000
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Program Family: 8090
Project # 819015

Hopkins System Improvements, East Isles Forcemain – Contract G

Project Location:
Council District # 6
City: Minneapolis, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	The project includes replacement of 1500 lineal feet of 30” concrete forcemain with two 24” diameter forcemains on Humboldt Ave between the Midtown Greenway and 27 th Street. Cooperative construction with the city of Minneapolis to complete local 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



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$600,000	\$5,400,000	\$600,000	\$5,355,000

Program Family: 8090
Project # 819016

Large Diameter Interceptor Cleaning – Phase 2

Project Location:
Council District #7, 8, 14

City: Minneapolis and St. Paul NIEB, St. Anthony W, Prospect Park, Downtown, Marcy Holmes, North Loop, Summit Hill



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Clean seven separate segments of Interceptors 1-MN-300, 1-MN-310, 1-MN-320, 1-SP-250, and 1-MS-100. These are deeper or larger tunnels that cannot otherwise feasibly be completed by Council Operations staff.
PROJECT NEED:	Interceptors need to be cleaned to restore original design capacity and minimize the potential for service interruptions.

PROJECT SCHEDULE



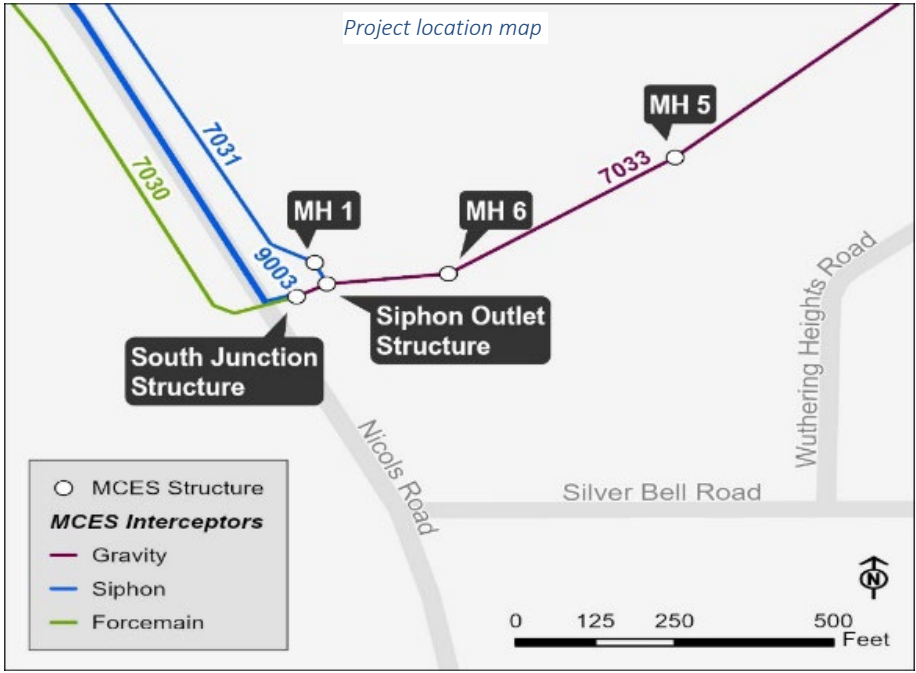
FINANCIAL ANALYSIS

2023 Cash Flow \$4,000,000	Current ACP \$13,010,000	2023 – 2028 Cash Flow \$10,953,000	Total Project Cost \$13,010,000
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Program Family: 8090
Project # 819017

7031/9003 Siphon Outlet Structure Improvements (MH-1 & South Junction Structure)

Project Location:
Council District: # 15
City: Eagan, MN
Location: North of intersection of Nicols Road and Silver Bell Road



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Replacement of maintenance structure (MH1) and the South Junction Structure to reduce the potential for structure failure. Internal lining of interceptor 7030, and a small portion of interceptor 7033 near MH 6.
PROJECT NEED:	Condition assessment has identified the tail house and surrounding structures as being in poor condition. The project is needed for operator safety, to preserve assets, and to maintain system flexibility

PROJECT SCHEDULE



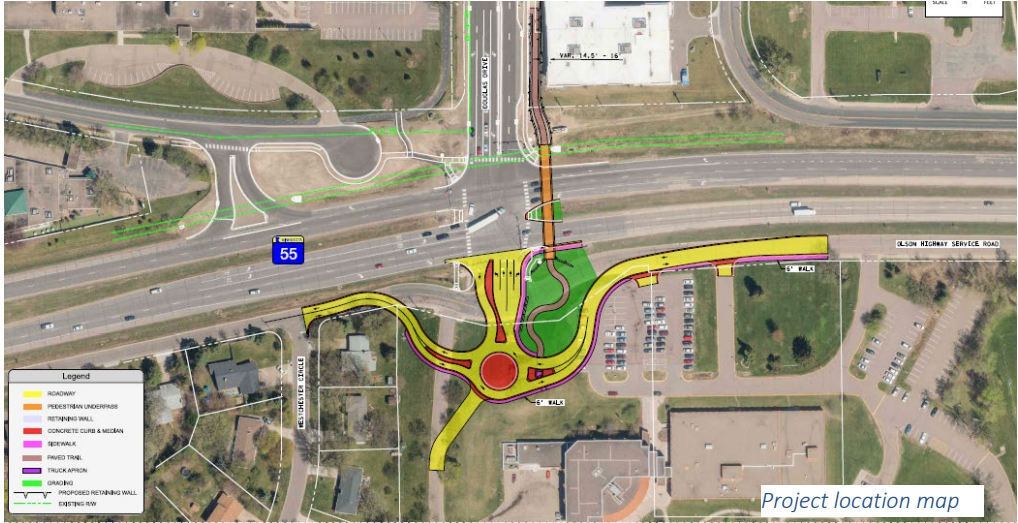
FINANCIAL ANALYSIS

2023 Cash Flow \$500,000	Current ACP \$5,361,000	2023 – 2028 Cash Flow \$5,100,000	Total Project Cost \$5,361,000
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Program Family: 8090
Project # 819018

Plymouth Forcemain Relocation at Douglas Drive

Project Location:
Council District # 6
City: Golden Valley, MN
Location:
Hwy 55 and Douglas Dr.



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	This project realigns the existing parallel 30-inch and 42-inch forcemains. The City of Golden Valley is working to improve pedestrian access in the project area, and the ability for pedestrians to cross Highway 55. The proposed pedestrian tunnel requires that the existing forcemains be lowered. One of the forcemain pipes is over 50 years old and at the end of its useful life.
PROJECT NEED:	

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$2,000,000	\$3,050,000	\$3,000,000	\$3,050,000

Program Family: 8090
Project # 819019

Regional Vector Waste Facility Improvements

Project Location:
Council District # 1-16
City: Regional



Vector truck discharging into a waste receiving facility.

PROJECT TYPE:	Study
OBJECTIVES:	Asset Preservation and Quality Improvements
CUSTOMER LEVEL OF SERVICE:	Meet capacity needs, coordinate with others, minimize impacts
SCOPE:	Study the need for Regional vector waste facilities. Implementation of improvements, if any, would be completed under a separate project.
PROJECT NEED:	Metro plant is the only regional vector waste receiving facility in operation. Consequently, no regional vector waste disposal facility is available when river flooding closes access to the plant. Additionally, lack of a disposal facility can interrupt customer’s cleaning operations and potentially result in illicit dumping into the regional conveyance system.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$100,000	Current ACP \$200,000	2023 – 2028 Cash Flow \$200,000	Total Project Cost \$200,000
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Program Family: 8090
Project # 819020

Hopkins System Improvements, East Isles Forcemain – Contract H

Project Location:
Council District # 6
City: Minneapolis, MN
The Mall Park



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	The project includes replacement of 1,000 lineal feet of 30” concrete forcemain with two 24” diameter forcemains within The Mall Park between Bde Maka Ska Parkway and Humboldt Ave. Cooperative construction with the Minneapolis Park and Recreation Board to construct park master plan improvements in the area. The existing 30” concrete forcemain on Irvine Ave. will be abandoned.
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.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$100,000	\$2,300,000	\$2,250,000	\$2,300,000

