



FY 2024 – 2028 Capital Improvement Plan and FY 2024 Capital Budget

BOWC CIP Committee

April 5, 2023

Summary of the Proposed FY 2024 -2028 5-Year Capital Improvement Plan (CIP) and FY 2024 Capital Budget



Category	2023-24	2024-25	2025-26	2026-27	2027-28	2024-2028 Total
Water Main	\$ 64,108	\$ 102,005	\$ 67,004	\$ 57,250	\$ 42,000	\$ 332,367
Sewer Line Replacement	20,746	14,305	23,400	33,400	14,400	106,251
Green Infrastructure	8,790	31,041	40,657	11,250	12,250	103,988
Central Services	14,211	8,282	5,057	3,812	7,598	38,960
Meters/Fire Hydrants	10,981	4,500	4,500	4,500	4,500	28,981
Lead Service Line Replacement	31,551	23,203	10,000	-	-	64,754
Total	\$ 150,387	\$ 183,336	\$ 150,618	\$ 110,212	\$ 80,748	\$ 675,301
Water	\$ 107,262	\$ 132,849	\$ 83,033	\$ 62,656	\$ 49,299	\$ 435,098
Sewer	43,126	50,487	67,586	47,556	31,449	240,203
Total	\$ 150,387	\$ 183,336	\$ 150,618	\$ 110,212	\$ 80,748	\$ 675,301

- The FY 2024-2028 CIP provides for \$435.1 million of Water System Improvements and \$240.2 million of Sewer System Improvements over the next 5-Year Planning Cycle for a total System-Wide Capital Plan of \$675.3 million.
- The FY 2023-2024 Capital Budget for both Systems is \$150.4 million (Water \$107.3 million and Sewer \$43.1 million).
- Almost 65% of the 5-Year Budget is for Water Main and Sewer Line Replacement Projects.
- Approximately \$64.8 million dollars have been committed to Lead Service Line Replacement over the next 3 years. This is in addition to \$29.2 million committed in prior fiscal years.

Proposed FY 2024 I&E and Construction Fund Budgets - Both Funds



Water I&E Fund	2023-24 (Proposed)
Revenues	
Lease payment	\$ 22,500,000
Grants	43,797,000
Capital Outlay	30,515,000
Interest Income	1,000,000
Non-Cash Offset	800,000
Total Revenues	\$ 98,612,000
Expenses	
Contract Scvs-Info Technology	\$ 1,157,500
Contract Svcs-Other	90,696,000
Major Repairs Building	2,125,000
Major Rep Improvt Other than Bldg	750,000
Capital Outlay-Equipment Infor	1,086,500
Acquisitions-Vehicle	1,987,000
Bank Fees	10,000
Amortization of Premium on Bonds	800,000
Total Expenses	\$ 98,612,000
Water Construction Fund	2023-24 (Proposed)
Revenues	
Capital Outlay	\$ 7,762,000
Interest Income	1,700,000
Total Revenues	\$ 9,462,000
Expenses	
Capital Expenses	\$ 9,460,000
Bank Fees for Bond Fund	2,000
Total Expenses	\$ 9,462,000

Sewer I&E Fund	2023-24 (Proposed)
Revenues	
Lease payment	\$ 27,500,000
Grants	3,195
Capital Outlay	8,904,305
Interest Income	500,000
Total Revenues	\$ 36,907,500
Expenses	
Contract Scvs-Info Technology	\$ 1,157,500
Contract Svcs-Other	29,801,000
Major Repairs Building	2,125,000
Major Rep Improvt Other than Bldg	750,000
Capital Outlay-Equipment Infor	1,086,500
Acquisitions-Vehicle	1,987,000
Bank Fees	500
Total Expenses	\$ 36,907,500
Sewer Construction Fund	2023-24 (Proposed)
Revenues	
Capital Outlay	\$ 5,219,900
Interest Income	1,000,000
Total Revenues	\$ 6,219,900
Expenses	
Capital Expenses	\$ 6,219,000
Bank Fees	900
Total Expenses	\$ 6,219,900

