

# Macomb Interceptor Drain Drainage District (MIDD)

## FY 2024 Budget & Charges

### Executive Summary

March 2023

The proposed Macomb Interceptor Drainage District (MIDD) budget for the fiscal year beginning July 1, 2023 totals \$94.9 million. The budget increased \$2.7 million or 2.9%. For the fifth consecutive year, average charge adjustments remain less than 3%.

Commissioner Miller has successfully secured Federal, State and County funds for the 15 Mile Road interceptor lining projects which has resulted in \$10's of millions of debt that will now not have to be assessed on our MIDD ratepayers.

The Great Lakes Water Authority (GLWA) and Oakland Macomb Interceptor District (OMID) costs account for two-thirds of the total MIDD budget. GLWA approved a 2.3% increase to OMID which results in a 2.6% increase to the MIDD, as Macomb's sewage flows are increasing more than Oakland's. GLWA is not passing on unpaid Highland Park charges. OMID costs rose 5.6% primarily due to debt for two new projects: the Northeast Interceptor East Arm (NIEA) lining & gates and three OMID Odor & Corrosion facilities in Sterling Heights. This projected debt service is included in the budget, but will be finalized and billed after the OMID bonds are sold later this year. Communities will be notified and can again elect to pre-pay their share to avoid interest costs.

MIDD-only costs account for one-third of the total budget and rose only 2.3%. With several one-time project costs dropping off, next year's budget funds several needed MIDD projects without incurring debt including:

- \$8 million toward system wide interceptor cleaning and sediment removal.
- \$3 million to complete the Segment 5 and Segment 6 lining projects and the construction of four MIDD Odor & Corrosion Control facilities.
- \$1.6 million for interceptor preventative maintenance inspections and grouting repairs.

Previously collected debt charges no longer needed for the 15 Mile interceptor project will instead now fund the 21 Mile and Garfield Road interceptor rehabilitation lining project.

The average sewer charge adjustment to the 11 MIDD communities is 2.9%. There is a slight charge variability among the communities due to sewer flow volumes. The budget is based on average sewer flows over the past 9 years. We plan to use a 10 year average in FY 2025 to match both GLWA and OMID charge methodologies which help to reduce rate volatility.

Attached is a more detailed budget and charge information which will explain the expenditures by cost center. The 2023 MIDD Report also explains the current and future work being done on your behalf in the district. Should you have any questions, please do not hesitate to contact the Macomb County Public Works Office.

**MIDD Budget**  
**Total Sewer Charges**

<b>Cost Category</b>	<b>2022/2023 Budget</b>	<b>2023/2024 Budget</b>	<b>Change</b>	<b>% Change</b>	<b>% of Total</b>
GLWA-OMID	46,990,069	48,224,470	1,234,401	2.6%	50.8%
GLWA CSO Program	1,024,180	1,052,320	28,140	2.7%	1.1%
<b>Total GLWA</b>	<b>48,014,249</b>	<b>49,276,790</b>	<b>1,262,541</b>	<b>2.6%</b>	<b>51.9%</b>
OMID Capital	535,200	869,700	334,500	62.5%	0.9%
OMID O&M	3,823,713	3,509,320	(314,393)	-8.2%	3.7%
OMID New Debt (NIEA & Odor & Corrosion)	593,905	1,274,380	680,475	114.6%	1.3%
OMID Existing Debt	7,837,639	7,852,590	14,951	0.2%	8.3%
<b>Total OMID</b>	<b>12,790,457</b>	<b>13,505,990</b>	<b>715,533</b>	<b>5.6%</b>	<b>14.2%</b>
<b>Subtotal GLWA and OMID</b>	<b>60,804,706</b>	<b>62,782,780</b>	<b>1,978,074</b>	<b>3.3%</b>	<b>66.2%</b>
MIDD Existing Debt	14,231,450	14,382,530	151,080	1.1%	15.2%
MIDDD O&M/Charge Required Revenue	17,159,080	17,717,200	558,120	3.3%	18.7%
<b>Total MIDDD</b>	<b>31,390,530</b>	<b>32,099,730</b>	<b>709,200</b>	<b>2.3%</b>	<b>33.8%</b>
<b>Total Budget</b>	<b>92,195,236</b>	<b>94,882,510</b>	<b>2,687,274</b>	<b>2.9%</b>	<b>100%</b>

**MIDDD COMMUNITIES  
PRIOR YEAR COMPARISON**

Cost Category	2022/2023 Charge	2023/2024 Charge	Difference	% Change	Page #
1) GLWA-OMID	46,990,069	48,224,470	1,234,401	2.6%	2
2) GLWA CSO Program	1,024,180	1,052,320	28,140	2.7%	2
3) Sub Total GLWA	48,014,249	49,276,790	1,262,541	2.6%	
4) OMID Capital Improvements	535,200	869,700	334,500	62.5%	2
5) OMID O&M	3,823,713	3,509,320	(314,393)	-8.2%	2
6) Sub Total OMID	4,358,913	4,379,020	20,107	0.5%	
<b>7) MIDDD O&amp;M/Charge Required Revenue</b>	<b>17,159,080</b>	<b>17,717,200</b>	<b>558,120</b>	<b>3.3%</b>	<b>2,4</b>
8) Sub Total	69,532,242	71,373,010	1,840,768	2.6%	
9) OMID Existing Debt	7,837,639	7,852,590	14,951	0.2%	3
10) OMID New Debt (NIEA & Odor & Corrosion)	593,905	1,274,380	680,475	114.6%	4
12) MIDDD Existing Debt	14,231,450	14,382,530	151,080	1.1%	3
13) Sub Total Debt(See page 3)	22,662,994	23,509,500	846,506	3.7%	
<b>TOTAL</b>	<b>92,195,236</b>	<b>94,882,510</b>	<b>2,687,274</b>	<b>2.9%</b>	

Communities	2022/2023 Charge	2023/2024 Charge	Difference	% Change
Chesterfield Twp	7,429,594	7,585,731	156,137	2.1%
Clinton Twp	19,128,143	19,813,873	685,730	3.6%
Fraser	3,810,718	3,936,229	125,511	3.3%
Harrison Twp	5,706,026	5,761,121	55,095	1.0%
Lenox Twp	1,624,255	1,680,930	56,675	3.5%
Macomb Twp	12,541,532	12,941,582	400,050	3.2%
New Haven	1,123,810	1,149,006	25,196	2.2%
Shelby Twp	8,732,814	8,964,052	231,238	2.6%
Sterling Heights	28,016,508	28,877,650	861,142	3.1%
Utica	1,495,942	1,550,838	54,896	3.7%
Wash Twp	2,585,894	2,621,498	35,604	1.4%
<b>TOTAL</b>	<b>92,195,236</b>	<b>94,882,510</b>	<b>2,687,274</b>	<b>2.9%</b>

MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT  
 2023-2024 SEWER CHARGES  
 Effective July 1, 2023

	Total Annual	% Macomb County	Allocated to Macomb Cty	Monthly	Nine Year Rolling Average per actual consumption 7/1/2013-6/30/2022										Total	
					Chesterfield Twp	Clinton Twp	Fraser Twp	Harrison Twp	Lenox Twp	Macomb Twp	New Haven Twp	Shelby Twp	Sterling Heights	Utica		Wash Twp
<b>OMIDD Charges to MIDDD</b>					<b>7.4416%</b>	<b>20.9117%</b>	<b>4.2007%</b>	<b>6.2625%</b>	<b>1.1700%</b>	<b>14.1489%</b>	<b>0.8391%</b>	<b>9.7883%</b>	<b>30.8805%</b>	<b>1.6392%</b>	<b>2.7176%</b>	<b>100.00%</b>
GLWA-OMID	70,483,000	68.42%	48,224,470	4,018,710	299,055	840,380	168,813	251,671	47,019	568,603	33,721	393,363	1,240,998	65,875	109,212	4,018,710
GLWA CSO Program	1,738,800	60.52%	1,052,320	87,690	6,526	18,337	3,684	5,492	1,026	12,407	736	8,583	27,079	1,437	2,383	87,690
<i>GLWA Sub Total</i>	<i>72,221,800</i>		<i>49,276,790</i>	<i>4,106,400</i>	<i>305,581</i>	<i>858,717</i>	<i>172,497</i>	<i>257,163</i>	<i>48,045</i>	<i>581,010</i>	<i>34,457</i>	<i>401,946</i>	<i>1,268,077</i>	<i>67,312</i>	<i>111,595</i>	<i>4,106,400</i>
OMID Capital Improvements	1,300,000	66.90%	869,700	72,470	5,393	15,155	3,044	4,538	848	10,254	608	7,094	22,379	1,188	1,969	72,470
OMID O&M	5,129,090	68.42%	3,509,320	292,440	21,761	61,154	12,285	18,314	3,422	41,377	2,454	28,625	90,307	4,794	7,947	292,440
<i>OMID Sub Total</i>	<i>6,429,090</i>		<i>4,379,020</i>	<i>364,910</i>	<i>76,309</i>	<i>15,329</i>	<i>22,852</i>	<i>4,270</i>	<i>51,631</i>	<i>3,062</i>	<i>35,719</i>	<i>112,686</i>	<i>5,982</i>	<i>9,916</i>	<i>364,910</i>	
<i>Total GLWA and OMID Charges(see Exhibit A)</i>	<i>78,650,890</i>		<i>53,655,810</i>	<i>4,471,310</i>	<i>332,735</i>	<i>935,026</i>	<i>187,826</i>	<i>280,015</i>	<i>52,315</i>	<i>632,641</i>	<i>37,519</i>	<i>437,665</i>	<i>1,380,763</i>	<i>73,294</i>	<i>121,511</i>	<i>4,471,310</i>
Stormwater Pump Station O&M	50,000	100.00%	50,000	4,170	834	0	1,668	0	0	0	0	0	834	0	0	4,170
Sewage Disposal Charges - Mt. Clemens	410,000	100.00%	410,000	34,170	0	34,170	0	0	0	0	0	0	0	0	0	34,170
MIDDD O&M/Charge Required Revenue(pg 4)	17,257,200	100.00%	17,257,200	1,438,100	107,018	300,731	60,409	90,061	16,826	203,475	12,067	140,766	444,092	23,573	39,082	1,438,100
<i>MIDDD Sub Total</i>	<i>17,717,200</i>		<i>17,717,200</i>	<i>1,476,440</i>	<i>107,852</i>	<i>335,735</i>	<i>60,409</i>	<i>91,729</i>	<i>16,826</i>	<i>203,475</i>	<i>12,067</i>	<i>140,766</i>	<i>444,926</i>	<i>23,573</i>	<i>39,082</i>	<i>1,476,440</i>
<b>Total</b>	<b>96,368,090</b>		<b>71,373,010</b>	<b>5,947,750</b>	<b>440,587</b>	<b>1,270,761</b>	<b>248,235</b>	<b>371,744</b>	<b>69,141</b>	<b>836,116</b>	<b>49,586</b>	<b>578,431</b>	<b>1,825,689</b>	<b>96,867</b>	<b>160,593</b>	<b>5,947,750</b>
O&M Total	5,287,046	15,249,134	2,978,822	4,460,930	829,694	10,033,392	595,032	6,941,172	21,906,268	1,162,404	1,927,116	71,373,010				
Debt Total	2,298,685	4,564,739	957,407	1,300,191	851,236	2,908,190	553,974	2,022,880	6,969,382	388,434	694,382	23,509,500				
<b>Grand Total</b>	<b>7,565,731</b>	<b>19,813,873</b>	<b>3,936,229</b>	<b>5,761,121</b>	<b>1,680,930</b>	<b>12,941,582</b>	<b>1,149,006</b>	<b>8,964,052</b>	<b>28,877,650</b>	<b>1,550,838</b>	<b>2,621,498</b>	<b>94,882,510</b>				





