



DRAFT

CAPITAL IMPROVEMENT PLAN

AND 2020 CAPITAL BUDGET

2020-2024 DRAFT CIP 5-YEAR PLAN

DRAFT -Capital Improvement Plan

- This CIP should be considered a planning document and current fiscal year capital budget – the CIP is an evolving plan that requires continual review and modification during the course of each year.
- The amounts indicated in 2020 are the FY20 capital budget.
- The following table details the planned expenditures for the Fiscal Years 2020-2024 CIP. Expenditures are focused on replacement, installation and/or abandonment of existing water mains, replacement of inoperable fire hydrants, rehabilitation of sewer systems, management of storm water with green infrastructure, upgrades to information technology systems, replacing aging equipment and vehicles, as well as rehabilitation of facilities that support the operation of the utility.



Summary of CIP Financial Plan and FY2020-2024 Capital Budget

The FY 2020 – FY 2024 capital improvement plan provides for \$217 million of water system improvements and \$150 million of sewer system improvements over the five year planning cycle. **FY20 DRAFT Capital Budget of \$154,832,399**

Category Summary	% of 5-Year Spend	FY 2019 Current Year	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total 5-Year 2020-2024
Water Main	30%	37,981	38,365	34,419	15,238	14,000	8,000	110,023
Sewer Line Replacement	16%	22,330	33,728	24,028	-	-	-	57,756
CIPMO	7%	14,468	13,391	8,280	5,590	-	-	27,261
Green Infrastructure	11%	14,820	17,460	13,020	4,900	2,590	1,080	39,050
Central Services	20%	32,812	24,699	14,573	11,575	11,235	11,000	73,082
Meters/ Fire Hydrants	10%	7,283	12,000	12,000	4,000	4,000	4,000	36,000
O&M - I&E	7%	22,700	15,189	8,900	-	-	-	24,089
	100%	\$ 152,394	\$ 154,832	\$ 115,220	\$ 41,303	\$ 31,825	\$ 24,080	\$ 367,261
Water	59.3%	90,269	83,264	65,411	27,821	23,618	17,500	217,613
Sewer	40.7%	62,125	71,568	49,810	13,482	8,208	6,580	149,648
	100.0%	152,394	154,832	115,220	41,303	31,825	24,080	367,261



CIP FY 2020 – Water System Summary

Total estimated cost in millions

Category	FY 2019 - Current Year	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	2019-2023 CIP Total
Water							
Water Field Services	\$ 59,346	\$ 52,219	\$ 41,984	\$ 15,238	\$ 14,000	\$ 8,000	\$ 131,442
Metering	7,283	12,000	12,000	4,000	4,000	4,000	\$ 36,000
General Purpose	7,234	6,695	4,140	2,795	-	-	\$ 13,631
Water Total	73,862	70,915	58,124	22,033	18,000	12,000	181,072
Water Central Services							
Fleet	2,237	2,432	2,000	2,000	2,000	2,000	\$ 10,432
Facilities	8,011	4,602	2,000	2,000	2,000	2,000	\$ 12,602
Information Technology	6,158	5,316	3,287	1,788	1,618	1,500	\$ 13,507
Water Central Services Total	16,406	12,350	7,287	5,788	5,618	5,500	36,541
Grand Total	90,269	83,264	65,411	27,821	23,618	17,500	217,613



CIP FY 2020 – Sewer System Summary

Total estimated cost in Millions

Category	FY 2019 - Current Year	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	2020-2024 CIP Total
Sewer							
Field Services	\$ 23,665	\$ 35,063	\$ 25,363	\$ -	\$ -	\$ -	\$ 60,426
Green Infrastructure	14,820	17,460	13,020	4,900	2,590	1,080	\$ 39,050
Pump Stations	-	-	-	-	-	-	\$ -
General Purpose	7,234	6,695	4,140	2,795	-	-	\$ 13,631
Sewer Total	45,719	59,218	42,523	7,695	2,590	1,080	113,107
Sewer Central Services							
Fleet	2,237	2,432	2,000	2,000	2,000	2,000	\$ 10,432
Facilities	8,011	4,602	2,000	2,000	2,000	2,000	\$ 12,602
Information Technology	6,158	5,316	3,287	1,788	1,618	1,500	\$ 13,507
Sewer Central Services Total	16,406	12,350	7,287	5,788	5,618	5,500	36,541
Grand Total	62,125	71,568	49,810	13,482	8,208	6,580	149,648