Summary of Funding Sources



Water						
	2023-24	2024-25	2025-26	2026-27	2027-28	2024-28
Bond	\$ 9,460	\$ 21,000	\$ 22,000	\$ 19,500	\$ 12,000	\$ 83,960
DWSRF	10,000	20,000	14,720	5,000	-	49,720
I&E	44,005	39,376	36,313	38,156	37,299	195,148
Grant	43,797	52,473	10,000	-	-	106,270
Total	\$ 107,262	\$132,849	\$ 83,033	\$ 62,656	\$ 49,299	\$435,098
Sewer						
	2023-24	2024-25	2025-26	2026-27	2027-28	2024-28
Bond	\$ 6,219	\$ 25,500	\$ 39,000	\$ 17,000	\$ 7,000	\$ 94,719
I&E	33,712	20,842	27,382	30,556	24,449	137,940
Grant	3,195	4,146	1,204	-	-	7,544
Total	\$ 43,126	\$ 50,487	\$ 67,586	\$ 47,556	\$ 31,449	\$240,203

Appendices

Water Project List											
Total estimated cost (\$1000's)											
Contract #	Description	Status	Source of Funds	BOWC/Engineer Approved Amount	Previously Budgeted	2023-24	2024-25	2025-26	2026-27	2027-28	2024-28 Total
WS-712	Water Main Replacement-Cornerstone Village	A	Bond	\$ 18,630	\$ 18,630	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WS-713	Water Main Replacement-Jefferson/Chalmers	A	SRF	12,336	12,336	-	-	-	-	-	-
WS-715	Pilot Areas-Riverdale, Minock, Miller & Rosedale	A	SRF	9,682	9,682	-	-	-	-	-	-
WS-717	Replacement of Water Mains	A	Bond	13,694	9,500	4,194	-	-	-	-	4,194
WS-718	WM New Center Commons & Virginia Park	A	SRF	4,290	4,290	-	-	-	-	-	-
WS-719	Major Repair/Improvement of Water Mains	A	I&E	28,649	17,500	11,149	-	-	-	-	11,149
WS-TBD	Replace WS-719	N	I&E	42,000	-	-	10,500	10,500	10,500	10,500	42,000
WS-720	Watermain Replacement-Various Streets	A	Bond	13,446	11,100	2,346	-	-	-	-	2,346
WS -721	Lead Service Line Replacement (LSL)	A	Grant	10,000	10,000	-	-	-	-	-	-
WS-723	LSL Replacement for Settlements	A	I&E	2,751	2,200	551	-	-	-	-	551
WS-725	Watermain and LSL Replacement-Medical Ctr, Cultural Ctr & MidT	N	SRF	24,720	-	10,000	10,000	4,720	-	-	24,720
WS-732	Water Main Replacement and Rehab.	N	Grant	21,140	-	7,000	14,140	-	-	-	21,140
WS-733	Water Main Replacement and Rehab.	N	Grant	22,130	-	7,000	15,130	-	-	-	22,130
WS-735	LSL Replacement - Various Locations	A	Grant	24,703	5,000	12,000	7,703	-	-	-	19,703
WS-TBD	LSL Replacement - Various Locations	N	Grant	45,000	10,000	10,000	15,000	10,000	-	-	35,000
N/A	LSL Replacement Force Account	N	Grant	5,297	-	5,297	-	-	-	-	5,297