**MIDDD**  
**Operations Maintenance**  
**Budget to Actual**

Description	Page #	Actual			Projected 6/30/2023	Budget 2022/2023	Budget 2023/2024	Budget Change	% Change
		2021/2022	12/31/2022	6/30/2023					
<b>EXPENSE</b>									
Public Works Wastewater Personnel	5	1,510,742	949,011	1,841,400	1,889,760	1,984,020	94,260	5.0%	
Office Operations/Insurance	6	313,800	268,976	376,810	343,100	406,450	63,350	18.5%	
SCADA	7	84,580	139,895	247,250	461,990	117,260	(344,730)	-74.6%	
Sewer Systems Projects/Studies/Eng. Design	8	14,677,418	6,649,716	10,274,910	16,917,940	15,840,330	(1,077,610)	-6.4%	
Legal Services	9	43,460	18,824	45,000	75,000	75,000	0	0.0%	
Clintondale PS O&M	10	413,950	214,323	580,810	870,000	786,890	(83,110)	-9.6%	
Meters O&M	11	82,280	23,376	116,800	307,500	88,500	(219,000)	-71.2%	
Control Structures and Pump Station O&M	12	35,090	16,664	111,100	228,400	189,400	(39,000)	-17.1%	
Biofilters O&M	13	45,360	4,716	50,450	281,370	178,930	(102,440)	-36.4%	
Contribution Life Cycle Reserve	14	31,790	5,126	18,090	25,500	19,800	(5,700)	-22.4%	
Interceptor O&M	7, 10, 11, 13, 14	171,700	184,300	184,300	184,300	184,300	0	0.0%	
Stormwater Pump Stations	15	2,367,538	528,914	3,646,380	9,898,300	18,614,210	8,715,910	88.1%	
Sewage Disposal Charges - Mt. Clemens	16	91,000	65,500	131,000	131,000	50,000	(81,000)	-61.8%	
Debt Service -SRF and Revenue Bonds	17	216,848	105,069	210,140	200,000	410,000	210,000	105.0%	
		1,680,170	1,229,070	2,458,140	2,458,140	675,630	(1,782,510)	-72.5%	
<b>Total</b>		<b>21,765,726</b>	<b>10,403,480</b>	<b>20,292,580</b>	<b>34,272,300</b>	<b>39,620,720</b>	<b>5,348,420</b>	<b>15.6%</b>	

<b>REVENUE</b>									
Reimbursements	18	991,720	64,689	139,690	225,000	150,000	(75,000)	-33.3%	
Settlements	18	0	0	0	100,000	100,000	0	0.0%	
Sale of property-M59 & Garfield	18	0	0	2,200,000	0	0	0	100.0%	
Washington Twp Meter Project	18	38,600	0	0	0	0	0	0.0%	
COVID Grant	18	1,521,770	444,129	800,000	0	345,630	345,630	0.0%	
Net Reimbursement from ARPA Funds	18	0	0	9,928,220	0	0	0	0.0%	
<b>MIDDD O&amp;M/Charge Required Revenue</b>	<b>2</b>	<b>16,476,190</b>	<b>8,579,540</b>	<b>17,159,080</b>	<b>17,159,080</b>	<b>17,717,200</b>	<b>558,120</b>	<b>3.3%</b>	
Carryforward	18	0	0	0	16,523,220	20,907,890	4,384,670	26.5%	
Use of SCADA Reserve	18	0	0	114,400	215,000	0	(215,000)	-100.0%	
Interest		35,960	229,872	400,000	50,000	400,000	350,000	700.0%	
		19,064,240	9,318,230	30,741,390	34,272,300	39,620,720	5,348,420	15.6%	
<b>Total</b>		<b>19,064,240</b>	<b>9,318,230</b>	<b>30,741,390</b>	<b>34,272,300</b>	<b>39,620,720</b>	<b>5,348,420</b>	<b>15.6%</b>	

Total Reserve	33,705,864	42,691,853	14,482,975	22,586,943
Broken out as follows:				
SCADA Life Cycle	251,600	188,460	87,905	239,760
Clintondale PS Life Cycle	525,000	600,000	600,000	675,000
NGI Life Cycle	210,000	240,000	240,000	270,000
Control Structures Life Cycle	20,000	25,000	25,000	30,000
Biofilters Life Cycle	161,000	184,000	184,000	207,000
<b>Life Cycle Sub-Total</b>	<b>1,167,600</b>	<b>1,237,460</b>	<b>1,136,905</b>	<b>1,421,760</b>
Debt Reserve <sup>(1)</sup>	2,232,170	136,829	2,002,601	136,829
Non Committed Reserve	7,476,379	11,343,469	21,028,354	21,028,354
Carryforward	22,829,715	see page 18	16,523,220	20,907,890
Spending of Carryforward			(16,523,220)	(20,907,890)
<b>TOTAL RESERVES</b>	<b>33,705,864</b>	<b>42,691,853</b>	<b>14,482,975</b>	<b>22,586,943</b>

**NOTE**  
1) Segment 5 and 6 SRF bonds will no longer be required since MIDDD will receive ARPA funds for Segment 5 & 6. The funds previously collected for debt will now be used for 21 Mile and Garfield, as well as paying Segment 5 and 6 construction costs. Segment 5 had one draw for \$2.5 million so there will be a minimal on-going SRF debt payment for 5659-03.

**Public Works Wastewater Disposal Division  
Personnel Cost**

<b>Position</b>	<b>Number of Positions</b>	<b>BUDGET 2022/2023</b>	<b>BUDGET 2023/2024</b>
Operation & Flow Manager	1	100,222	114,330
50% Charged to other drainage districts		(50,111)	(57,170)
Construction and Maint Manager	1	100,222	114,340
WW Eng II/Construction Supervisor	3.5	298,363	349,620
50% charged to other drainage districts (Wagner and Rozycki)		(90,504)	(103,940)
Wastewater Field Supervisor	1	70,360	79,090
SCADA Engineer	1	80,480	94,490
SCADA Operator-FT	1	64,928	78,090
50% charged to other drainage districts(Weiser and Schmitt)-SCADA		(72,704)	(86,290)
Senior Asset Mgmt Technician(Hockman)	0.5	33,907	42,950
GIS Technician Senior(Contesti)	1	74,923	86,700
Community Services Coordinator-(Childs) <sup>(1)</sup>	1	69,081	69,650
GIS Specialist/Engineering Tech-(Cakal) <sup>(2)</sup>	0.5	26,975	31,360
Wastewater Field Operator	3	155,840	166,370
Portion of Field Operators wages charged to other districts		0	(54,000)
Drain Account Specialist	1	48,672	53,340
Incentive Pay, P.E.		3,300	3,300
1/3 Admin support from GF(Candice,Brian,Dan,Norb,Emily)	1.65	179,552	198,450
	<b>17.15</b>	<b>1,093,506</b>	<b>1,180,680</b>
Overtime		200,000	220,000
Engineering portion of OT charged to other districts		0	(40,000)
Standby Pay		22,000	22,000
Longevity		1,800	1,800
	Subtotal	223,800	203,800
Fringe Benefits		639,095	687,070
Fringe Benefits charged to other drainage districts		(90,641)	(115,530)
Net Fringe Benefits	Subtotal	548,454	571,540
Accounting Support Staff	Subtotal	1,865,760	1,956,020
		24,000	28,000
		<b>1,889,760</b>	<b>1,984,020</b>

**NOTES:**

- 1) Position was vacant when we prepared budget last year so used a higher salary for 22/23 budget. 23/24 reflects current salary
- 2) MIDDD is responsible for 50%, and the other 50% is shared with the General Fund.