Water Project List

Total estimated cost (1000's)

Water Project List 2020-2024 CIP

CIP No.	Description	Status	Source of Funds	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2020-2024 CIP Total	Percent of CIP
463	WS-693A Joy Road Water Main Replacement Phase 2 (17,500LF)	C	(DWRf)	1,892	-	-	-	-	-	-	0.0%
463	WS-697 Water Main Replacement -Westside (19,136LF)	C	(DWRf)	10	-	-	-	-	-	-	0.0%
463	WS-698 Water Main Replacement -Westside (26,743LF)	C	(DWRf)	752	-	-	-	-	-	-	0.0%
1322	WS-703 Water Main Replacement (33,820 LF)	A	I&E	6,350	1,000	-	-	-	-	1,000	0.5%
1322	WS-704 Water Main Replacement -along Outerdrive (20,500LF)	A	Bond	4,801	548	-	-	-	-	548	0.3%
1322	WS-705 Water Main Replacement-2-sections Eastside and Westside (33,400LF)	A	Bond	7,000	5,140	599	-	-	-	5,739	2.6%
1322	WS-706 Water Main Replacement Wayne Co. Roads (26,400)	A	Bond	5,500	4,000	500	-	-	-	4,500	2.1%
1322	WS-707 Water Main Replacement- (20,000LF)	P	(DWRf)	5,000	3,000	3,000	-	-	-	6,000	2.8%
1454	WS-709- Unplanned Lead Service Line Replacement	A	Grant	-	-	-	-	-	-	-	0.0%
1322	WS-710 Water Main Replacement-Hnd Wayne Co Roads (31,594LF)	N	(DWRf)	3,000	4,000	6,000	1,600	-	-	11,600	5.3%
1322	WS-711 Water Main Replacement-Incl Jefferson Streetscape(39,801LF)	N	Loan (DWRf)	-	3,000	6,000	5,200	-	-	14,200	6.5%
1349	WS-712 Water Main Replacement-Cornerstone Village (48,000LF)	N	I&E/Bond	1,345	9,287	10,000	538	-	-	19,825	9.1%
1349	WS-713 Water Main Replacement-Jefferson/Chalmers	N	I&E	-	-	-	5,000	5,000	-	10,000	4.5%
1349	WS-714 Water Main Replacement-MDOT Streetscape (25,100LF)	N	(DWRf)	-	3,500	3,500	-	-	-	7,000	3.2%
1349	WS-715 Pilot Areas-Riverdale, Milrock, Miller & Rosedale	N	I&E	-	-	-	2,000	8,000	-	10,000	4.6%
1349	WS-716 High Priority Areas: Brewster Douglas, Virginia Park, New Center Commons	N	I&E	-	-	-	-	1,000	8,000	9,000	4.1%
1349	DWS-907 Watermain & Sewer Rehab- North Rosedale Park	N	I&E/Bond	-	4,500	4,500	900	-	-	9,900	4.5%
463	MDU-4841 (PW-6974) Livermois to Ramsbach Water Main Replacement (4,052LF)	C	I&E	-	-	-	-	-	-	-	0.0%
1449	WS-701 Repair of Water Mains	C	I&E	800	-	-	-	-	-	-	0.0%
1449	WS-702 Repair & Replacement of Water Mains	A	I&E	8,000	3,899	-	-	-	-	3,889	1.8%
1449	WS-708 Repair of Water Mains	A	I&E	2,400	2,400	-	-	-	-	2,400	1.1%
1449	DWS-902 Repair of Pavement (break repair)	A	I&E	6,800	6,800	6,800	-	-	-	13,600	6.2%
1449	DWS-904 Repair of Lawns (break repair)	A	I&E	765	765	765	-	-	-	1,530	0.7%
1449	Valve Exercising	-	I&E	2,000	-	-	-	-	-	-	0.0%
1449	Leak Detection	-	I&E	600	-	-	-	-	-	-	0.0%
1308	CS-1673 Professional Engineering Services for Design of Water Main	A	I&E	888	-	-	-	-	-	-	0.0%
1349	CS-1909-Condition Assessments-High Priority Neighborhoods	N	I&E	-	390	320	-	-	-	710	0.3%
1349	CS-1812 Professional Engineering and Construction Services for CIPMO	A	I&E	7,234	6,695	4,140	2,795	-	-	13,631	6.3%
1349	CIPMO Pilot Program (N. Rosedale Park and Cornerstone Village)	-	I&E	943	-	-	-	-	-	-	0.0%
1349	Watermain Program Allowances	N	I&E	-	-	-	-	-	-	-	0.0%
1452	City Planning & Development Framework Allowance	N	I&E	500	-	-	-	-	-	-	0.0%
1304	Water Meter Replacement Program	A	I&E	5,283	3,000	3,000	3,000	3,000	3,000	15,000	6.9%
1352	Fire Hydrant Replacement Program	A	I&E	2,000	1,000	1,000	1,000	1,000	1,000	5,000	2.3%
1450	Itton Migration -MIU Replacement	N	I&E	-	8,000	8,000	-	-	-	16,000	7.4%
1328	Vehicle, Heavy Equipment, and Equipment Purchases	A	I&E	2,237	2,432	2,000	2,000	2,000	2,000	10,432	4.8%
1262	Information Technology	A	I&E	6,158	5,316	3,287	1,788	1,618	1,500	13,507	6.2%
1337	Facility Improvement Allowance	A	I&E	8,011	4,602	2,000	2,000	2,000	2,000	12,602	5.8%
TOTALS				90,269	83,264	65,411	27,821	23,618	17,500	217,613	100.0%