N/A	LSL Replacement Force Account	N	I&E	1,203	-	1,203	-	-	-	-	1,203
WS-736	Emergency Watermain Break Project	N	I&E	7,834	1,000	4,000	2,300	534	-	-	6,834
WS-TBD	Replace WS-736	N	I&E	8,000	-	-	-	2,500	3,000	2,500	8,000
WS-TBD	Lead Service Line Replacement (Wiin Grant)	N	Grant	5,000	2,000	2,500	500	-	-	-	3,000
WS-TBD	Water main and LSL replacement work in Dexter-Linwood, Davison, and Buffalo-Charles	N	SRF	25,000	-	-	10,000	10,000	5,000	-	25,000
WS-TBD	Replacement of Distribution Mains on Jefferson	N	Bond	25,000	-	-	10,000	10,000	5,000	-	25,000
DWS-919	Replace Pavement (After Break Repair)	A	I&E	32,671	11,200	13,286	8,185	-	-	-	21,471
DWS -TBD	Replace DWS-919	N	I&E	18,000	-	-	-	6,000	6,000	6,000	18,000
DWS-955	Hydraulic Excavation	A	I&E	266	133	133	-	-	-	-	133
CS-1812	Professional Engineering and Construction Services for CIPMO	A	Bond	32,678	32,678	-	-	-	-	-	-
CS-TBD	Replaces CS-1812	P	Bond	3,000	-	-	1,000	1,000	1,000	-	3,000
CS-1921A	Watermain Design - Somat, Orchard Hiltz, and The Mannik & Smith Group	A	Bond	3,000	3,000	-	-	-	-	-	-
CS-TBD	Replaces CS-1921	N	Bond	3,000	-	-	-	1,000	1,000	1,000	3,000
CS-1923	Third Party Inspection (Water & Sewer)	A	I&E	2,250	2,250	-	-	-	-	-	-
CS-TBD	Replaces CS-1923	N	I&E	2,250	-	-	750	750	750	-	2,250
CS-1925	Itron Migration -MIU Replacement	A	I&E	9,120	9,120	-	-	-	-	-	-
CS-1926	Itron Migration Project Management	A	I&E	1,157	842	315	-	-	-	-	315
WS -TBD	Watermain Program Allowances	N	I&E/Bond	92,000	-	5,000	20,000	20,000	25,000	22,000	92,000
PC-803B	Meter Installation	A	I&E	942	850	92	-	-	-	-	92
PC-TBD	Replace PC- 803B	P	I&E	1,000	-	-	250	250	250	250	1,000
PC-808	Far West Warren (non GSI)	A	I&E/Bond	6,340	5,500	840	-	-	-	-	840
TBD	Water Meter Replacement Program	A	I&E	1,500	1,500	-	-	-	-	-	-
TBD	Water Meter Replacement Program	P	I&E	3,750	-	750	750	750	750	750	3,750
TBD	Fire Hydrant Replacement Program	A	I&E	12,750	250	2,500	2,500	2,500	2,500	2,500	12,500
Various	Vehicle and Heavy Equipment	A	I&E	-	-	1,987	750	750	750	750	4,987
Various	Information Technology	A	I&E	-	-	2,244	2,254	1,504	881	2,489	9,371
Various	Facilities Improvements	A	I&E	-	-	2,875	1,138	275	275	560	5,123
	Total					\$ 107,262	\$132,849	\$ 83,033	\$ 62,656	\$49,299	\$ 435,098