**MIDDD  
Office Operations**

Project #	MIDDD OFFICE OPERATIONS	2022/2023 BUDGET	2023/2024 BUDGET	NOTES
	Bank Fees	100	200	Wire fees for payment of debt and OMID invoices.
	Dues, Membership & Subscriptions	5,000	7,000	Upgrading DropBox storage for file sharing and to host inspection videos linked to NexGen.
	Equipment Repair & Maintenance	10,000	12,000	
	Equipment	40,000	50,000	Replacement truck purchase for \$40,000 and \$10,000 other equipment.
	Gasoline(County)	15,000	20,000	
	Internal Service Cost(County)	30,000	30,000	Cross charge from county for telephone, car insurance, and building insurance
	Insurance	210,000	225,750	Liability and underground coverage. Projected increase for 23/24.
	Office Supplies	500	500	
	Operating Supplies	2,000	2,000	
	Personnel-Non WWS Employees	9,000	9,900	Charge for Chapaton personnel working on MIDDD assets
	Postage & Shipping	100	100	
	NexGen	0	15,000	Asset management used for MIDDD. Expensed in different account previously but now budgeting separately. County IT Department and other drainage districts pay a portion.
	Training	5,000	12,000	Confined space training is now an annual expense and was not accounted for in last year's budget.
	Uniforms	1,800	1,800	
	Weather Radar	3,100	3,200	
	Telephone	6,500	10,000	Budget restated to reflect added hotspots and prior year price increase.
	Vehicle Maintenance	5,000	7,000	
	<b>Total</b>	<b>343,100</b>	<b>406,450</b>	



SCADA

WO #	SCADA	2022/2023 BUDGET	2023/2024 BUDGET
92104	Cell modem service (Verizon) 45 units <sup>(1)</sup>	15,960	18,900
92111	Comcast Business Service <sup>(1)</sup>	13,990	18,060
WO18058	Meter Pit Control Logic Cleanup <sup>(2)</sup>	20,000	0
WO18077	SCADA As Needed Engineering <sup>(3)</sup>	57,000	50,000
WO19009	MIDDD/OMID battery replacements for 4 of the billing meter sites <sup>(4)</sup>	720	0
WO19010	MIDD Billing Meter Battery Replacements <sup>(4)</sup>	2,160	0
WO19011	Wonderware Software Support Annual Renewal <sup>(5)</sup>	11,400	12,540
WO19012	VEEAM support Annual Renewal <sup>(5)</sup>	1,540	2,280
WO19015	VMWare Software Support Annual Renewal <sup>(5)</sup>	5,130	7,980
WO19102	Dell Hardware Support Annual Renewal <sup>(6)</sup>	7,700	0
WO21030	Spare parts for MIDDD control panels	7,500	7,500
WO22004	SCADA Server Replacement <sup>(7)</sup>	215,000	0
WO22047	SCADA NGI Comcast Integration <sup>(8)</sup>	20,000	0
	<b>Total New Projects</b>	<b>378,100</b>	<b>117,260</b>
95901	Training - Radios/Switches/VMWare <sup>(9)</sup>	5,000	0
WO20029	3.6GHz Replacement Radios at MPSCS2705 <sup>(9)</sup>	18,690	0
WO22014	Firewall Hardware Design/Config <sup>(9)</sup>	4,300	0
WO22016	Obsolete Wireless backhaul replacement links <sup>(9)</sup>	21,500	0
WO22017	Fiber Optic Improvements <sup>(9)</sup>	21,500	0
WO22018	SolarWinds - Network Management Software <sup>(9)</sup>	12,900	0
	<b>Total Carryover Projects</b>	<b>83,890</b>	<b>0</b>
	<b>TOTAL ALL PROJECTS</b>	<b>461,990</b>	<b>117,260</b>
	Future costs of upgrade-Life Cycle <sup>(10)</sup>	51,300	51,300

See page 7a for notes

## SCADA NOTES

- 1) Increase in costs relates to moving from a radio system to cell service. The radio system technology is obsolete and expensive to upgrade.  
Added NGI and CS-12 to service.
- 2) Projected to be completed by June 30, 2023.
- 3) To cover activity for SCADA programming, network and server maintenance.
- 4) Moved to As Needed line item.
- 5) Expected price increase in 2024.
- 6) We have a 5-year support package with the new equipment so will not see a charge this year as it was part of the SCADA server replacements.
- 7) Current SCADA servers and associated equipment at Clintondale PS and Chapaton PS were 7 years old and reached the end of their useful life. This system is critical to operations across all drainage districts and the cost was split per the established allocation.  
Total cost of project was \$200,776, MIDD portion \$114,443, with life-cycle reserves used to fund the costs.
- 8) Projected to be completed by June 30, 2023.  
NGI pump station currently has radio and cell modem for SCADA communications. The radio backbone is slowly being taken offline so we need to bring a redundant communication link into this site.
- 9) Projects no longer a high priority. Will review in future years.
- 10) Used for future server upgrades.

**SYSTEM PROJECTS/STUDIES/CONSULTING**

<b>Project #</b>	<b>System Projects/Studies/Consulting</b>	<b>2022/2023 BUDGET</b>	<b>2023/2024 BUDGET</b>
	Replenish reserve from CPS refunding-Year 4 <sup>(1)</sup>	618,680	618,680
WO18072	As Needed Engineering <sup>(2)</sup>	250,000	200,000
WO18105	GLWA Assistance <sup>(2)</sup>	30,000	0
WO18320	As Needed Metco <sup>(2)</sup>	75,000	0
WO18322	Annual Meter Dye Testing <sup>(3)</sup>	50,000	50,000
WO19020	Data Review-Aquasight <sup>(4)</sup>	58,000	100,000
WO22050	Odor and Corrosion Construction/CCA <sup>(11)</sup>		811,040
WO22068	Covid Testing 2023-Grant Funded	0	340,630
80154	General Construction/Engineering Contingency-All projects(New Money) <sup>(5)</sup>	0	2,200,000
	<b>Total New Projects</b>	<b>1,081,680</b>	<b>4,320,350</b>
80154	General Construction/Engineering Contingency-All projects <sup>(5)</sup>	450,000	450,000
WO18316	As Needed Applied Science <sup>(2)</sup>	25,000	0
WO18320	As Needed Metco <sup>(2)</sup>	60,000	0
WO18351	SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab <sup>(6)</sup>	927,790	75,000
WO19023	Level Sensors/Pressure/H2S-Meters <sup>(7)</sup>	214,200	261,200
WO19024	Segment 5 Construction <sup>(8)</sup>	611,240	0
WO19095	Segment 5 CCA <sup>(8)</sup>	972,500	0
WO21025	Segment 6 Construction Administration <sup>(9)</sup>	685,530	0
WO21026	Segment 6 Construction <sup>(9)</sup>	0	0
WO22048	2023 Drop Shaft Rehab Design, Construction, & CCA <sup>(10)</sup>	1,600,000	2,400,000
WO22050	Odor and Corrosion Construction/CCA <sup>(11)</sup>	10,290,000	8,333,780
	<b>Total Carryover Projects</b>	<b>15,836,260</b>	<b>11,519,980</b>
	<b>TOTAL ALL PROJECTS</b>	<b>16,917,940</b>	<b>15,840,330</b>

See notes on page 8a

**SYSTEM PROJECTS/STUDIES/CONSULTING  
NOTES**

- 1) Replacing the \$3,093,401 in reserves over five years. Last year will be FY 2025.
- 2) In prior years was separated by specialty. Beginning in FY 2024 will now combine all as needed into one. Used to support our engineering team to work on various smaller projects throughout the MIDDD.
 

GLWA Assistance	30,000
Flow Control	75,000
Other	95,000
<u>Total</u>	<u>200,000</u>
- 3) This service is essential to ensure that all of the billing meters within the MIDDD are accurately reporting.
- 4) On-going maintenance fees.
 

There were three phases to build online system. Each phase had its own annual maintenance that we covered under previous budgets. We are now rolling that into one full annual maintenance fee. The cost is not going up.
- 5) Contingency for possible overages for Segment 5, Segment 6 and Odor & Corrosion.
- 6) Project is complete. However, a small amount will be kept for future warranty inspection. Savings from project will be put toward the Drop Shaft Repair project.
- 7) Three sites will also have air pressure and H2S sensors to help monitor corrosion and pressure concerns and will be connected to SCADA. Higher as we anticipated expenses in prior budget that did not occur.
- 8) Funds to pay for the costs of Segment 5 repairs and engineering. ARPA funds will be used to pay for project expenses after March 3, 2021.

**FUNDING for SEG 5**

Source	Grouting	Eng	Const	Other	Total
Sinkhole Settlement		1,690,960	10,409,040	400,000	12,500,000
Budget 2019		1,000,000			1,000,000
Budget 2020	2,878,150		85,600	260,190	3,850,000
Budget 2021			1,150,000		1,150,000
SRF5659-03			2,505,992		2,505,992
State ARPA Funds		2,950,716		260,190	20,408,560
2017 Bond			3,660,000		3,660,000
2010 Bond			408,000		408,000
Refund to District <sup>(a)</sup>		(2,950,716)	(3,713,750)	(260,190)	(6,924,656)
<u>Total</u>	<u>2,878,150</u>	<u>3,317,020</u>	<u>31,702,536</u>	<u>660,190</u>	<u>38,557,896</u>

- 9) Costs of Segment 6 will be covered by ARPA funds.

**FUNDING for SEG 6**

Source	Eng-FKE	Const-Ric	Man	Other	Total
Budget 2020	1,000,000				1,000,000
Budget 2021	875,000				875,000
Budget 2022	313,210		910,460	276,330	1,500,000
Federal Funds			1,000,000		1,000,000
State ARPA Funds	1,816,770			688,390	15,179,370
Refund to District <sup>(a)</sup>	(1,816,770)		(910,460)	(276,330)	(3,003,560)
<u>Total</u>	<u>2,188,210</u>		<u>13,674,210</u>	<u>688,390</u>	<u>16,550,810</u>

Net Reimbursement of ARPA-Sum of A

9,928,216

- 10) Upon completion of the current inspection program we will start design of the next round of possibly eight Drop Shaft Rehabilitations at our metering facilities. The locations and quantity will be dependent on the results of the current inspection program. This amount is first collection towards the \$3-\$4 million needed in 2024 for design, CCA, and construction. Remaining funds to be collected in FY 2025.

Savings from SY-S-1, SY-S-2, & WA-S-1 Meter Rehab	1,600,000
<u>TOTAL</u>	<u>800,000</u>

- 11) There are 4 components to this project (NGI, CPS, Biofilter, and 21 Mile & Garfield).