Program Family: 8090
Project # 819022

MCES Interceptor Rehab – Site 1 – 6-MO-650

Project Location:
Council District # 3
City: Mound, MN
Location:
Interceptor 6-MO-650



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve assets, Minimize Impacts, and Coordinate with Others
SCOPE:	Rehabilitation of 2,600 LF of 8-inch and 10-inch FM. Rehabilitation of about 500 ft of 24-inch RCP pipe at Auditors Rd and Shoreline Dr.
PROJECT NEED:	Routine condition assessments have identified interceptors at this site as poor condition pipes. 6-MO-650 has experienced recent breaks in the forcemain due to its age. The gravity section of pipe has sag in the pipe. Hennepin County is planning a road reconstruction project on Shoreline Dr. This project needs to be completed before the road reconstruction.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$100,000	\$8,150,000	\$3,700,000	\$3,900,000

Program Family: 8090
Project # 819022

MCES Interceptor Rehab – Site 2 – Interceptor 8151 Siphon at Keller Lake

Project Location:
Council District # 11
City: Maplewood, MN
Location:
Interceptor 8155



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitation of 3 siphon pipes (two 24-inch DIP and a 42-inch DIP) under Keller Lake. Rehabilitation of the headhouse and tail house structures. New gates/valves to improve hydraulic performance.
PROJECT NEED:	Routine condition assessments have identified interceptors at this site as poor condition pipes with extensive corrosion in two of the three pipes.

PROJECT SCHEDULE



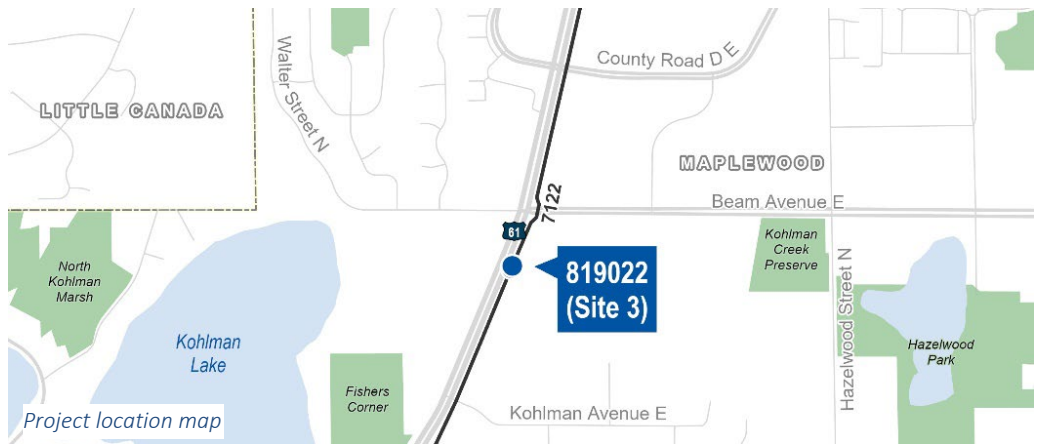
FINANCIAL ANALYSIS

2023 Cash Flow \$25,000	Current ACP \$3,250,000	2023 – 2028 Cash Flow \$3,250,000	Total Project Cost \$3,250,000
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Program Family: 8090
Project # 819022

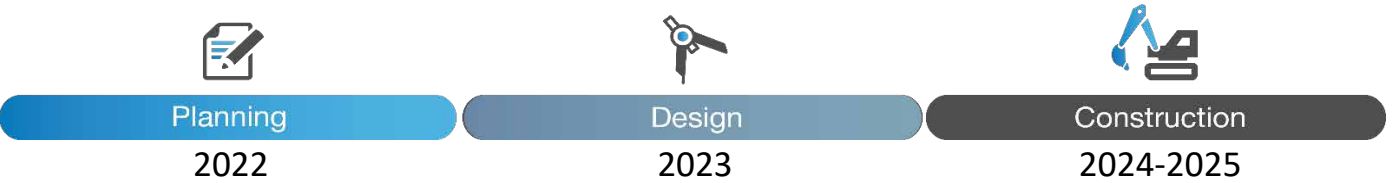
MCES Interceptor Rehab – Site 3 – Interceptor 7122 Storm Sewer Crossing

Project Location:
Council District # 11
City: Maplewood, MN
Location:
Interceptor 7122



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Inspection and cleaning of interceptor 7122 of the low head crossing and the air jumpers.
PROJECT NEED:	The interceptor needs to be cleaned and inspected to check the condition of the pipe. Temporary conveyance is required to do the work.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$25,000	\$650,000	\$650,000	\$650,000

Program Family: 8090
Project # 819022

MCES Interceptor Rehab – Site 4 – 1-MN-310 Siphon Structures at Basset Creek

Project Location:
Council District # 7
City: Minneapolis, MN
Location:
Interceptor 1-MN-310



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitation of 2-36” diameter CIP pipes and cast-in place concrete headhouse and tail house structures. New access structures to improve maintenance.
PROJECT NEED:	Routine condition assessments have identified interceptor as poor condition pipes with significant loss of concrete with rebar exposed in the structures.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$50,000	Current ACP \$3,900,000	2023 – 2028 Cash Flow \$3,900,000	Total Project Cost \$3,900,000
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Program Family: 8090
Project # 819025

TH 13 – MnDOT Coordination

Project Location:
Council District # 4
City: Savage, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	This project realigns the existing forcemain route to move it from under MnDOT’s proposed entrance ramps and frontage roads.
PROJECT NEED:	MnDOT’s TH 13 project includes constructing an overpass with entrance and exit ramps to improve traffic safety at the intersections of Highway 13 and Dakota Ave and Highway 13 and Yosemite Ave. The existing forcemains need to be relocated to ensure continued maintenance without disrupting the proposed Highway improvements. The work will be completed as a part of a MnDOT Construction Contract.

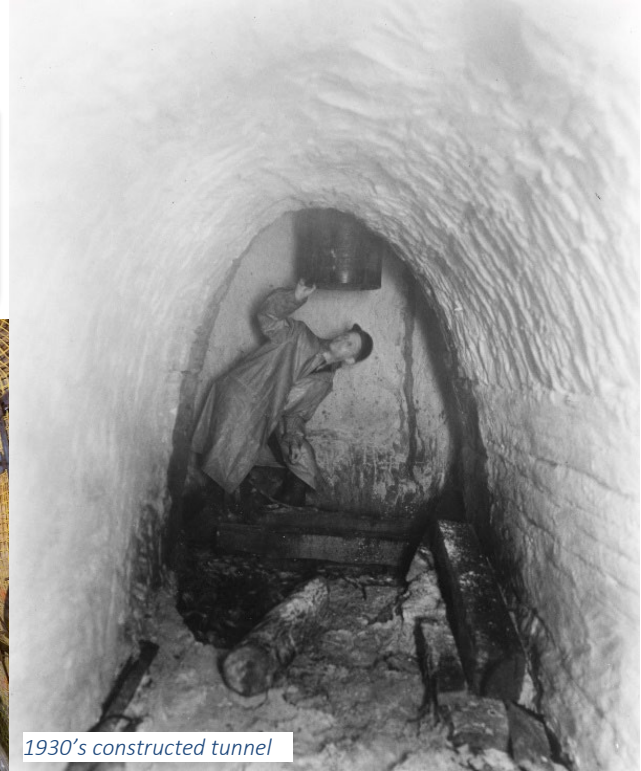
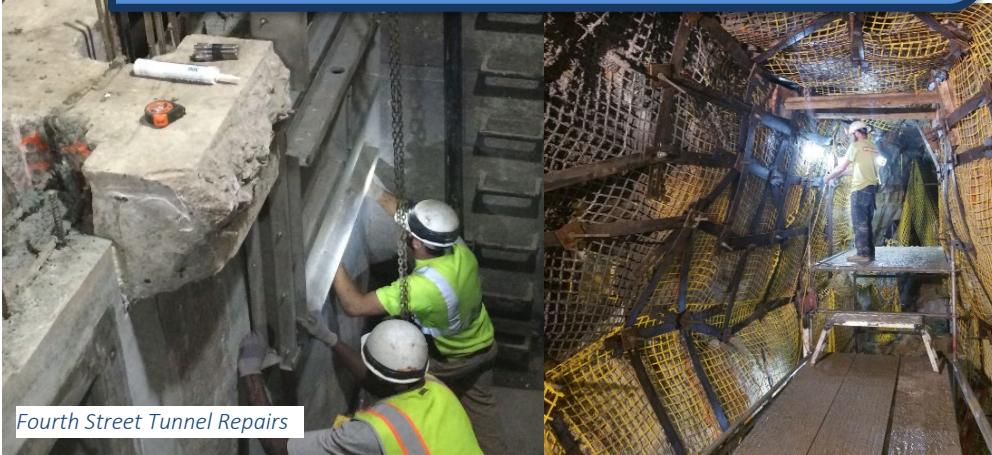
PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$100,000	\$3,696,000	\$100,000	\$3,696,000