Sewer Project List

Total estimated cost (1000's)

Sewer Project List 2020-2024 CIP

CIP No.	Description	Status	Source of Funds	2019-20	2020-21	2021-22	2022-23	2022-24	2020-2024 CIP Total	Percent of CIP
448	DWS-900 Inspection and Rehab North Side (10,660LF)	C	I&E	-	-	-	-	-	-	0.0%
448	DWS-903 Inspection and Rehabilitation of Sewers City Wide	A	I&E/ Bond	17,500	16,500	-	-	-	34,000	22.7%
448	DWS-907 North Rosedale Park	N	I&E/ Bond	5,000	300	-	-	-	5,300	3.5%
448	DWS-908 Cornerstone Village Sewer Rehab	N	I&E/ Bond	6,000	100	-	-	-	6,100	4.1%
448	DWS-909 Sewer Condition assessments throughout City	N	I&E	3,000	4,400	-	-	-	7,400	4.9%
448	DWS-910- Sewer Condition Assessments High Priority	N	I&E	2,000	2,500	-	-	-	4,500	3.0%
448	Relocation of Sewer Syphon-West Parkway (MOU-DPW)	P	I&E	228	228	-	-	-	456	0.3%
1349	Sewer Program Allowances	N	I&E	-	-	-	-	-	-	0.0%
1349	City Planning & Development Framework Allowance	N	I&E/ Bond	-	-	-	-	-	-	0.0%
1349	CS-1812 Professional Engineering and Construction Services for Capital Improvement Program Management Organization	A	I&E	6,695	4,140	2,795	-	-	13,631	9.1%
1449	DWS-902 Repair of Pavement (break repair)	A	I&E	1,200	1,200	-	-	-	2,400	1.6%
1449	DWS-904 Repair of Lawns (break repair)	A	I&E	135	135	-	-	-	270	0.2%
1353	CS-1522 Green Infrastructure Program Management	A	I&E	700	50	-	-	-	750	0.5%
1353	Stoepel Park No. 1	A	I&E	10	-	-	-	-	10	0.0%
1353	PC-799 Crowell Rec Center and Ecosite Modifications	A	I&E	10	10	10	-	-	30	0.0%
1353	Tireman Phase II Bioswale	P	I&E	10	10	-	-	-	20	0.0%
1353	West Warren (Constance at Rouge Park/Tireman Sawyer PH III)	N	I&E	5,300	5,800	200	10	10	11,320	7.6%
1353	PC-801A Oakman Blvd	P	I&E	5,000	480	10	10	-	5,500	3.7%
1353	Liuzzo Park	N	I&E	10	-	-	-	-	10	0.0%
1353	PC-800 O'Shea Park	P	I&E	10	10	10	-	-	30	0.0%
1353	PC-802 Joy Rd. Drainage Improvements	P	I&E	225	-	-	-	-	225	0.2%
1353	Minoch Park	N	I&E	1,500	3,000	1,400	50	50	6,000	4.0%
1353	Charles H. Wright Academy	N	I&E	2,000	400	10	10	10	2,430	1.6%
1353	Charles H. Wright Academy Expanded Area	N	I&E	-	750	750	10	10	1,520	1.0%
1353	North Rosedale (Edinborough)	N	I&E	10	10	10	-	-	30	0.0%
1353	Capital Partnership Program-St. Paul Tabernacle	P	I&E	175	-	-	-	-	175	0.1%
1353	CS-1884 Green Infrastructure Program Management	P	I&E	2,500	2,500	2,500	2,500	1,000	11,000	7.4%
1328	Vehicle, Heavy Equipment, and Equipment Purchases	N	I&E	2,432	2,000	2,000	2,000	2,000	10,432	7.0%
1262	Information Technology	N	I&E	5,316	3,287	1,788	1,618	1,500	13,507	9.0%
1337	Facility Improvement Allowance	N	I&E	4,602	2,000	2,000	2,000	2,000	12,602	8.4%
TOTALS				71,568	49,810	13,482	8,208	6,580	149,648	100.0%