LDS Const	Tetra	Tech	CCA	Total	MIDDD Portion
5,054,184			399,200	5,453,384	10,290,000
3,711,531			291,990	4,003,521	220,000
1,525,645			122,660	1,648,305	(57,776)
1,677,337			186,800	1,864,137	(2,118,444)
<u>Total</u>	<u>11,968,697</u>		<u>1,000,650</u>	<u>12,969,347</u>	<u>8,333,780</u>

<u>Carryover:</u>	
2023 Budget	10,290,000
Moved from NGI	220,000
Act Cost through 12/31/22	(57,776)
Proj cost 1/1/23-6/30/23	(2,118,444)
<u>Remaining</u>	<u>8,333,780</u>

1,747,235 Funds on hand as of 1/31/23

Moved \$220,000 from NGI Foremain and repaving parking lot  
Construction of new Odor & Corrosion Control Facilities at the CPS and MA-S-2 locations. Modification of the existing Fraser Bio-Filter, converting it to an engineered media system.

2023 Budget	10,290,000
Moved from NGI	220,000
<u>Total</u>	<u>10,510,000</u>
Projected Cost	11,321,042
Shortage included in 24 budget	(811,042)

\* Future project expected for remaining funds



**MIDDD LEGAL SERVICES**

	<b>2022/2023 BUDGET</b>	<b>2023/2024 BUDGET</b>
<b>Legal Services</b>		
MIDDD Legal Services	75,000	75,000
<b>Total</b>	<b>75,000</b>	<b>75,000</b>

**CLINTONDALE PUMP STATION  
OPERATIONS and MAINTENANCE**

Project #	Clintondale Pump Station O & M	2022/2023 BUDGET	2023/2024 BUDGET
WO19031	O&M <sup>(1)</sup>	110,000	110,500
WO19013	Spare Parts	20,000	15,000
WO22052	Plug Valve Installation-New Money <sup>(2)</sup>	0	43,720
WO22053	CPS Electrical Room AC-New Money <sup>(3)</sup>	0	74,400
92101/92103	Utilities <sup>(1 &amp; 4)</sup>	240,000	280,000
	<b>Total New Projects</b>	<b>370,000</b>	<b>523,620</b>
WO20036	Drain Valve For Force Main <sup>(5)</sup>	100,000	0
WO22052	Plug Valve Replacement <sup>(2)</sup>	100,000	0
WO22053	CPS Electrical Room AC <sup>(3)</sup>	200,000	163,270
WO22062	PLC Equipment Replacement <sup>(6)</sup>	100,000	100,000
	<b>Total Carryover Projects</b>	<b>500,000</b>	<b>263,270</b>
	<b>TOTAL ALL PROJECTS</b>	<b>870,000</b>	<b>786,890</b>
	Life Cycle/Future repairs <sup>(7)</sup>	75,000	75,000

**NOTES**

- 1) Slight increase due to corrosion facility coming on line.
- 2) Cost of installing 3 new plug valves.
 

Progressive Mechanical	78,486
JGM Valve Corp(3 Plugs)	65,232
Total	143,718
Collected in 2023 Budget	(100,000)
Difference	43,718
- 3) The electrical room at Clintondale Pump Station currently is not air conditioned. This room houses all of the main electrical switchgear and more importantly the VFD's which run the 4 pumps. This room during the summer months temperatures will rise above 100 degrees F. This is causing failures within the VFD equipment. If the VFD fails then the pump will not operate. Awarded to DE-CAL Services for 274,400  
 Collected in 2023 Budget (200,000)  
 Difference 74,400
- 4) Reflects increasing cost for utilities offset by only running one pump continuously throughout the day which lowers our peak demand charge compared to running two pumps.
- 5) Projected to be completed by June 30, 2023.  
 Conversion of the manually operated drain valve to be operated within SCADA. The current setup creates a safety risk for MCPWO when opening manually due to the high levels of H2S that are present while opening.
- 6) The PLC equipment needs to be replaced.
- 7) Future replacement cost for impeller, pump shaft, discharge header, diffuser bowl, etc.

**NORTH GRATIOT INTERCEPTOR  
OPERATIONS and MAINTENANCE**

Project #	NGI O & M	2022/2023 BUDGET	2023/2024 BUDGET
WO19033	O&M <sup>(1)</sup>	40,000	40,500
WO19034	Spare Parts	2,500	2,500
WO19038	Pigging	25,000	25,000
92-101/92-102	Utilities <sup>(1)</sup>	20,000	20,500
	<b>Total New Projects</b>	<b>87,500</b>	<b>88,500</b>
WO19040	Replace pressure transducers-sensors	0	0
WO22054	NGI Forcemain Valve Actuators <sup>(2)</sup>	200,000	0
WO19036	Repave Parking Lot <sup>(3)</sup>	20,000	0
	<b>Total Carryover Projects</b>	<b>220,000</b>	<b>0</b>
	<b>TOTAL ALL PROJECTS</b>	<b>307,500</b>	<b>88,500</b>
	Life Cycle/Future repairs <sup>(4)</sup>	30,000	30,000

**NOTES**

- 1) Slight increase due to corrosion facility coming on line
- 2) Will now be part of the Odor & Corrosion project shown on page 8.  
The dual forcemains at the NGI pump station have three valves that are manually controlled. Several years ago we shut down one of the two forcemains on an annual basis as it was creating lethal levels of H2S in the downstream discharge chamber. Recent evaluation of the facility has found that in a large wet weather event, both forcemains are required to keep levels safe in the upstream interceptor. By automating those three valves, staff will have the ability to quickly open the valves to the proper configuration to activate both forcemains.
- 3) Will now be part of the Odor & Corrosion project shown on page 8.  
Repave existing pavement areas. Starting to develop large cracks.
- 4) Future replacement cost for pumps, HVAC, and force main.

**METERS  
OPERATION and MAINTENANCE**

Project #	METERS O & M	2022/2023 BUDGET	2023/2024 BUDGET
WO19106	Meter Maintenance-3 year contract <sup>(1)</sup>	180,000	141,000
92101	Utilities	8,400	8,400
WO19043	As Needed <sup>(2)</sup>	15,000	40,000
	<b>Total New Projects</b>	<b>203,400</b>	<b>189,400</b>
WO19042	Replace Underground Light Fixtures <sup>(3)</sup>	25,000	0
	<b>Total Carryover Projects</b>	<b>25,000</b>	<b>0</b>
	<b>TOTAL ALL PROJECTS</b>	<b>228,400</b>	<b>189,400</b>

**NOTES**

- 1) New bid came in under prior contract's amount. Maintenance contract is for \$155,400 annually. This number shows only the MIDDD portion.
- 2) Increase is due to possible future maintenance of meters.
- 3) Projected to be completed by June 30, 2023.



**MIDD CONTROL STRUCTURES and PUMP STATION  
OPERATION and MAINTENANCE**

Project #	Control Structures & Pump Station O&M	2022/2023 BUDGET	2023/2024 BUDGET
WO19044	O&M-CS 3	10,000	10,000
WO19045	Spare Parts-CS 3	1,000	1,000
WO19044	Utilities-CS 3 <sup>(1)</sup>	600	0
WO22055	O&M-CS 12 <sup>(2)</sup>	40,000	25,000
WO22056	Spare Parts-CS 12	2,500	1,250
WO22055	Utilities-CS 12	20,000	5,000
WO22057	O&M-CS 13 <sup>(3)</sup>	20,000	10,000
WO22058	Spare Parts-CS 13	2,500	1,250
WO22057	Utilities-CS 13	20,000	5,000
	Total	116,600	58,500
WO19046	Improvement to CS-3 Hydraulic Cylinder <sup>(4)</sup>	164,770	120,430
	<b>Total Carryover Projects</b>	164,770	120,430
	<b>TOTAL ALL PROJECTS</b>	281,370	178,930
	Life Cycle	5,000	5,000

**Notes:**

- 1) One DTE feed powers the Biofilter and CS-3. Since the biofilter uses by far the most power, we have moved the expense to the biofilter.
- 2) CS-12 is a new pump station that is being added to support the Segment 5 work. It is also going to be used for future inspections, maintenance, and repairs of the Romeo Arm and Garfield Interceptor. Six pumps are part of CS-12 so more maintenance is expected than the other structures.
- 3) CS-13 is being added to support the Segment 6 work. This control structure will be kept in place long-term to support any inspections, maintenance, and repairs downstream in the 15 Mile Interceptor and Romeo Arm.
- 4) Project to replace the CS-3 hydraulic cylinder which is at the end of its useful life and presents a safety concern.

**BIOFILTERS  
OPERATIONS and MAINTENANCE**

Project #	BIOFILTERS O & M	2022/2023 BUDGET	2023/2024 BUDGET
WO19047	O&M	15,000	10,000
WO19048	Spare Parts	1,000	1,000
TBD	Utilities Fraser-CCF 1 <sup>(1)</sup>	9,500	8,300
TBD	Utilities Macomb-CCF 2 <sup>(2)</sup>	0	500
	<b>Total New Projects</b>	25,500	19,800
	<b>Total Carryover Projects</b>	0	0
	<b>TOTAL ALL PROJECTS</b>	25,500	19,800
	Life Cycle <sup>(3)</sup>	23,000	23,000

**NOTES**

- 1) Existing Fraser Bio-Filter.
- 2) New Macomb Township Bio-Filter at 21 Mile and Garfield.
- 3) Future replacement cost for media bed filter material, centrifugal fan, driveway, flow conditioner, etc.