Program 8092 Minneapolis Interceptor System Rehabilitation – Phase 2



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-303 Pipe-in-Pipe Rehabilitation
- Interceptor 1-MN-320 Improvements

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:

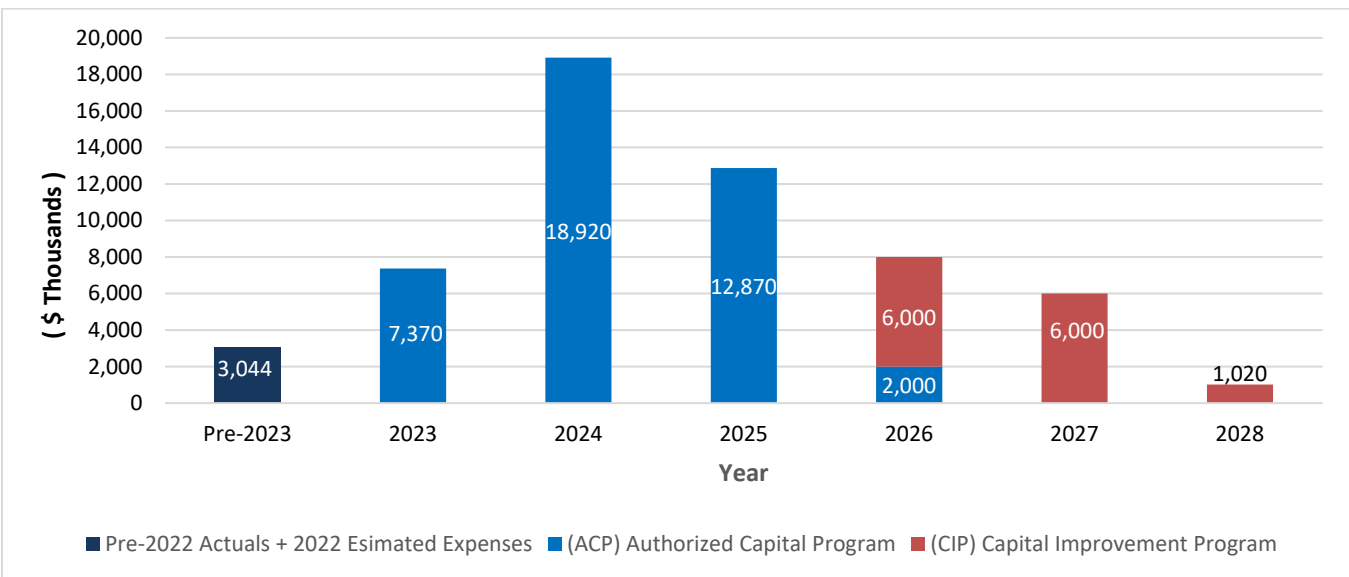
Project Number	Project Title
809200	Minneapolis Interceptor Rehabilitation Phase 2 (Parent Project) – Facility Planning
809205	Interceptor 1-MN-320 Improvements
809208	1-MN-345 Repair
809209	Basset Creek Tunnel Improvements
809210	Minneapolis Sandstone Tunnel Evaluation Program

809211	1-MN-303 Pipe-in-Pipe Rehabilitation
809213	1-MN-310 Rehab between 23 rd and 33 rd Ave. N
809214	1-MN-346 Improvements – Phase 1
8092XX	1-MN-346 Improvements – Phase 2

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$44,204,168	Capital Improvement Plan (CIP) \$13,020,000
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Estimated Program Cash Flow 2023 - 2028:

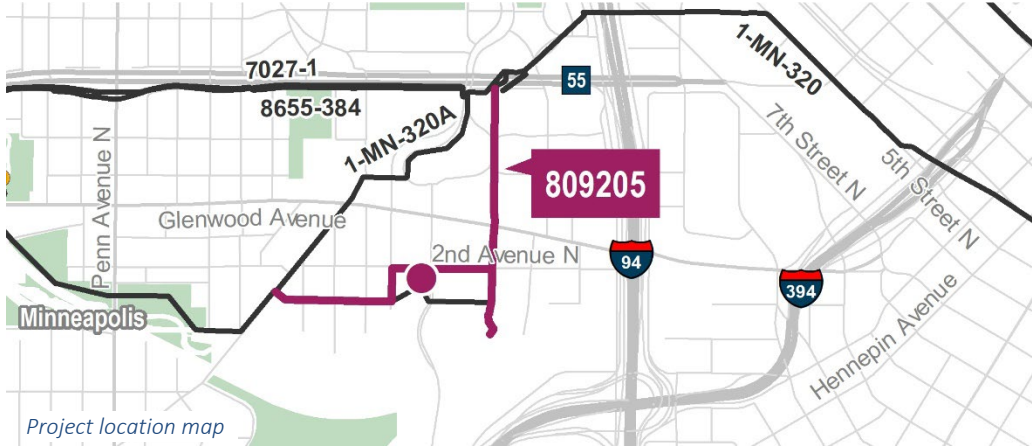


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8092
Project # 809205

Interceptor 1-MN-320 Improvements

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



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	A Draft Facility Plan recommends the construction of a lift station that serves flows coming into the Currie Avenue portion of 1-MN-320 and a realignment of the portion of 1-MN-320 along Dupont Avenue.
PROJECT NEED:	This interceptor, originally constructed in 1888, is in poor condition. In addition, the poor grades and likely settlement of the old interceptor causes solids accumulation in the pipe and results in odors.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$1,700,000	Current ACP \$16,094,000	2023 – 2028 Cash Flow \$15,300,000	Total Project Cost \$16,094,000
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Program Family: 8092
Project # 809208

1-MN-345 Rehabilitation

Project Location:
Council District #6
City: Minneapolis, MN
Location: Crossing of Minnehaha Creek at Girard Ave S



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	MCES will construct a temporary conveyance around the creek crossing and CIPP line the pipe.
PROJECT NEED:	Condition assessment showed an unlined section of Interceptor 1-MN-345 under the Minnehaha Creek in Minneapolis in poor condition. The project is needed to minimize the potential for pipe failure and the release of wastewater to the environment.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$1,901,000	2023 – 2028 Cash Flow \$1,700,000	Total Project Cost \$1,901,000
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Program Family: 8092
Project # 809209

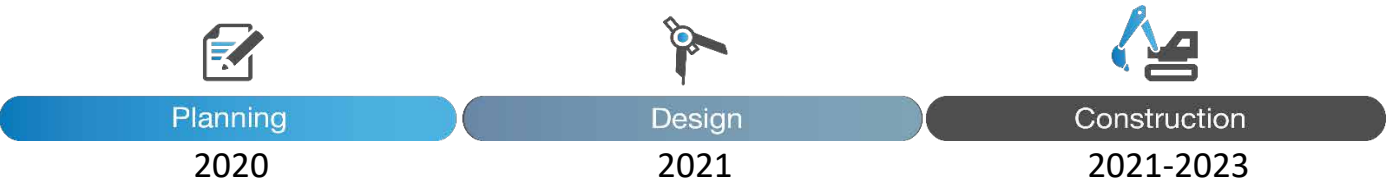
1-MN-320 Bassett Creek Tunnel

Project Location:
Council District # 6
City: Minneapolis, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Coordinate with Others
SCOPE:	Rehabilitate the interceptor section under Hwy 55 by slip lining.
PROJECT NEED:	MNDOT is removing the original Bassett Creek storm tunnel from beneath Hwy 55. The section of 1-MN-320 under Hwy 55 needs to be slip lined during the utility construction before the new road is reconstructed.