Central Services Summary

Total estimated cost (1000's)

Category	FY 2019 - Current Year	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	2020-2024 CIP Total
Fleet							
Water	\$ 2,237	\$ 2,432	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 10,432
Sewer	2,237	2,432	2,000	2,000	2,000	2,000	10,432
Fleet Total	4,475	4,863	4,000	4,000	4,000	4,000	20,863
Facilities							
Water	8,011	4,602	2,000	2,000	2,000	2,000	12,602
Sewer	8,011	4,602	2,000	2,000	2,000	2,000	12,602
Facilities Total	16,022	9,205	4,000	4,000	4,000	4,000	25,205
Information Technology							
Water	6,158	5,316	3,287	1,788	1,618	1,500	13,507
Sewer	6,158	5,316	3,287	1,788	1,618	1,500	13,507
Information Technology Total	12,316	10,631	6,573	3,575	3,235	3,000	27,014
Grand Total	32,812	24,699	14,573	11,575	11,235	11,000	73,082

Information Technology



Descriptions	Type		2019-20
Security			
Access Control	Software	Addition	100,000
Camera Replacements	Hardware/Equipment	Addition	100,000
Video Security System Upgrades	Software	Addition	150,000
Customer Service			
City Insights Portal Phase II	Software	Software Maintenance	150,000
EnQuesta Upgrade	Software	Software Maintenance	1,200,000
Selectron IVR	Software	Other IT Implementation	180,000
Administrative			
Records Management Services	Software	New Software Implementatio	571,200
Operations			
Collaboration Software for Drainage & Records Management	Software	New Software Implementatio	250,000
GPS for vehicles	Hardware/Equipment	New Hardware/Equipment In	210,000
Misc. Equipment for AssetWorks	Hardware/Equipment	New Hardware/Equipment In	100,000
Itron Replacement (staffing support)	Other IT Implementation	CIP IT STAFFING	1,000,000
Information Technology			
Desktops	Hardware/Equipment	Hardware	375,000
Laptop Charging Stations	Hardware/Equipment	Hardware	25,000
Laptops	Hardware/Equipment	Hardware	216,000
Rugged Tablets/Laptops	Hardware/Equipment	Hardware	100,000
Tablets	Hardware/Equipment	Hardware	154,000
Vehicle Mounts	Hardware/Equipment	Hardware/Equipment	60,000
Oracle Database Licenses	Software	Software	1,750,000
Oracle DC Migration	Hardware/Equipment	New Other IT Implementator	500,000
ITIL Based Service Desk w/City of Detroit	Software	New Software Implementatio	200,000
Low Voltage Wiring DWS-885	Hardware/Equipment	New Hardware/Equipment In	500,000
Network Infrastructure - CoD MERGER	Software	New Hardware/Equipment In	200,000
Network Infrastructure-REPLACEMENT	Software	New Hardware/Equipment In	50,000
Phone System Migration to Avaya	Hardware/Equipment	New Hardware/Equipment In	500,000
Copiers/Printers	Hardware/Equipment	Hardware	-
Printers	Hardware/Equipment	Hardware	510,000
Radios	Hardware/Equipment	Hardware	230,000
Executive Dashboard	Software	New Software Implementatio	300,000
Cityworks/AssetWorks/Records Implement	Other IT Implementation	New Other IT Implementator	950,000
Total			\$ 10,631,200