Sewer Project List											
Total estimated cost (\$1000's)											
Contract #	Description	Status	Source of Funds	BOWC/Engineer Approved Amount	Total Previously Budgeted	2023-24	2024-25	2025-26	2026-27	2027-28	2024-28 Total
DWS-917	Sewer Improvement in Riverdale	A	SRF	\$ 7,708	\$ 7,708	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DWS-918	Sewer Improvements in Rosedale	A	SRF	4,455	4,455	-	-	-	-	-	-
DWS-919	Replace Pavement (After break repair)	A	I&E	5,765	4,022	1,743	-	-	-	-	1,743
DWS-TBD	Replace DWS-919	N	I&E	5,700				1,900	1,900	1,900	5,700
DWS-920	Inspection and Rehabilitation of Sewers City Wide (Replace DWS-903)	A	Bond	16,319	13,600	2,719	-	-	-	-	2,719
DWS -920	Inspection and Rehabilitation of Sewers City Wide (Replace DWS-903)	A	I&E	3,605	1,400	1,400	805	-	-	-	2,205
DWS-921	Electrical Monitoring Upgrades at Belle Isle, Woodmere, Fischer Sewage Pump Stations	A	I&E	340	340	-	-	-	-	-	-
DWS-966	Sewer Condition Assessments - West Village, Southwest Detroit	P	I&E	6,000	-	-	4,000	2,000	-	-	6,000
DWS-931	Roofing Upgrades at Sewage Pump Stations	P	I&E	700	300	400	-	-	-	-	400
DWS-932	Large Sewer Improvements: Riverdale & Rosedale	A	SRF	3,927	3,927	-	-	-	-	-	-
DWS-935	Green Stormwater Infrastructure Maintenance	A	I&E	180	180	-	-	-	-	-	-
DWS-937	Sewer Improvement throughout City	N	Bond	10,000	-	-	2,000	8,000	-	-	10,000
DWS TBD-1	Sewer Improvement throughout City - Multiple contracts	N	Bond	40,000	-	-	20,000	20,000	-	-	40,000
DWS-938	Sewer Condition assessments throughout City	A	I&E	5,994	5,994	-	-	-	-	-	-
DWS-964	Sewer Condition Assessments High Priority Areas	N	I&E	12,000	2,000	7,000	3,000	-	-	-	10,000
DWS-965	Sinkhole Repairs	P	I&E	4,284	2,300	1,984	-	-	-	-	1,984
DWS-TBD	Sewer Program Allowances	N	I&E/Bond	70,000	-	5,000	5,000	18,000	30,000	12,000	70,000
CS-1812	Professional Engineering and Construction Services for Capital Improvement Program Management Organization	A	Bond	32,678	32,678	-	-	-	-	-	-
CS-TBD	Replaces CS-1812	N	Bond	3,000	-	-	1,000	1,000	1,000	-	3,000
CS-1884	Green Infrastructure Program Management	A	I&E	12,000	10,000	2,000	-	-	-	-	2,000
TBD	Replace CS-1884	N	I&E	7,500				2,500	2,500	2,500	7,500
CS-1921	Watermain/Sewer Design - Somat, OHM, The Mannik & Smith Group	A	Bond	3,000	2,000	1,000	-	-	-	-	1,000
CS-TBD	Replace CS-1921	N	Bond	3,000	-	-	-	1,000	1,000	1,000	3,000
CS-1923	Third Party Inspection (Water & Sewer)	P	I&E	2,250	1,750	500	-	-	-	-	500
CS-TBD	Replace CS-1923	N	I&E	3,000			750	750	750	750	3,000
CS-1925	Itron Migration -MIU Replacement	A	I&E	9,095	4,665	4,430	-	-	-	-	4,430
CS-1926	Itron Migration Project Management	A	I&E	792	280	512	-	-	-	-	512
CS-TBD	Belle Isle CSO Condition Assessment (GLWA) - CSO Improvement Program -Cost Sharing with GLWA	A	I&E	3,500	1,000	500	500	500	500	500	2,500
PC-801	Oakman Boulevard	A	I&E	8,245	8,245	-	-	-	-	-	-
PC-803B	Meter Installation	A	I&E	942	150	792					792
PC-TBD	Replace 803B	N	I&E	1,000	-	-	250	250	250	250	1,000
PC-806	Charles H. Wright Academy GSI	A	I&E	1,918	1,918	-	-	-	-	-	-
PC-808 (GSI)	Far West Stormwater Improvements	A	Grant	32,964	20,726	2,000	7,831	2,407	-	-	12,238
TBD	Oakman Boulevard Stormwater Optimization Improvements*	N	I&E	900	-	900	-	-	-	-	900
PC-812	Brightmoor GSI Construction (EPA)*	N	I&E/Grant	1,100	-	1,050	50	-	-	-	1,100
PC-813	Bentler-Westbrook Construction (NFWF)*	N	I&E/Grant	590	-	525	65	-	-	-	590
TBD	Minock Park Greening Construction (USFS)*	N	I&E/Grant	590	-	300	290	-	-	-	590
TBD	Minock Park GSI (EGLE)*	N	I&E/Grant	570	-	515	55	-	-	-	570
TBD	Brightmoor/Minock Park Stormwater Improvement Project	N	I&E	21,000				6,000	7,000	8,000	21,000
TBD	Artesan Project Enhancement	A	I&E	400	400	-	-	-	-	-	-
TBD	St. Paul Tabernacle Capital Partnership Program	A	I&E	154	154	-	-	-	-	-	-
TBD	Water Meter Replacement Program	A	I&E	3,750	-	750	750	750	750	750	3,750
Various	Vehicle and Heavy Equipment	N	I&E	-	-	1,987	750	750	750	750	4,987
Various	Information Technology	N	I&E	-	-	2,244	2,254	1,504	881	2,489	9,371
Various	Facilities Improvement	N	I&E	-	-	2,875	1,138	275	275	560	5,122
	Total					\$ 43,126	\$ 50,487	\$ 67,586	\$ 47,556	\$ 31,449	\$ 240,203