PROJECT SCHEDULE



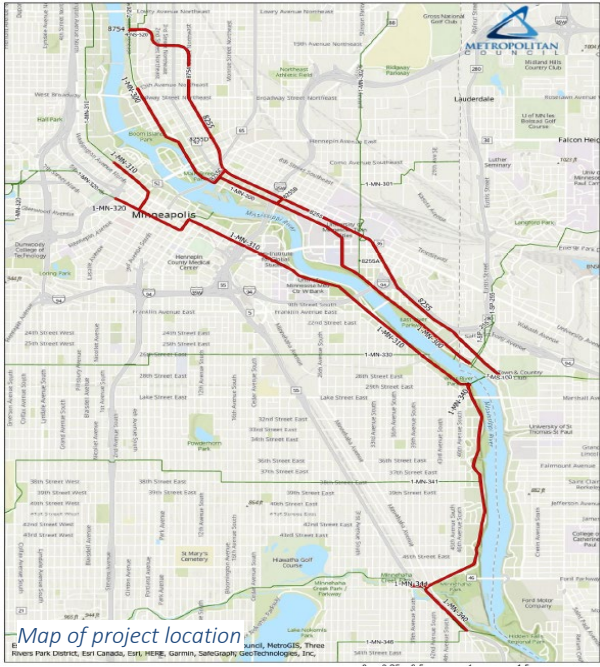
FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$1,200,000	2023 – 2028 Cash Flow \$200,000	Total Project Cost \$1,200,000
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Program Family: 8092
Project # 809210

Minneapolis Sandstone Tunnel Evaluation

Project Location:
Council District #5, 7,
and 8
City: Minneapolis, MN
Location: Generally
Paralleling the
Mississippi River



PROJECT TYPE:	Condition Assessment
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Complete cave inspections on 1-MN-310 and 1-MN-340 and prepare inspection plans for 2024.
PROJECT NEED:	There is a risk of sandstone eroding over time from over the top of constructed tunnels through natural ground behavior. Condition assessments are needed to minimize the potential for pipe failure.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$1,000,000	\$3,217,000	\$6,000,000	\$6,217,000

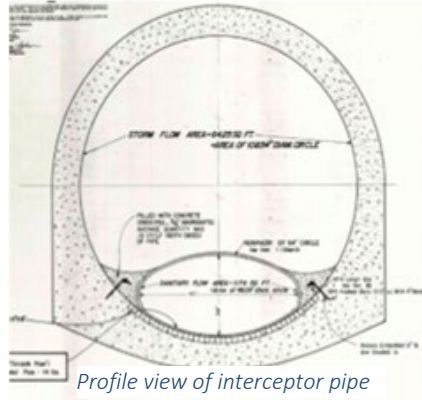
Program Family: 8092
Project # 809211

1-MN-303 Pipe-in-Pipe Rehabilitation

Project Location:

Council District #8

City: Minneapolis
Columbia Park and
Mashall Terrace
Neighborhoods



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Repair Pipe-in-Pipe using removal and replacement and/or CIPP.
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 in-laid deformed corrugated metal pipe (CMP). A walking inspection conducted in January 2022 identified severe damage and corrosion that is allowing significant inflow of stormwater into the sanitary sewer.

PROJECT SCHEDULE



Planning

2020-2021



Design

2021-2022



Construction

2022-2023

FINANCIAL ANALYSIS

2023 Cash Flow \$300,000	Current ACP \$9,600,000	2023 – 2028 Cash Flow \$9,300,000	Total Project Cost \$9,600,000
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Program Family: 8092
Project # 809213

1-MN-310 Rehab Between 23rd and 33rd Ave. N

Project Location:

Council District # 7

City: Minneapolis, MN



Project location map

PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Line 5,000 feet of 1-MN-310 from 34th Avenue North to 22nd Avenue North and rehabilitate 20 maintenance holes.
PROJECT NEED:	Interceptor 1-MN-310 is adjacent to the proposed Upper Harbor Terminal project in Minneapolis. Recent CCTV inspection has identified Condition 4 deterioration between 34th and 22nd Aves N. The project schedule will be coordinated to limit impacts on future development in the area.

PROJECT SCHEDULE



Planning
2020



Design
2020-2023



Construction
2023-2025

FINANCIAL ANALYSIS

2023 Cash Flow \$150,000	Current ACP \$6,050,000	2023 – 2028 Cash Flow \$6,350,000	Total Project Cost \$6,350,000
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Program Family: 8092
Project # 809214

1-MN-346 Rehabilitation – Phase 1

Project Location:
Council District #5 and 8
City: Minneapolis and Richfield, MN
Location: The north side of the airport to the north side of Bossen Field



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitate the existing Condition 5 pipe between Bossen Field and 53 rd St E or replace it.
PROJECT NEED:	Methane gases are likely entering Interceptor 1-MN-346 through surrounding fill materials. High methane concentrations have been found at structures along Bossen Field park and upstream to Meter M130. The interceptor was identified as being in poor condition in previous assessment. Lining the interceptor will preserve the pipe and minimize gases from entering the sewer potentially causing hazardous conditions.

PROJECT SCHEDULE



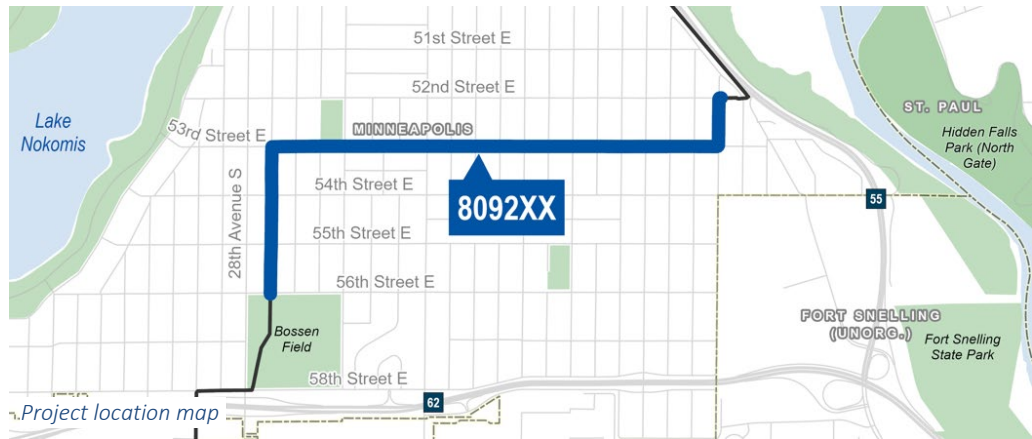
FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$120,000	\$3,820,000	\$3,620,000	\$3,820,000