Vehicle, Heavy Equipment, and Equipment					
Descriptions	Type	Addition/ Replacement	QTY	Unit Cost	2019-20
Revenue Recovery					
Assigned Vehicles	Vehicle	Addition	3	25,000	75,000
Passenger Vehicles	Van	addition	1	45,000	45,000
Meter Operations					
Utility Truck	Heavy Equipment	Replacement	2	130,000	260,000
Compact Excavator	Heavy Equipment	Addition	1	48,000	48,000
Drop Deck Trailer for Excavator	Heavy Equipment	Addition	1	20,000	20,000
Mini Hydro excavator	Heavy Equipment	Addition	1	70,000	70,000
Trailer for hydro-excavator	Heavy Equipment	Addition	1	16,000	16,000
Compressors	Equipment	Addition	1	25,000	25,000
Large Meter Test Bench	Equipment	Replacement	1	560,000	560,000
Backfill Tamper	Equipment	New	4	2,100	8,400
Air Digger	Equipment	New	6	1,800	10,800
Field Services Operations					
Camera Truck-CCTV	Specialty Truck	Addition	1	245,000	245,000
Brick Trucks	Specialty Truck	Replacement	2	175,000	350,000
F150	Truck	Replacement	5	45,000	225,000
14-Yard Dump Truck	Specialty Truck	Addition	1	220,000	220,000
5-Yard Dump Truck	Specialty Truck	Replacement	1	180,000	180,000
Boom Truck	Specialty Truck	Replacement	1	338,000	338,000
Fleet Operations					
Executive SUV	Vehicle	Replacement	1	32,000	32,000
Pool Vehicles	Vehicle	Replacement	15	35,000	525,000
F-350 Super Duty	Truck	Addition	2	45,000	90,000
F-450 Super Duty	Truck	Addition	1	115,000	115,000
Full Size Transit	Van	Replacement	2	40,000	80,000
Passenger Vehicles	Vehicle	Replacement	8	25,000	200,000
Heavy Equipment	Specialty Truck	Addition	5	225,000	1,125,000
Total				\$ 4,863,200	



Facility Improvements

Descriptions	Type	QTY	Unit Cost	FY2019-2020
Roofing				
CSF/West/MOB	Roof replacement	1	\$ 214,700	214,700
Heating Units				
CSF	HVAC Units	10	150,000	1,500,000
Garage Door Replacement				
CSF	CSF/West yard	10	25,000	250,000
Furniture				
Northwest Activity Center	Furniture - Customer Service Cent	1	100,000	100,000
Southwest Customer Service Center	Furniture	1	100,000	100,000
Training Room Table & Chairs	CSF - 1st Fl & Garage	1	50,000	50,000
Meter Shop	CSF	1	200,000	200,000
Interior Improvements				
CSF - Meter Shop Build Out	Interior Space Improvements	1	300,000	300,000
CSF - Yards - Build Out	Interior Space Improvements/Rea	5	200,000	1,000,000
CSF - Exterior Signage	Exterior Signage	1	50,000	50,000
Painting/Carpet	Improvements	1	15,000	15,000
Elevators	Rehabilitation - MOB	1	1,000,000	1,000,000
Flooring	Interior West Yard	10	100,000	1,000,000
Flooring	Exterior West Yard	1	375,000	375,000
1st Fl. Improvements	MOB	1	250,000	250,000
Parking Lot Improvements				
Repavement	Customer Service-East & West	2	25,000	50,000
LED Lights	West Yard/ East & West Payment	1	250,000	250,000
Detroit Building Authority (DBA)	Consolidation, Renovations & Improvements			2,500,000
Total				\$ 9,204,700

Next steps to finalize CIP Plan

- **February 2019** -Submit a copy of draft CIP Plan to GLWA as required in the Lease Agreement
- **March 2019** Receive comments and questions from BOWC CIPO Committee
- **April 2019** Review final draft BOWC meeting
- **May 2019** -Request to approve 5-Year Plan and FY 2020 Capital Budget
- **June 2019** - Submit approved DWSD 5-Year 2020-2024 CIP Plan to City of Detroit Budget Dept and City Council for comment.

Thank You



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