Water & Sewerage
Department

Vehicle and Heavy Equipment

Descriptions	Type	QTY	Estimated Unit Cost	2023-24	2024-25	2025-26	2026-27	2027-28	2024-28 Total
New Purchases									
2023 ProMaster City	1/4 Ton Van	4	\$ 43,000	\$ 172,000	\$ -	\$ -	\$ -	\$ -	\$ 172,000
2023 Escape	SUV	4	40,000	160,000	-	-	-	-	160,000
2023 EV Escape	SUV (EV)	2	45,000	90,000	-	-	-	-	90,000
2023 F350 4x4 Crew Gas	1 Ton Pickup 4x4 Crew Cab, Gas	6	70,000	420,000	-	-	-	-	420,000
2023 F150 4x4 Crew	1/2 Ton Pickup 4x4 Crew Cab, Gas	1	60,000	60,000	-	-	-	-	60,000
2023 F350 4x4	1 1/4 Ton Utility w/Custom Body	2	150,000	300,000	-	-	-	-	300,000
2023 Dodge Charger	Passenger Car, Police Spec	2	45,000	90,000	-	-	-	-	90,000
2023 Transit Cargo AWD	1 Ton Cargo Van All Wheel Drive	6	72,000	432,000	-	-	-	-	432,000
Carry All cart	Utility Cart	3	15,000	45,000	-	-	-	-	45,000
Front End Loader	Front End Loader	1	400,000	400,000	-	-	-	-	400,000
2023 Transit Pass XL AWD	3/4 Ton Passenger Van, AWD	2	82,500	165,000	-	-	-	-	165,000
2023 5YD Dump Truck	5 Yard Dump truck	5	170,000	850,000	-	-	-	-	850,000
2023 F550 4x4 S/C CC	1 1/2 Ton Utility w/ Custom Body	4	160,000	640,000	-	-	-	-	640,000
Mini Exe Plus Trailer	Mini Exe Plus Trailer	1	150,000	150,000	-	-	-	-	150,000
Tentative Future Purchases	Vehicle		-	-	1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
Total		43		\$ 3,974,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$9,974,000