Program Family: 8092
Project # 8092XX

1-MN-346 Rehabilitation – Phase 2

Project Location:
Council District # 5 & 8
City: Minneapolis and Richfield, MN



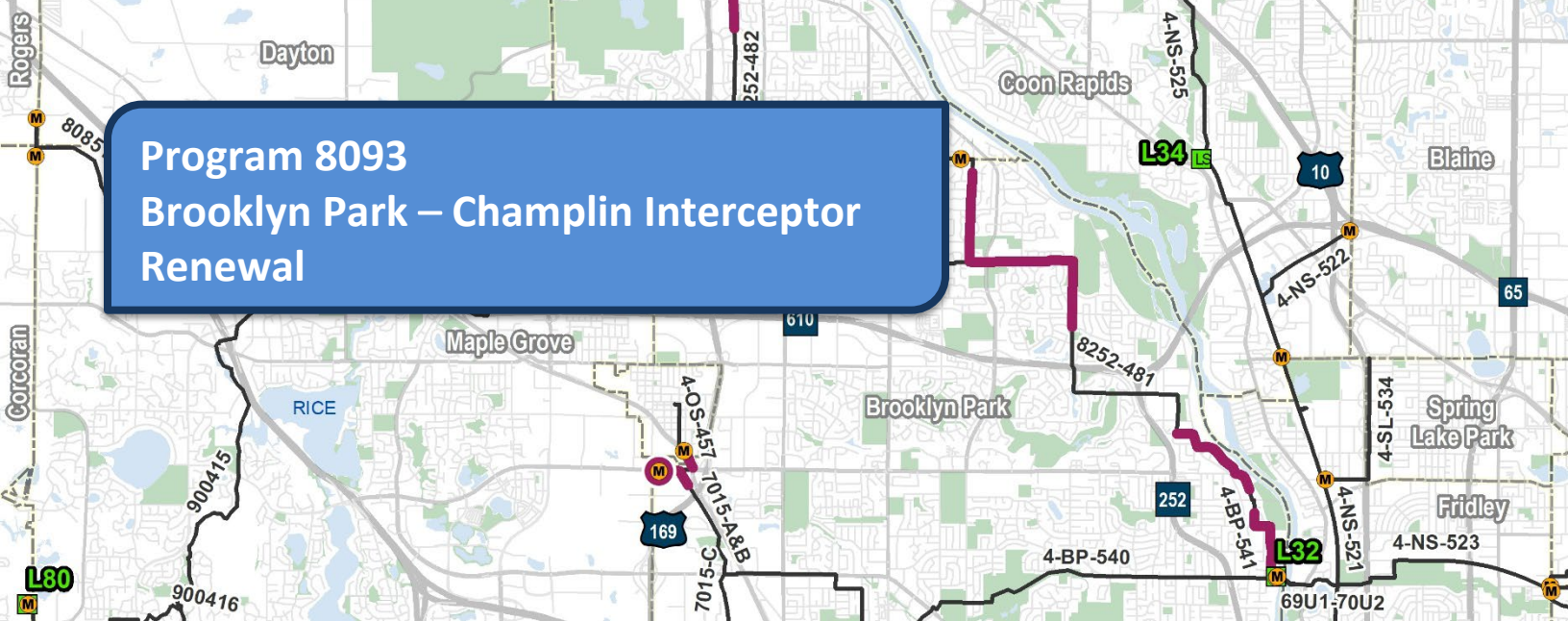
PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, Meet Capacity Needs, Communicate Information
SCOPE:	A study is underway to determine whether a new interceptor pipe should replace the existing 1-MN-346 interceptor or divert flow through a parallel pipe to increase capacity and reduce maintenance.
PROJECT NEED:	Hydraulic modeling conducted by MCES in partnership with Edina indicate future capacity issues. A sag between 54 th and 56 th Streets along 1-MN-346 has been problematic for maintenance with grease buildup and limits the capacity of the pipe.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$120,000	\$3,820,000	\$3,620,000	\$3,820,000



Description:

This Program provides for the rehabilitation of 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 requires immediate attention and that the pipe has failed or has potential to fail within the next 5 to 10 years. 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

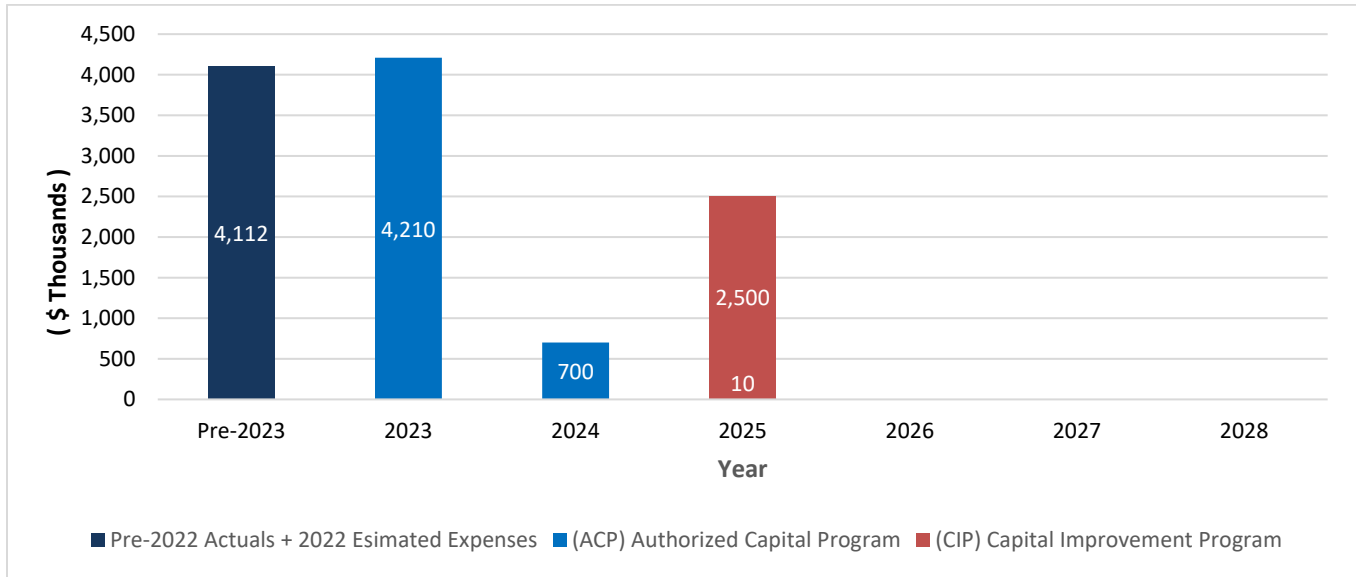
Active Projects in Program:

Project Number	Project Title
809300	Brooklyn Park-Champlin Interceptor Renewal (Parent Project)
809320	BPCI Renewal – Phase 2
809361	Brooklyn Park & Osseo Interceptor Rehabilitation – 7015 A&B, 4-OS-457 and M224

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$9,032,932	Capital Improvement Plan (CIP) \$5,000,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8093
Project # 809320

Brooklyn Park-Champlin Interceptor Renewal

Project Location:

Council District # 2

City: Brooklyn Park, MN



Project location map

PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	CIPP repair includes interceptor 8252-481 from MH 8 1 to MH 15 2.
PROJECT NEED:	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



Planning
2021



Design
2023-2025



Construction
2026-2028

FINANCIAL ANALYSIS

2023 Cash Flow \$200,000	Current ACP \$500,000	2023 – 2028 Cash Flow \$5,400,000	Total Project Cost \$5,500,000
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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: Brooklyn Park,
Osseo and Maple Grove,
MN

Interceptor 7015 A&B



Project location map

PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	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 rehabilitated using Fiberglass Reinforced 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 existing biocide tank at M224 will be moved to a new location further south on 83 rd Ave on City of Brooklyn Park property.
PROJECT NEED:	7015-A&B and 4-OS-457 are 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 condition. M224 has significant corrosion and access issues.