**INTERCEPTOR  
OPERATIONS and MAINTENANCE**

Project #	Interceptor	2022/2023 BUDGET	2023/2024 BUDGET
WO22008	Grouting <sup>(1)</sup>	0	1,000,000
WO22022	Interceptor Inspections-New Money <sup>(2)</sup>	0	500,000
WO22059	Annual Critical Area Inspections <sup>(3)</sup>	50,000	110,000
WO22060	Interceptor Cleaning/Sediment Removal <sup>(4)</sup>	0	8,000,000
	<b>Total New Projects</b>	<b>50,000</b>	<b>9,610,000</b>
WO22008	Grouting <sup>(1)</sup>	4,525,000	3,926,770
WO22022	Interceptor Inspections <sup>(2)</sup>	1,773,300	1,527,440
WO22060	Interceptor Cleaning/Sediment Removal <sup>(4)</sup>	3,550,000	3,550,000
WO22061	Garfield Interceptor Lining Pilot <sup>(5)</sup>	0	0
	<b>Total Carryover Project</b>	<b>9,848,300</b>	<b>9,004,210</b>
	<b>TOTAL ALL PROJECTS</b>	<b>9,898,300</b>	<b>18,614,210</b>

**NOTES**

- On-going grouting within the MID interceptors to seal any leaks or repairs that need to be made.  
 Carryover:  
 2020 Budget-Savings from Drop Shaft Repair 2,900,000  
 2021 Budget-Originally called Phase II and Phase III Grouting 1,425,000  
 2022 Budget-Repair work stemming from inspection repair program/Phase III Grouting 3,200,000  
 2023 Budget 1,000,000  
 2021 Expenses (2,108,331)  
 2022 Expenses (2,259,362)  
 2023 Projected Expenses(Lower because grouting on hold) TOTAL 3,926,770
- On-going inspection including the Romeo Arm, 15 Mile Interceptor (forremain included), Lakeshore Interceptor, Garfield Interceptor and drop shafts.  
 Drop Shafts:  
 CT-S-7 (if not repaired or inspected during Segment 5), FR-S-2 (if not repaired or inspected during Segment 5), ST-S-3,CT-S-4,CT-S-5,CT-S-6,CH-S-1, CH-S-2,CH-S-3, LX-S-2,NH-S-1,HR-S-1  
 Lenox Local inspection being paid from surplus bond funds.  
 Will likely be more expensive than the current program due to requiring full laser profile and sonar reports. This information will be critical for MCPWO staff to gauge the amount of work required to clear the debris from within the interceptors.  
 We will also be able to compare the rate of rise of that debris since it was last checked in 2017.

Source	Amount
2020 Budget	1,000,000
2021 Budget	1,000,000
2020 Expense	(61,555)
2021 Expense	(86,149)
2022 Expense	(108,166)
2023 Proj Exp	(216,690)
<b>TOTAL</b>	<b>1,527,440</b>

- Annual inspection of high risk areas, including Clinton River and Red Run.
- Second collection to start cleaning out the MIDDLE interceptors. This will be an activity that will occur on a 10-year basis and has not been done system wide since the MIDDLE took over control from DWSD. The Lakeshore Interceptor and Romeo Arm/Garfield North of 15 Mile are top priority for this project in 2024. During the next inspection a plan will be developed for this cleaning program so that it can be competitively bid. Ultimately, this could be up to a \$20 million system wide cleaning project.
- The 2017 inspection showed that there are approximately 194,000 CF of sediment within the interceptors that need to be removed. This does not include the work that is already taking place in Segments 5 & 6. The estimated cost to remove that debris is \$15,800,000. These numbers will be updated with the 2023 inspection.
- Included in projected 22/23 numbers. Is a \$3.1 million project at 21 Mile and Garfield and repair of two local connections. Using funds collected for Segment 5 & 6 debt.

**PUMP STATIONS-STORMWATER  
OPERATIONS and MAINTENANCE**

Chapter	Community	Various Pump Stations	2022/2023 BUDGET	2023/2024 BUDGET
4	Chesterfield	Schmidt <sup>(2)</sup>	28,000	10,000
4	Clinton Twp	Bridgewood <sup>(2)</sup>	23,000	10,000
4	Sterling Heights	Hildebrandt <sup>(2)</sup>	25,000	10,000
4	Harrison Twp	Murdock Ballard <sup>(1 &amp; 2)</sup>	55,000	20,000
		Total	131,000	50,000

**NOTES**

- 1) Inlet Grate Project funded in prior year.
- 2) Standard cabling and connection for the portable generator funded in prior year.



**Revenue Bond  
and  
Projected SRF Calculation**

Payment Date	2022/2023 BUDGET	2023/2024 BUDGET
SRF 5487-01 <sup>(1)</sup>	545,140	539,830
SRF 5540-01 <sup>(1)</sup>	138,000	135,800
Projected Seg 5 SRF(5659-03) Debt <sup>(2)</sup>	850,000	0
Projected Seg 6 SRF(5693-01) Debt <sup>(3)</sup>	925,000	0
<b>Total</b>	<b>2,458,140</b>	<b>675,630</b>

**NOTES**

- 1) SRF 5487-01 and 5540-01 are classified as revenue bonds so they must be included in the rate calculation on page 4, unlike the debt shown on page 3.
- 2) Segment 5 SRF loan closed in July of 2020. However, we are using ARPA funds to cover a portion of the costs and will close Segment 5 loan having drawn down \$2.5 million so there will be a small debt related to 5659-03 found on page 3.
- 3) Segment 6 SRF of \$12,757,420 closed in June 2021. However, we are using ARPA funds to fully cover the costs and we will close and not draw on the SRF loan.
- 4) The amounts previously collected for Segments 5 and 6 debt will now fund the 21 Mile & Garfield lining project.

SRF 5659-03	1,080,221
SRF 5693-01	1,525,000
<b>TOTAL</b>	<b>2,605,221</b>

5) SRF 5659-03 will not be administratively complete by debt payment due date of Spring 2023 so principal payment of \$1,215,000 will be applied to the final SRF loan amount of \$2,505,992. This will lower future principal payments.

<b>Debt Reserve 6/30/23</b>			
Debt #	7/1/2022	Funded	Payment
SRF 5540-01	27,366	138,000	(138,000)
SRF 5487-01	109,463	545,144	(545,144)
SRF 5659-03	1,495,341	850,000	(1,265,120)
SRF 5693-01	600,000	925,000	0
<b>TOTAL</b>	<b>2,232,170</b>	<b>2,458,144</b>	<b>(1,948,264)</b>

5540-01 (Biofilter) Interest	13,450
5540-01 (Biofilter) Principal	110,000
5487-01 (Meter Rehab) Interest	65,010
<b>Total</b>	<b>188,460</b>

<b>Projected Debt Reserve 6/30/24</b>			
Debt #	7/1/2023	Funded	Payment <sup>(4 &amp; 5)</sup>
SRF 5540-01	27,366	135,800	(135,800)
SRF 5487-01	109,463	539,830	(539,830)
SRF 5659-03	1,080,221	0	(1,080,221)
SRF 5693-01	1,525,000	0	(1,525,000)
<b>TOTAL</b>	<b>2,742,050</b>	<b>675,630</b>	<b>(3,280,851)</b>

5487-01 (Meter Rehab) Interest	487,170
<b>Total</b>	<b>675,630</b>
<b>Grand Total</b>	<b>675,630</b>

**Revenue Detail**

Revenue	2022/2023 BUDGET	2023/2024 BUDGET
Reimbursements <sup>(1)</sup>	225,000	150,000
COVID Grant <sup>(2)</sup>	0	345,630
Settlements <sup>(3)</sup>	100,000	100,000
Carryforward <sup>(4)</sup>	16,523,220	20,907,890
MIDD O&M/Charge Required Revenue	17,159,080	17,717,200
Use of SCADA Reserve(see Page 7)	215,000	0
Interest	50,000	400,000
<b>Total</b>	<b>34,272,300</b>	<b>39,620,720</b>

**NOTES**

- 1) Reimbursement from OMID for personnel, SCADA, other and engineering. Also from other drainage districts for SCADA and engineering assistance
- 2) State grant for COVID wastewater monitoring throughout Macomb County. Includes reimbursement for personnel.
- 3) As part of the bankruptcy settlement, MIDD as part of class 14 has been issued Class B notes that mature in 2044.  
There is still a delay in settling with other claimants.
- 4) Remaining projects that were charged in prior years and need to be carried forward for completion in 23/24

General Construction/Engineering Contingency-All projects	450,000	Eng
SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab	75,000	Eng
Level Sensors/Pressure/H2S-Meters	261,200	Eng
Drop Shaft Rehab Design	2,400,000	Eng
Odor and Corrosion Construction/CCA	8,333,780	Eng
CPS Electrical Room AC	163,270	CPS
PLC Equipment Replacement	100,000	CPS
Improvement to Hydraulic Cylinder	120,430	CS-3
Grouting	3,926,770	Intercept
Interceptor Inspections	1,527,440	Intercept
Interceptor Cleaning/Sediment Removal	3,550,000	Intercept
<b>TOTAL</b>	<b>20,907,890</b>	

CHARGES BASED ON 9 YEAR FLOW

Community	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Avg MCF	Percent
Chesterfield Twp	139,865	147,801	148,556	151,068	155,861	166,668	182,427	162,532	170,069	1,424,847	158,316	7.4416%
Clinton Twp	423,884	406,093	424,430	425,691	462,261	492,785	467,902	401,235	499,665	4,003,946	444,883	20.9117%
Fraser	84,484	81,441	82,972	87,535	85,403	92,896	100,620	89,142	99,812	804,305	89,367	4.2007%
Harrison Twp	117,627	123,316	124,529	134,398	143,738	155,911	155,732	117,731	126,090	1,199,072	133,230	6.2625%
Lenox Twp	14,738	17,903	19,660	22,168	23,916	29,330	30,724	30,573	34,994	224,006	24,890	1.1700%
Macomb Twp	282,023	286,614	285,612	304,753	302,162	303,503	307,084	305,777	331,552	2,709,080	301,009	14.1489%
New Haven	16,788	17,348	16,654	17,110	16,899	19,346	18,879	16,543	21,096	160,663	17,851	0.8391%
Shelby Twp	196,959	210,127	210,641	201,275	210,768	219,191	205,107	201,404	218,676	1,874,148	208,239	9.7883%
Sterling Heights	629,619	649,205	658,729	645,764	639,342	689,471	666,666	608,741	725,135	5,912,672	656,964	30.8805%
Utica	37,680	33,816	31,955	34,475	32,999	35,811	35,242	31,414	40,463	313,855	34,873	1.6392%
Washington Twp	57,990	60,414	58,849	58,427	57,147	59,880	55,605	58,272	53,752	520,336	57,815	2.7176%
<b>Total</b>	<b>2,001,657</b>	<b>2,034,078</b>	<b>2,062,587</b>	<b>2,082,664</b>	<b>2,130,496</b>	<b>2,264,792</b>	<b>2,225,988</b>	<b>2,023,364</b>	<b>2,321,304</b>	<b>19,146,930</b>	<b>2,127,437</b>	<b>100%</b>