Information Technology Projects

Descriptions	2023-2024	2024-2025	2025-2026	2026-27	2027-28	2024-2028 Total
Security						
Access Control and Video Surveillance Systems	\$ 200,000	\$ 400,000	\$ 300,000	\$ 50,000	\$ 50,000	\$ 1,000,000
Customer Service						
City Insights Portal Updates	150,000	60,000	60,000	300,000	300,000	870,000
EnQuesta Upgrade	-	-	-	-	2,300,000	2,300,000
enQuesta Rate Change / AWC Adjustments / etc.	60,000	40,000	40,000	40,000	40,000	220,000
DivDat/City Insights/Utilitec	30,000	30,000	30,000	30,000	200,000	320,000
Lead Service Line Phone Updates	150,000	150,000	-	-	-	300,000
Lifeline Rate Outreach Updates	150,000	150,000	-	-	-	300,000
Facilities						
Meeting Room Upgrades/ Hardware/Consult	100,000	25,000	25,000	50,000	150,000	350,000
Operations						
Records Management	300,000	300,000	300,000	-	-	900,000
Itron Replacement (staffing support) CS-1943 iVantage & Add Second Contract for Laptop Support	350,000	350,000	150,000	-	-	850,000
Claims Reporting & Case Management	225,000	100,000	-	-	-	325,000
Permitting System	350,000	150,000	-	-	-	500,000
Matters Management System	-	175,000	125,000	-	-	300,000
MARS - TEST BENCH REPLACE/ENHANCEMENT	250,000	250,000	375,000	-	-	875,000
Information Technology						
Desktops	20,000	20,000	45,000	45,000	45,000	175,000
Laptop Charging Stations		5,000			5,000	10,000
Laptops	150,000	150,000	100,000	100,000	100,000	600,000
Rugged Tablets/Laptops	30,000	30,000	30,000	30,000	350,000	470,000
Tablets	-	-	-	-	50,000	50,000
Vehicle Mounts	70,000	50,000	70,000	70,000	70,000	330,000
Phone System Migration to Avaya	2,500	2,500	2,500	2,500	2,500	12,500
Infrastructure Hardware, data center, IDF	20,000	20,000	20,000	20,000	40,000	120,000
Printers	30,000	30,000	60,000	30,000	30,000	180,000
Low Voltage Wiring	200,000	250,000	250,000	250,000	250,000	1,200,000
800 Mhz Radios - Portable (wearable)	200,000	200,000	200,000	20,000	80,000	700,000
800 Mhz Radios - Mobile (mounted in vehicles)	250,000	250,000	-	-	100,000	600,000
800 Mhz Radios - Counsoles (mounted inside with direct connection to external antenna)	-	120,000	-	-	90,000	210,000
Cityworks/AssetWorks/Records Implementation Staffing	500,000	500,000	300,000	200,000	200,000	1,700,000
GPS for underground assets	300,000	300,000	400,000	400,000	400,000	1,800,000
GIS Update As-Built Drawing Upgrades	300,000	200,000	125,000	125,000	125,000	875,000
Cyber Security Software/Services	100,000	200,000	-	-	-	300,000
Total	\$ 4,487,500	\$ 4,507,500	\$ 3,007,500	\$1,762,500	\$ 4,977,500	\$ 18,742,500



Water & Sewerage
Department

Facilities Improvement Projects

Descriptions	Type	QTY	Unit Cost	Total	2023-24	2024-25	2025-26	2026-27	2027-28	2024-2028 Total
Exterior Improvements										
CSF	Roof Replacement	1	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000
MOB	Roof Replacement	1	1,500,000	1,500,000		1,500,000	-	-	-	1,500,000
MOB Penthouse	Building	1	2,000,000	2,000,000	2,000,000	-	-	-	-	2,000,000
Heating Units										
CSF	HVAC Units	12	150,000	1,800,000	500,000	400,000	300,000	300,000	300,000	1,800,000
Garage Door Replacement										
Overhead Doors CSF/ West Yard	Interior Door Replacement	30	14,000	420,000	-	-	-	-	420,000	420,000
Build Out: Interior Improvements										
CSF Yard Buildout	Interior Space Improvement/Ready Rooms/Offices	5	200,000	1,000,000	250,000	250,000	250,000	250,000	-	1,000,000
MOB Freight Elevator	Door Replacement Upper/Lower	1	125,000	125,000		125,000	-	-	-	125,000
CSF Concrete Repairs	East Yard	1	500,000	500,000	500,000	-	-	-	-	500,000
Parking Lot Improvements										
Parking Lot Repavement	CSF-Employee Lot	1	1,000,000	1,000,000	1,000,000		-	-	-	1,000,000
Exterior Fence	CSF	1	400,000	400,000	-	-	-	-	400,000	400,000
	Total			\$ 10,245,000	\$ 5,750,000	\$ 2,275,000	\$ 550,000	\$ 550,000	\$ 1,120,000	\$ 10,245,000

Lead Service Line Replacement - Force Account

Type of Replacement	Labor	Fringe	Plumber (Contractual)	Equipment	Material	Total
Private Side Completion	\$668,770	\$238,350	\$217,500	\$610,000	\$2,640,000	\$4,374,620
Full Replacement Berm	96,088	34,246	31,250	132,000	615,107	908,691
Full Replacement Street	96,088	34,246	31,250	178,000	877,106	1,216,690
TOTAL	\$860,946	\$306,841	\$280,000	\$920,000	\$4,132,213	\$6,500,000



THANK YOU!

Detroit Water & Sewerage Department

For more information visit: www.detroitmi.gov/dwsd

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