PROJECT SCHEDULE



Planning
2019



Design
2019-2020

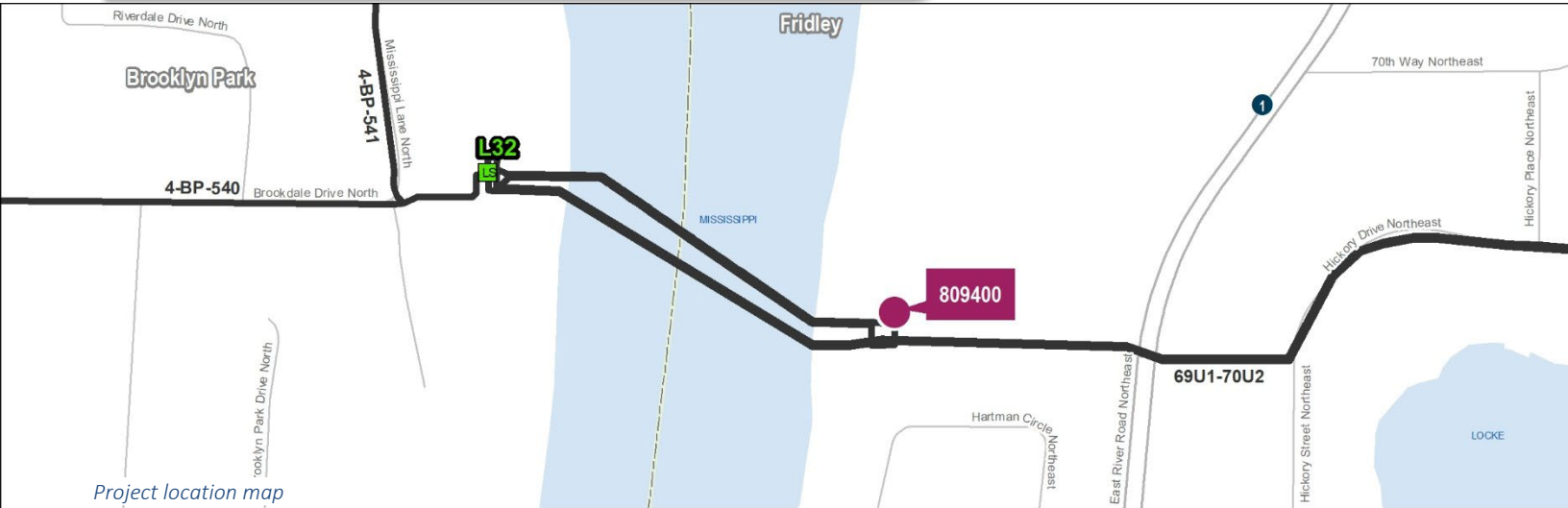


Construction
2021-2023

FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$4,000,000	\$5,548,000	\$4,000,000	\$5,548,000

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 which facilities 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

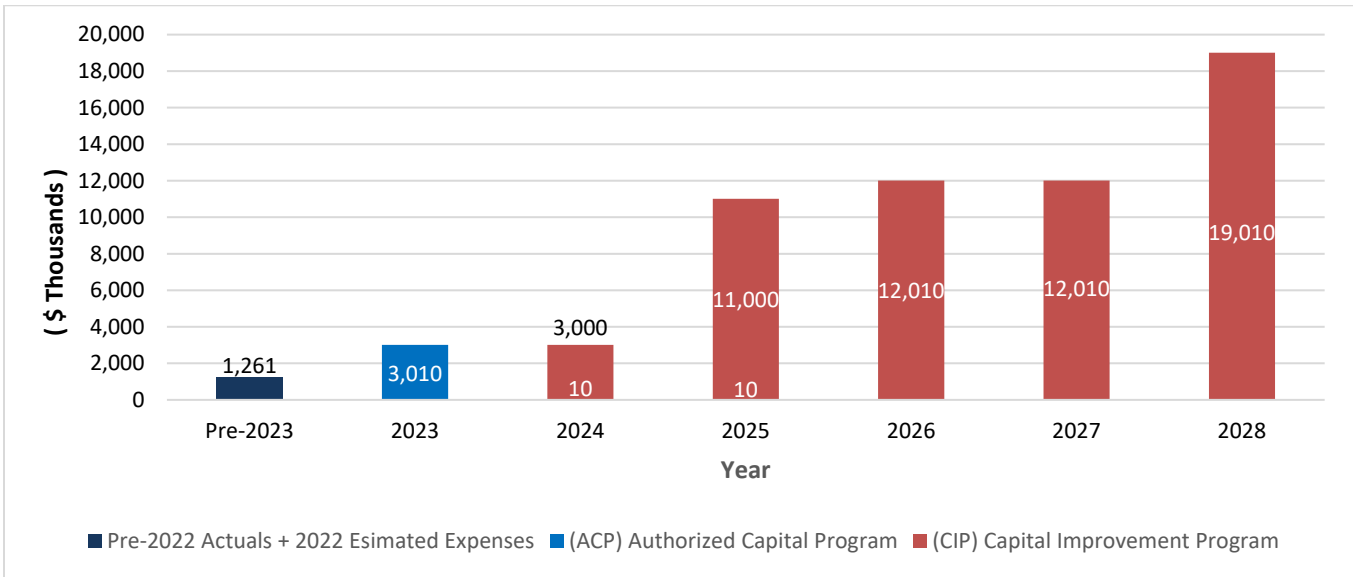
Active Projects in Program:

Project Number	Project Title
809400	New Lift Station L32 (Parent Project)

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$5,993,993	Capital Improvement Plan (CIP) \$57,030,000
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Estimated Program Cash Flow 2023 - 2028:



Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8094
Project # 809400

Design of New Lift Station L-32A

Project Location:
Council District # 2
City: Brooklyn Park and Fridley, MN
Location: Lift Station L32 Site



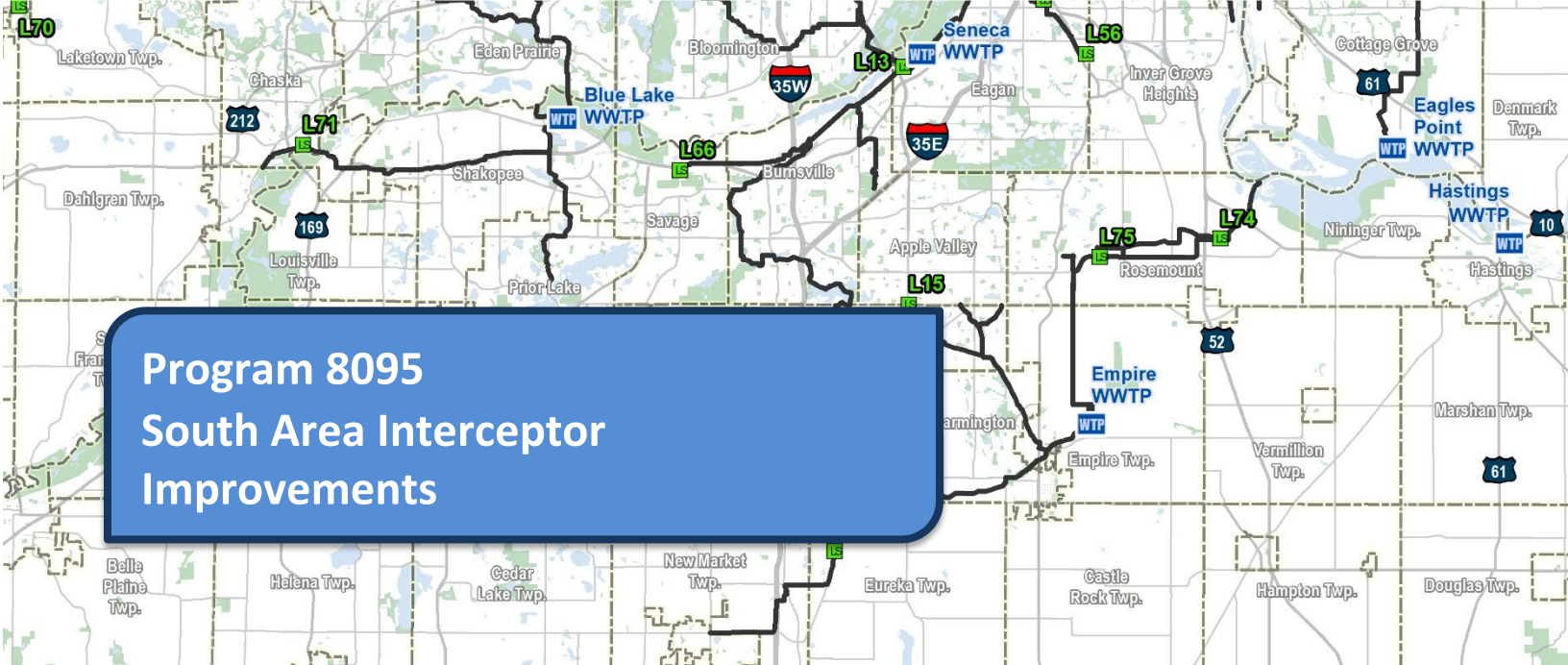
PROJECT TYPE:	Lift Station Improvement
OBJECTIVES:	Asset Preservation and System Expansion
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, Meet Capacity Needs, and Be a Good Neighbor
SCOPE:	Project includes design of a new lift station L32A on the east side of Mississippi River in Fridley. The work will also include rehabilitation of the two old forcemain pipes under the river, conversion of the existing forcemain pipes into siphon pipes, and demolition of the existing lift station L32 in Brooklyn Park.
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



FINANCIAL ANALYSIS

2023 Cash Flow \$1,200,00	Current ACP \$6,000,000	2023 – 2028 Cash Flow \$79,200,000	Total Project Cost \$82,200,000
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Program 8095 South Area Interceptor Improvements

Description:

The interceptor systems in Apple Valley, Eagan, Farmington, Lakeville, Savage, and other south area communities are in need of rehabilitation and/or replacement as well as expansion to serve growth. The Program will rehabilitate existing interceptor facilities, including gravity sewers, and force mains, as well as 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.