Effective July 1, 2023

# Exhibit A

## Annual Operating Charges

GLWA	Current 2023		2024		COSDS		MIDD		Annual		Monthly	
	Budget		Budget		%		%		COSDS	Macomb	COSDS	MIDD
Common-to-all and OMIDDD Charges	\$ 68,870,100	\$	70,483,000		31.58%		68.42%		\$ 22,258,531	\$ 48,224,469		
CSO Program	1,692,300		1,738,800		39.48%		60.52%		686,478	1,052,322		
Total	70,562,400		72,221,800						22,945,009	49,276,791		\$ 1,912,084.08 \$ 4,106,399.25
<b>OMIDDD</b>												
Operations and Maintenance Expense												
Sewer System Maintenance	595,360		614,000		31.58%		68.42%		193,901	420,099		
Sewer System Engineering	68,220		98,530		31.58%		68.42%		31,116	67,414		
Pump Maintenance Unit	2,237,780		2,184,160		31.58%		68.42%		689,758	1,494,402		
Systems Control Unit	410		270		31.58%		68.42%		85	185		
Mapping Unit	1,300		680		31.58%		68.42%		215	465		
Miss Dig	110		-		31.58%		68.42%		-	-		
General and Administrative	1,261,030		1,381,940		31.58%		68.42%		436,417	945,523		
Subtotal	4,164,210		4,279,580						1,351,492	2,928,088		244,007.33
Non Operating	-		-		31.58%		68.42%		-	-		-
Major Maintenance	1,150,000		1,150,000		31.58%		68.42%		363,170	786,830		65,569.17
Emergency Maintenance	500,000		-		31.58%		68.42%		-	-		-
Capital Improvement	800,000		1,300,000		33.10%		66.90%		430,300	869,700		72,475.00
Subtotal	2,450,000		2,450,000						793,470	1,656,530		
O&M Non-Rate Revenue	(210,060)		(300,490)		31.58%		68.42%		(94,895)	(205,595)		(17,132.92)
<b>FY 2024 Total Fixed Charges</b>	<b>\$ 76,966,550</b>	<b>\$</b>	<b>78,650,890</b>						<b>\$ 24,995,076</b>	<b>\$ 53,655,814</b>		<b>4,471,317.83</b>

Capital Improvements are defined as investments that are made to assets that exceed \$5,000 and increase the useful life of assets by five years or more.

Debt Service*	2010A mfa 5368-02	2010B	2011A mfa 5368-02	2013A mfa 5368-03	2014A	2015A mfa 2001-01	2019 refunding	2019 revenue	2020A	2022 Issuance Projected Debt**	2023 Issuance Projected Debt***	Total Debt Service
	1,673,875	-	1,623,875	3,951,200	475,144	544,250	445,528	509,798	3,273,900	887,750	-	1,904,900
												14,419,314
<b>Total OMIDDD Related Revenue Requirements</b>												<b>93,070,204</b>

\* Estimated annual debt service for the 2024 budget updated February 2023

\*\* 2022 issuance projected debt for 2023 using dated date of 9/1/2022, funding of approximately \$15 million, final maturity 7/1/2042, and true interest cost of approximately 2.6%.

\*\*\* 2023 issuance projected debt for 2024 using a dated date of 9/1/2023, funding of approximately \$28 million (refer to Exhibit C), final maturity 7/1/2043, and true interest cost of approximately 3.2%.



**Exhibit B**  
**Oakland-Macomb Interceptor Drain Drainage District**  
**Fiscal Year (FY) 2023/24 Budget**

*Effective July 1, 2023*

**Flow Data**

Year	Fiscal Year	OMIDDD Allocation Flows		OMIDDD Allocation Flows	
		COSDS (cfs)	MIDDD (cfs)	COSDS (%)	MIDDD (%)
1	FY2012/13	29.89	62.82	32.24%	67.76%
2	FY2013/14	30.74	64.80	32.18%	67.82%
3	FY2014/15	29.74	64.76	31.47%	68.53%
4	FY2015/16	29.36	65.08	31.09%	68.91%
5	FY2016/17	30.63	66.50	31.54%	68.46%
6	FY2017/18	34.05	69.60	32.85%	67.15%
7	FY2018/19	34.05	69.60	32.85%	67.15%
8	FY2019/20	32.51	70.79	31.47%	68.53%
9	FY2020/21	27.02	64.16	29.64%	70.36%
10	FY2021/22	32.11	73.61	30.37%	69.63%
Current FY2022/23 (10-Yr A		31.08	66.76	31.77%	68.23%
<b>Prop. FY2023/24 (10-Yr A</b>		<b>31.01</b>	<b>67.17</b>	<b>31.58%</b>	<b>68.42%</b>

1. All annual flows are based on the average monthly flow rates, proportioned based on the number of days in each month.
2. COSDS Flows for fiscal years FY2012/13 thru FY2014/15 include a 30% adjustment to account for diversion to the Clinton River Wastewater Resource Reclamation Facility (CRWRRF).
3. Due to a catastrophic failure at the CRWRRF (COSDS's non-OMID outlet), there was volatility in the flow delivered from COSDS to OMID in FY2017/18 and FY2018/19. When paired, these two years offset each other and the volatility is mitigated. The OMID rates are based on a rolling 10-year average flow rate. In Rate Years 2028/29 and 2029/30, these volatile years will roll off the average, which will create volatility in the average if the actual values are used. To reduce this future volatility, the actual COSDS-to-OMID flows and MIDDD flows for FY2017/18 (COSDS = 37.74 cfs, MIDDD = 67.29 cfs) and FY2018/19 (COSDS = 30.35 cfs, MIDDD = 71.90 cfs) have both been replaced with the average for these two years (COSDS = 34.045 cfs, Macomb = 69.595 cfs).
4. Except as noted above, COSDS fiscal year flows are based on measured flow, which includes actual diversion to CRWRRF.



**EXHIBIT C**  
**OAKLAND MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT**  
**CAPITAL IMPROVEMENT PROGRAM**  
**February 14, 2023**

**Fund FND82912 Oakland Macomb InterceptorCh21**

Description	2022 Actual	2023 Updated	2024 Proposed
<b>UNDESIGNATED BEGINNING BALANCE</b>	<b>\$7,639,027</b>	<b>\$7,214,380</b>	<b>\$14,380</b>
Transfer to Emergency Reserve	(\$1,500,000)	(\$7,200,000)	
Net Change from Operations	\$1,075,353		
<b>UNDESIGNATED ENDING BALANCE</b>	<b>\$7,214,380</b>	<b>\$14,380</b>	<b>\$14,380</b>
<b>MAINTENANCE RESERVE BEGINNING BALANCE</b>	<b>\$2,848,992</b>	<b>\$3,694,956</b>	<b>\$3,144,956</b>
Maintenance Reserve Revenue	\$1,500,000	\$1,150,000	\$1,150,000
PRJ-12842 NESPS Oper Control Transition	(\$113,203)	(\$60,000)	
PRJ-13014 NESPS Emergency Contingencies	(\$51,378)	(\$90,000)	
PRJ-13015 OMID Immediate Repairs	(\$42,333)	(\$150,000)	
Crane Replacement		(\$300,000)	(\$300,000)
P4 VFD Replacement		(\$300,000)	(\$300,000)
CCTV Inspection		(\$250,000)	(\$250,000)
PLC Replacement at NESPS Generator		(\$50,000)	
Wet Well Cleaning		(\$500,000)	(\$500,000)
General Major Maintenance	(\$447,122)		
Total Maintenance Reserve Expense	(\$654,036)	(\$1,700,000)	(\$1,350,000)
<b>MAINTENANCE RESERVE ENDING BALANCE</b>	<b>\$3,694,956</b>	<b>\$3,144,956</b>	<b>\$2,944,956</b>
<b>EMERGENCY RESERVE BEGINNING BALANCE</b>	<b>\$1,500,000</b>	<b>\$1,429,863</b>	<b>\$9,129,863</b>
Emergency Reserve Revenue	\$500,000	\$500,000	
Expenses	(\$2,070,137)		
Transfer from Undesignated	\$1,500,000	\$7,200,000	
<b>EMERGENCY RESERVE ENDING BALANCE</b>	<b>\$1,429,863</b>	<b>\$9,129,863</b>	<b>\$9,129,863</b>
<b>CAPITAL RESERVE BEGINNING BALANCE</b>	<b>\$2,413,875</b>	<b>\$2,978,217</b>	<b>\$8,971,097</b>
Capital Reserve Revenue	\$807,426	\$800,000	\$1,300,000
PRJ-13016 OMID Flow Control Improvements	(\$3,626)	(\$400,000)	(\$7,000,000)
PRJ-13017 NESPS Security Upgrades	(\$146)		
1-3019 OMID NIEA Sewer Rehabilitation Design		\$2,236,910	
1-3020 NESPS Mechanical and Electrical Upgr/Design		\$3,905,970	
PRJ-17059 OMID Odor/Corrosion System Design	(\$232,565)	(\$500,000)	(\$500,000)
PRJ-17060 OMID Flow Ctrl Struct Rehab	(\$3,942)		
NESPS Discharge Chamber Correction		(\$50,000)	(\$200,000)
CS-6 Bypass System Installation			(\$1,000,000)
NESPS Wet Well Heaters			
OMID Odor and Corrosion Facility Design			
Macomb SCADA Upgrades OMIDDD Portion			
OMID PCI-7 Bypass Feasibility Analysis			(\$450,000)
Pipe Lining PCI-7			
MIDDD Segment 5-OMID Portion			(\$650,000)
General Capital	(\$2,803)		
Total Capital Reserve Expense	(\$243,084)	\$5,192,880	(\$9,800,000)
<b>CAPITAL RESERVE ENDING BALANCE</b>	<b>\$2,978,217</b>	<b>\$8,971,097</b>	<b>\$471,097</b>
<b>Reserve</b>			
<b>Undesignated</b>	<b>\$7,214,380</b>	<b>\$14,380</b>	<b>\$14,380</b>
<b>Major Maintenance</b>	<b>\$3,694,956</b>	<b>\$3,144,956</b>	<b>\$2,944,956</b>
<b>Emergency Maintenance</b>	<b>\$1,429,863</b>	<b>\$9,129,863</b>	<b>\$9,129,863</b>
<b>Capital</b>	<b>\$2,978,217</b>	<b>\$8,971,097</b>	<b>\$471,097</b>
<b>NET POSITION ENDING BALANCE</b>	<b>\$15,317,417</b>	<b>\$21,260,297</b>	<b>\$12,560,297</b>
12.5% of the Operations and Maintenance Budget		\$9,340,826	\$9,589,139

**EXHIBIT C**  
**OAKLAND MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT**  
**CAPITAL IMPROVEMENT PROGRAM**  
**February 14, 2023**

**Fund FND82912 Oakland Macomb InterceptorCh21**

**Current Construction Funds as of 12/31/2022**

<b>Project Description</b>	<b>Remaining Funds Committed for Capital Projects (In- progress)</b>
PRJ-13308 OMID NI-EA CONSTRUCTION	\$20,889,417
PRJ-13309 NESPS MECH-ELEC CONSTRUCTION	\$11,521,125
PRJ-13252 OMID Segment 5	\$1,322,242
<b>Total Remaining Expense in Construction Funds</b>	<b>\$32,410,542</b>

**Future Bonded Projects Through 2024**

<b>Project Description</b>	<b>Project Estimate</b>
NIEA Contract II Bond (Summer 2023)	\$16,000,000
OMID Odor/Corrosion Facility Construction (Summer 2023)	\$12,000,000
<b>Total Bonded Projects</b>	<b>\$28,000,000</b>

FY 2024 Suburban Wholesale Sewer Service Charge Schedule Calculation \*

OMID

	(1)	(2)	(3)	(4)	(5)	(6)
	Existing	Index	Index	Proposed	FY 2024	Effective
	FY 2023	Adjustment	Adjustment	FY 2024	Fixed	Charge
	Charges	%	\$	Charges	Monthly Charge	Adjustment
	\$			\$	\$	%
<u>Revenue Requirement Analysis Summary</u>						
1	67,730,800	2.81%	1,904,400	69,635,200	5,802,900	2.75% (a)
2	1,395,500	0.0%	0	1,395,500	116,300	0.00%
3	69,126,300	2.8%	1,904,400	71,030,700	5,919,200	2.75%
4	2,186,400	-11.2%	(245,300)	1,941,100	161,800	
5	71,312,700	2.3%	1,659,100	72,971,800	6,081,000	
6	5,760,500	2.8%	158,700	5,919,200		
7	182,200	-11.2%	(20,400)	161,800		
8	5,942,700	2.3%	138,300	6,081,000		
<u>Relative Increase over Wholesale Revenue Requirement</u>						
9	2.1%			2.0%		
<u>Detroit Ownership Adjustment</u>						
(a)	14.589%			14.589%		

Line 2 / Line 1

<- No Change in SHARES until FY 2025

\* The charges in this document are preliminary in nature and are subject to change or modification by the Great Lakes Water Authority Board following a public hearing on the FY 2024 Financial Plan and service charge schedules for the System. The public hearing is scheduled for February 22, 2023. The Notice of this Public Hearing can be found in the customer portal.

TFG

THE FOSTER GROUP

PRELIMINARY PROPOSED

1/9/23



**Candice S. Miller**

Public Works Commissioner  
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

From: Vincent Astorino, Operations & Flow Manager

Date: March 13, 2023

Subject: MA-S-2 & SY-S-3 Sewer Lining Project – Construction Contract Recommendation

The Macomb County Public Works Office (MCPWO), on behalf of the Macomb Interceptor Drain Drainage District (MIDDD), has coordinated the MA-S-2 & SY-S-3 Sewer Lining Project consisting of the rehabilitation of the pipes and manholes surrounding the aforementioned sewage metering facilities at the intersection of 21 Mile Road and Garfield Road in Macomb Township, Michigan. These metering sites service all of Macomb Township (MA-S-2) and the majority of Shelby Township (SY-S-3).

In August 2022 the MIDDD Board approved SAK Construction, LLC to rehabilitate the northernmost section of the Garfield Interceptor with a spiral wound PVC liner. That project, named the Garfield Interceptor Lining Pilot Project (GILPP), has since begun construction and has progressed well. As part of the GILPP, a temporary bypass pumping operation must be utilized; a necessary but oftentimes costly and disruptive practice. MCPWO staff identified two additional areas than can be rehabilitated while the bypass is already in place. This will result in a lower overall project cost and a significantly reduced impact to the surrounding community since the existing bypass and traffic control setups could be utilized. The projected costs for this new work were also considered with the 23/24 MIDDD budget and have been covered.

MCPWO staff initially obtained pricing from SAK Construction to perform this additional work. SAK's price was roughly in line with estimates but without anything to compare it to the decision was made to seek additional pricing from other contractors. A full bid package was then prepared and sent to seven (7) pre-qualified lining contractors. On 03/01/2023 one (1) bid was received from Municipal and Contractors Sealing Products, Inc. A summary of the two bids is as follows:

Contractor	Bid Price	Comment
SAK	\$510,160	Proposal reformatted on 03/06/23 to match bid form, prices held
MCSP	\$651,471	Bid received during formal bid period

MCPWO is recommending that the Board award this work to SAK Construction, LLC in the total base bid amount of \$510,160.00. Upon approval, MCPWO will prepare a change order to incorporate this additional work into SAK's existing GILPP contract. MCPWO will also obtain a proposal from AEW to provide additional CCA services for this work and will present this proposal at a future board meeting.

Attachments: Project Bid Tabulation  
AEW Recommendation Letter Dated 03/07/2023  
SAK Proposal dated 03/06/2023





**ANDERSON, ECKSTEIN & WESTRICK, INC.**  
**CIVIL ENGINEERS - SURVEYORS - ARCHITECTS**

51301 Schoenherr Road, Shelby Township, MI 48315  
586.726.1234 | [www.aewinc.com](http://www.aewinc.com)

March 7, 2023

Vince Astorino, Operations and Flow Manager  
Macomb County Public Works  
21777 Dunham Road  
Clinton Township, Michigan 48036

Reference: Recommendation of Award  
Macomb Interceptor Drain Drainage District  
MA-S-2 & SY-S-3 Sewer Lining Project  
AEW Project No. 0211-0211  
MCPW Project No. WWS-2023-004

Dear Mr. Astorino:

Following invitation and bid solicitation, we publicly opened bids for the referenced project at the Chapaton Pump Station Offices on March 1, 2023. The certified low bidder is SAK Construction, LLC with a base bid of \$510,160.00 for the proposed work. A bid tabulation was prepared by your office.

We recommend that the proposed work be awarded to SAK Construction, LLC for a base bid amount of \$510,160.00. SAK Construction, LLC is qualified to construct this project and has successfully performed similar work in the past.

Sincerely,

A handwritten signature in blue ink, appearing to read "Louis J. Urban".

Louis J. Urban, P.E.  
Project Manager

cc: S. Wagner, P.E., Engineer II

LJU/crf

M:\0211\0211-0211\Gen\Letters\Award Recommendation.docxx

March 3, 2023, Revised March 6, 2023

Macomb County Public Works  
 Mr. Vincent Astorino  
 Operations and Flow Manager  
 23001 E 9 Mile Rd  
 St. Clair Shores, MI 48080  
 Email: [vincent.astorino@macombgov.org](mailto:vincent.astorino@macombgov.org)

Anderson, Eckstein & Westrick, Inc.  
 Mr. Lou Urban, PE  
 51301 Schoenherr Road  
 Shelby Township, MI 48315  
 Email: [lurban@awinc.com](mailto:lurban@awinc.com)

Via Email

RE: Macomb Interceptor Drain Drainage District MA-S-2 & SY-S-3 Sewer Lining Project

Dear Mr. Astorino and Mr. Urban,

SAK Construction, LLC (SAK) is pleased to provide the following quotation for the additional lining services as part of the Macomb Interceptor Drain Drainage District MA-S-2 & SY-S-3 Sewer Lining Project.

Macomb County Public Works					
Mar-23					
SPR Pilot Garfield Add-On Work					
Geopolymer and MH Rehab					
Item #	Item Description	Unit	Qty	Unit Price	Total Price
1	Mobilization	LS	1	\$ 25,355.00	\$ 25,355.00
2	Clean & Televis (Pre & Post)	LS	1	\$ 60,000.00	\$ 60,000.00
3	Cementitious Lining, 66"-72" dia., MA-S-2	LF	80	\$ 1,475.00	\$ 118,000.00
6	Epoxy Lining of Chambers, MA-S-2	SF	1000	\$ 34.00	\$ 34,000.00
7	Epoxy Lining, Manhole Risers, 4' dia.	VF	95	\$ 223.00	\$ 21,185.00
8	Epoxy Lining, Manholes, 7' dia.	VF	35	\$ 390.00	\$ 13,650.00
9	Epoxy Lining, Manholes, 13' dia.	VF	6	\$ 1,120.00	\$ 6,720.00
10	Structure Modifications (if required)	LS	1	\$ -	\$ -
11	Traffic Control	LS	1	\$ 10,000.00	\$ 10,000.00
12	Temporary Bypass Pumping	LS	1	\$ 45,000.00	\$ 45,000.00
13	Restoration	LS	1	\$ 1,000.00	\$ 1,000.00
14	Permit Allowance	DLR	1	\$ 5,000.00	\$ 5,000.00
A1	Cementitious Lining, 42" dia., SY-S-3	LF	80	\$ 1,050.00	\$ 84,000.00
A2	Cementitious Lining, 66" dia., SY-S-3	LF	75	\$ 1,150.00	\$ 86,250.00
<b>Total</b>					<b>\$ 510,160.00</b>

**SCOPE:**

SAK Construction, LLC proposes to furnish all necessary materials, labor, tools, equipment, supplies, and supervision necessary to install the GeoKrete geopolymer system in accordance with the plans and specifications provided and the Inclusions, Exclusions, Notes, and Terms that align with the General Conditions presented in this proposal.