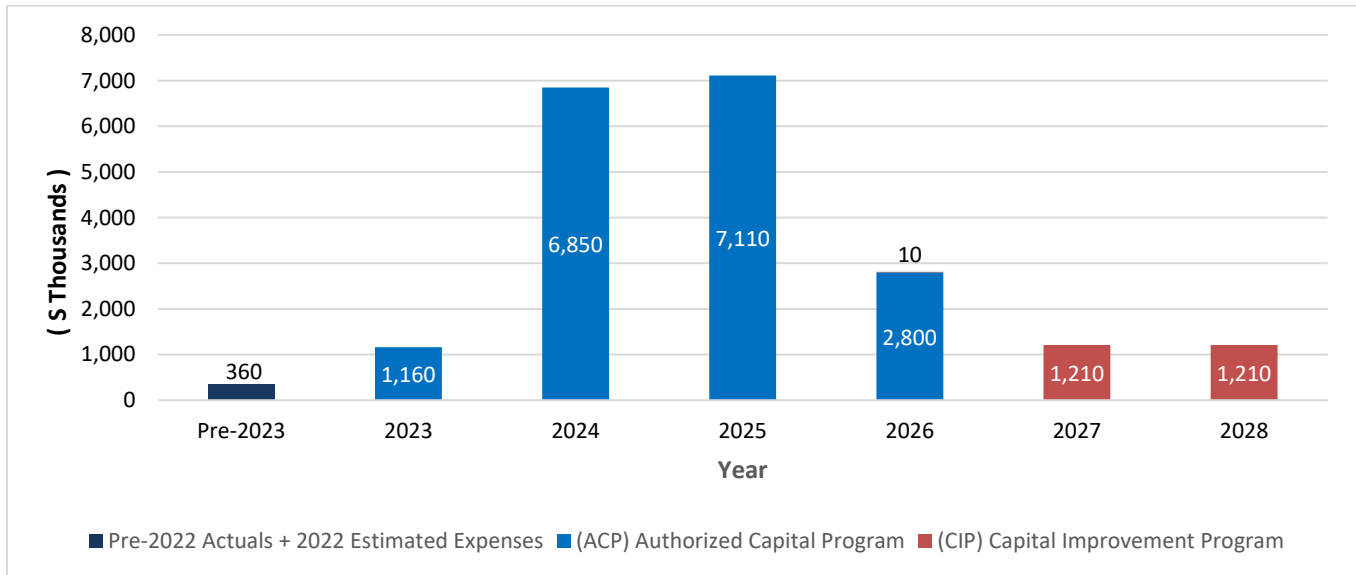
Active Projects in Program:

Project Number	Project Title
809500	South Area Improvements (Parent Project)
809510	Shakopee Interceptor Odor Improvements
809520	South Area Rehabilitation (Sites 1 – 4)

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$18,280,000	Capital Improvement Plan (CIP) \$30,000
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Estimated Program Cash Flow 2023 - 2028:

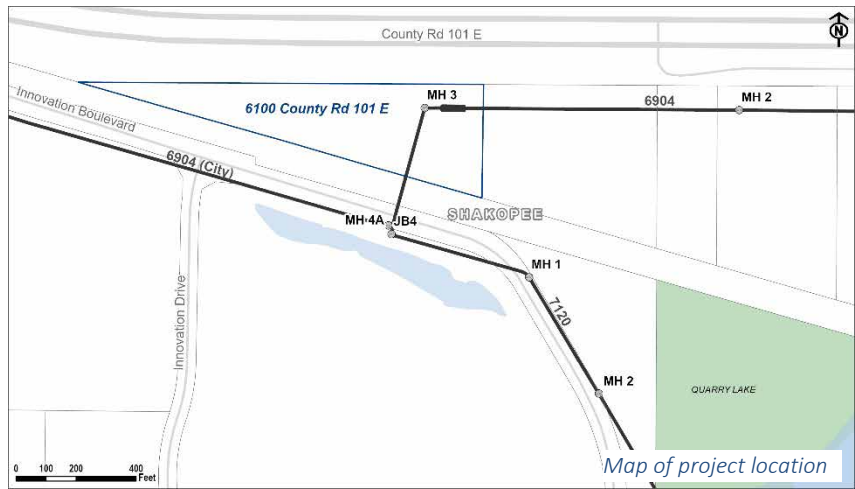


Note: The ACP is the total amount of all past and present authorizations including Pre-2023 Expenses.

Program Family: 8095
Project # 809510

Shakopee Interceptor Odor Improvements

Project Location:
Council District: # 4
City: Shakopee, MN
Location: MCES 9206 & 7120; pipe that runs along highway 169



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets, Minimize Impacts, and Be a Good Neighbor
SCOPE:	Project work will include construction of ventilation and odor treatment facilities.
PROJECT NEED:	Very high hydrogen sulfide generation in interceptors 7120, 9206 and 6904 has led to corrosion and odors. A siphon located along interceptor 6904 creates an air dam forcing sewer air to escape to the surface and impacting surrounding properties with odor. Hydrogen sulfide concentration within the interceptors at this location is at dangerous levels creating a safety issue for inspections and cleaning work.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow \$500,000	Current ACP \$3,150,000	2023 – 2028 Cash Flow \$3,000,000	Total Project Cost \$3,150,000
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Program Family: 8095
Project # 809520

South Area Rehabilitation – Interceptor 3-BV-39

Project Location:
Council District # 15
City: Burnsville, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Rehabilitation of 8,560 linear feet of interceptor pipe and 30 maintenance structures.
PROJECT NEED:	Routine gravity interceptor CCTV inspections have identified four interceptor sites in the South Interceptor Service Area that have that have failed pipes or pipes that will likely fail in the next 5 years. The facilities are in need of rehabilitation.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$600,000	\$0	\$14,400,000	\$14,600,000

Program Family: 8095
Project # 809520

South Area Rehabilitation – Interceptor 3-BV-35

Project Location:
3-BV-35

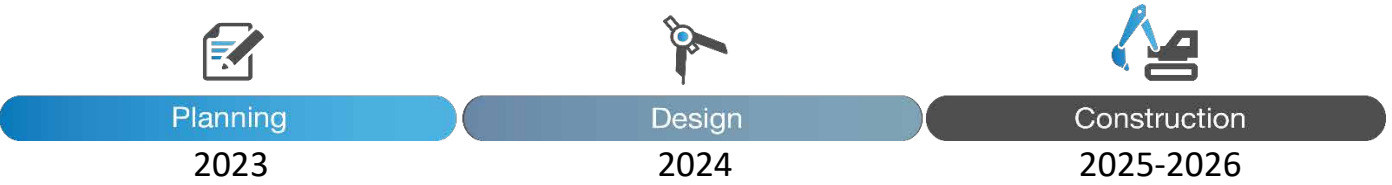
Council District # 15

Cities: Burnsville, MN



PROJECT TYPE:	Interceptor Improvement
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Site 2 and 3 of the South Area Improvements. This project includes rehabilitation of 2,740 linear feet of interceptor pipe and associated maintenance structures as needed.
PROJECT NEED:	Interceptors 3-BV-35 was constructed in 1964. CCTV inspection showed two segments to be conditions 4 and 5 and in need of rehabilitation or replacement. The upstream segment from MH 172 to MH 170 includes approximately 800 feet of 18-inch reinforced concrete pipe (RCP). The downstream segment between MH 85 and the 7030 discharge includes 1,200 feet of 12-inch vitreous clay pipe (VCP) and 740 feet of 18-inch VCP.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$200,000	\$0	\$4,200,000	\$4,200,000

Program Family: 8095
Project # 809520

South Area Rehabilitation – 7102-2 & 7111A

Project Location:
7102-2 & 7111A

Council District # 15

Cities: Inver Grove Heights, MN



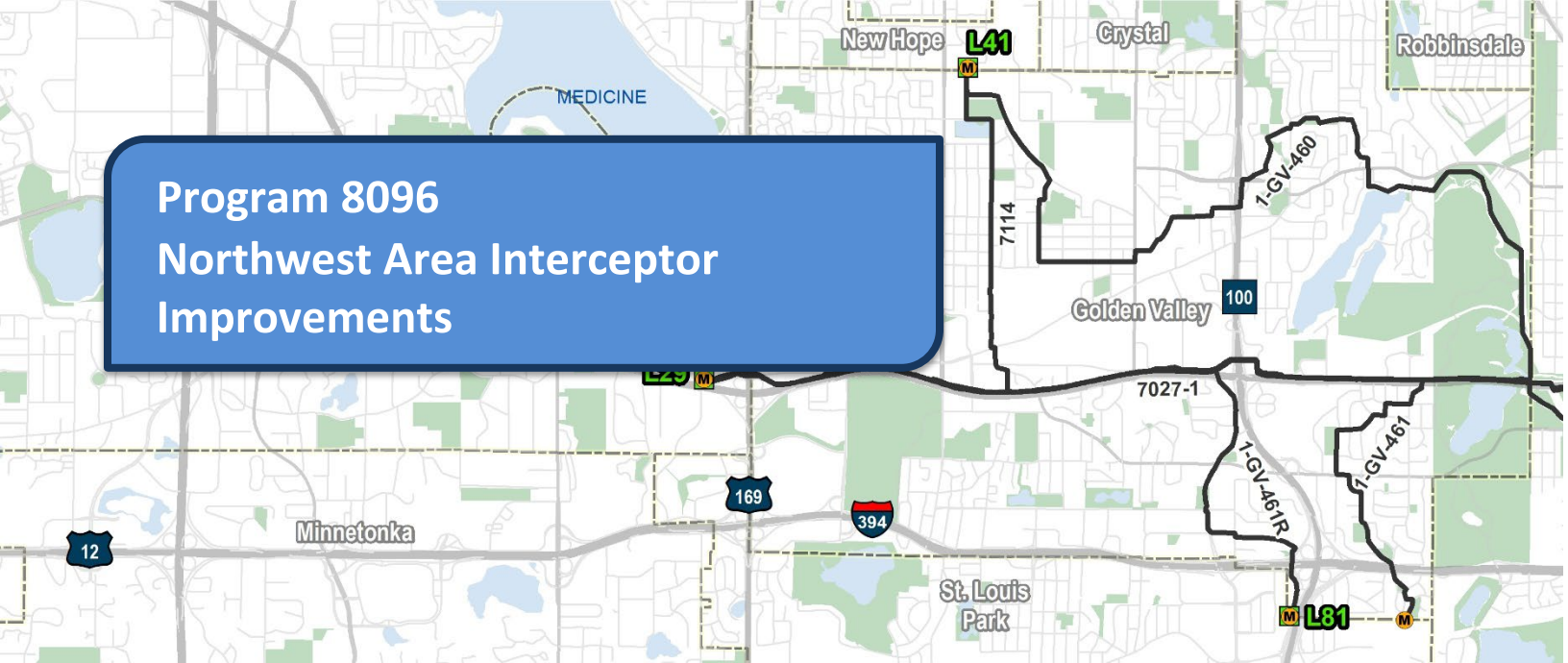
PROJECT TYPE:	Interceptor Rehabilitation
OBJECTIVES:	Asset Preservation
CUSTOMER LEVEL OF SERVICE:	Preserve Assets and Minimize Impacts
SCOPE:	Site 4 of the South Area Improvements. This project includes rehabilitation of 555 linear feet of interceptor pipe and associated maintenance structures.
PROJECT NEED:	CCTV inspection showed the segment between the 7102-2 Turning Chamber and 7111A discharge to 7111-1&2 at manhole (MH) 212 to be conditions 4 and 5. The turning structure is in very poor to failing condition as is the tail of the siphon pipes. Other structures associated with these pipes are in poor condition and will need replacement.

PROJECT SCHEDULE



FINANCIAL ANALYSIS

2023 Cash Flow	Current ACP	2023 – 2028 Cash Flow	Total Project Cost
\$150,000	\$0	\$1,200,000	\$1,200,000



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.

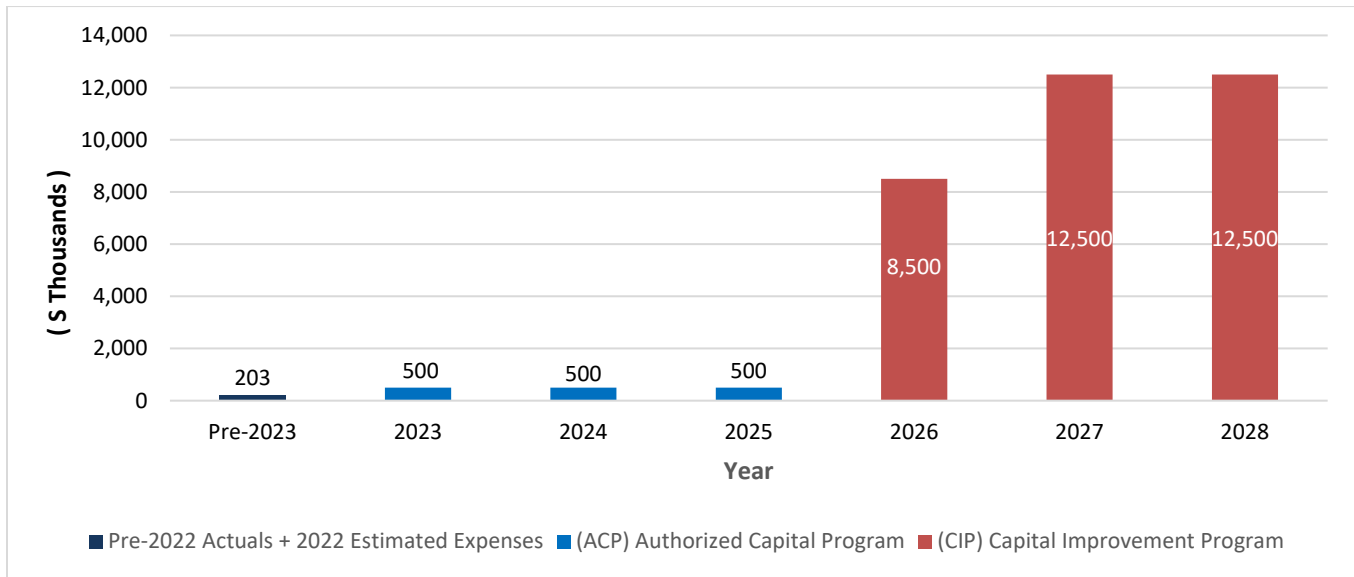
Active Projects in Program:

Project Number	Project Title
809600	Northwest Area Improvements (Parent Project)

MCES 2023 – 2028 Capital Program:

Authorized Capital Program (ACP) \$1,730,305	Capital Improvement Plan (CIP) \$33,500,000
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Estimated Program Cash Flow 2023 - 2028:



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



390 Robert Street North
St Paul, MN 55101-1805

651-602-1000
TTY 651-291-0904
public.info@metc.state.mn.us
metro council.org

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