- Project scope – pipe preparation and GeoKrete geopolymer application of 235 LF of 42” to 72” concrete pipe at 2 separate sites.
- Full Manhole/structure rehabilitation of five structures with a total of approximately 41 vertical feet (round) of 7’ and 13’ diameter manholes and 1,000 square feet (rectangular).

**SCHEDULE:**

- |   |           |
|---|-----------|
| • Mobilization/Pipe Preparation/Flow Control Set up | 1 week(s) |
| • GeoKrete geopolymer install                       | 4 week(s) |
| • Manhole rehabilitation                            | 2 week(s) |

**PROPOSED SUBCONTRACTORS**

- Marra Inc. – Manhole Rehabilitation
- Doetsch Environmental – Televising and Cleaning

1. **GENERAL CONDITIONS**

○ ASSUMPTIONS

- Existing flow control that is part of the Garfield SPR Pilot will need to remain in place for the rehabilitation of MA-S-2. For system SY-S-3, system bypass will be installed and billed per bypass line item in proposal.
  - Assumes all work is completed while bypass is in operation for the Garfield Interceptor SPR work.
- Manhole and structure rehabilitation is for the full structure with the exception of structure M2 that excludes the invert rehabilitation.

○ INCLUSIONS

- Mobilization / demobilization
  - SAK plans for one mobilization and setup with continuous operations
- Bypass pumping, flow control, and diversion valve operations.
- GeoKrete geopolymer installation designed to fully deteriorated conditions per 3<sup>rd</sup> party engineer.
- Full manhole/structure rehabilitation with Vortex StructureGuard. Excludes invert of structure M2.

- Maintenance of traffic, traffic control, traffic control plans or devices, flaggers, arrow boards, signs, etc.
  - Pre and Post video for project acceptance.
  - Certificate of Insurance, with coverage per project specifications, if necessary.
  - Performance and payment bonds.
  - Sales tax on materials.
  - Permits as required and per the allowance provided.
  - Temporary fencing or repairs to any permanent fencing.
  - Debris removal and disposal.
  - Local water supply including hydrant access for operations.
  - Utilization of existing laydown area for equipment and materials.
- EXCLUSIONS
- Federal, State, or local permits, or other associated third-party requirements. SAK Construction may be required to be permit holder but any associated costs with permit will be responsibility of Owner.
  - Specialized training or specialized safety compliance to meet any Owner-specific requirements.
    - If needed, the cost of acquiring these provisions will be negotiated separately.
    - Crews do have minimum 8-hr OSHA Confined Space training and certificates will be provided as part of the submittal process.

Thank for the opportunity to provide a quote for the Garfield Interceptor SPR pilot – Additional Lining Services. Please do not hesitate to contact me at 651.263.0498 should you have any questions.

Sincerely,  
SAK Construction, LLC



Anthony A. Aderhold, PE  
Business Development Leader

CC: Tim Bussen – General Manager  
Cory Street – Sr. PM and SPR/Geo Specialist



# BID TABULATION

**Candice S. Miller**  
Public Works Commissioner  
Macomb County



**Project:** MA-S-2 & SY-S-3 Sewer Lining Project

**Project No.** WWS-2023-004

**Bid Location:** Chapaton Pump Station  
23001 E. Nine Mile Road  
St. Clair Shores, MI 48080

**Bid Date & Time:** 03/01/2023 @ 2:00pm

ITEM NO.	ITEM	QTY	UNIT	Municipal and Contractors Sealing Products, Inc.		SAK Construction, LLC	
				UNIT PRICE	BID AMOUNT	UNIT PRICE	BID AMOUNT
1	Mobilization (5% Max.)	LS	1	\$20,000.00	\$20,000.00	\$25,355.00	\$25,355.00
2	Clean & Televis (Pre & Post)	LS	1	\$66,000.00	\$66,000.00	\$60,000.00	\$60,000.00
3	Cementitious Lining, 66"-72" dia., MA-S-2	LF	80	\$525.00	\$42,000.00	\$1,475.00	\$118,000.00
4	CIPP Lining, 42" dia., SY-S-3	LF	80	\$800.00	\$64,000.00	N/A	- *
5	CIPP Lining, 66" dia., SY-S-3	LF	75	\$1,400.00	\$105,000.00	N/A	- *
6	Epoxy Lining of Chambers, MA-S-2	SF	1,000	\$45.00	\$45,000.00	\$34.00	\$34,000.00
7	Epoxy Lining, Manhole Risers, 4' dia.	VF	95	\$560.00	\$53,200.00	\$223.00	\$21,185.00
8	Epoxy Lining, Manholes, 7' dia.	VF	35	\$1,092.00	\$38,220.00	\$390.00	\$13,650.00
9	Epoxy Lining, Manholes, 13' dia.	VF	6	\$3,296.00	\$19,776.00	\$1,120.00	\$6,720.00
10	Structure Modifications (if required)	LS	1	\$25,000.00	\$25,000.00	\$0.00	\$0.00
11	Traffic Control	LS	1	\$20,000.00	\$20,000.00	\$10,000.00	\$10,000.00
12	Temporary Bypass Pumping	LS	1	\$220,000.00	\$220,000.00	\$45,000.00	\$45,000.00
13	Restoration	LS	1	\$27,500.00	\$27,500.00	\$1,000.00	\$1,000.00
14	Permit Allowance	DLR	25,000	1	\$25,000.00	1	\$5,000.00 **
<b>TOTAL BASE BID AMOUNT</b>				<b>\$770,696.00</b>		<b>\$339,910.00</b>	

**ALTERNATES**

A1	Cementitious Lining, 42" dia., SY-S-3	LF	80	\$280.00	\$22,400.00	\$1,050.00	\$84,000.00
A2	Cementitious Lining, 66" dia., SY-S-3	LF	75	\$365.00	\$27,375.00	\$1,150.00	\$86,250.00
A3	CIPP Lining, 42" dia., MA-S-2 Outlet to GI	LF	88	\$800.00	\$70,400.00	N/A	- *
<b>All Cementitious (incl. A1 &amp; A2; excl. Bid Items 4 &amp; 5)</b>				<b>\$651,471.00</b>		<b>\$510,160.00</b>	
<b>All Cementitious + MA-S-2 Outlet (incl. A1 &amp; A2 &amp; A3; excl. Bid Items 4 &amp; 5)</b>				<b>\$721,871.00</b>		<b>-</b>	

\* No pricing provided, bid assumes that Owner will accept Alternates A1 & A2 for all cementitious restoration

\*\* Allowance not fully utilized because Contractor already has active permits. Amount proposed is acceptable and inconsequential to bid results.



**Candice S. Miller**

Public Works Commissioner  
Macomb County

To: Board Members of the following Drainage Districts:  
 - Macomb Interceptor Drain Drainage District (MIDDD)  
 - Eight and One-Half Mile Relief Drain Drainage District (8MRDDD)

From: Vincent Astorino, Operations & Flow Manager

Date: March 13, 2023

Subject: 2023 Interceptor Inspection Program – Contractor Recommendation

Macomb County Public Works Office (MCPWO), on behalf of the two Drainage Districts noted above, has coordinated the 2023 Interceptor Inspection Program. This program will consist of routine televising and inspection of the large interceptors throughout these systems. Given the recent pipe failures within the Romeo Arm Interceptor, sonar and laser scanning will also be performed within the MIDDD. The sonar data will also be used to document the sediment within the MIDDD interceptors so that a future project to remove that sediment can utilize that data. Inspections of non-reinforced concrete pipe occurs every three (3) years and reinforced concrete pipe every six (6) years. Furthermore, the inspections within the MIDDD are in accordance with the Administrative Consent Order (ACO-004875) entered by the MIDDD with the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Approximately 24 miles of pipe ranging from 2-feet to 12-feet in diameter will be inspected across both districts as part of this project.

In June 2022, the Boards approved MCPWO staff to engage NTH Consultants, Ltd. to prepare contract documents, assist with bidding, and provide construction oversight for the Program from start to finish. Detailed plans and specifications were then prepared and the project was publicly advertised on MITN. On March 6, 2023, MCPWO received the three (3) unit price bids as follows:

Contractor	Task 1 - MIDDD	Task 2 - 8MRDDD	Total
Taplin Group, LLC	\$591,319.40	\$403,919.38	\$995,238.78
RedZone Robotics, Inc.	\$932,891.50	\$665,509.00	\$1,598,400.50
Pipetek	\$1,161,099.30	\$545,459.00	\$1,706,558.30
Eng. Est	\$1,212,792.00	\$371,833.00	\$1,584,625.00
NTH Fee	\$81,549.00	\$81,507.00	\$163,056.00
Total Project Cost	\$672,868.4	\$485,426.38	-
<b>Budgeted Amount</b>	<b>\$1,773,300.00</b>	<b>\$500,000.00</b>	-

NTH performed a review of the documents submitted by Taplin Group, LLC and has indicated they believe they are capable of performing the work for the as-bid price.

**MCPWO staff is recommending the following action:**

**That the MIDDD board award the contract to Taplin Group, LLC in the total Task 1 base bid amount of \$591,319.40 to perform the work associated with the 2023 Interceptor Inspection Program within the MIDDD.**

and,

**That the 8MRDDD board award the contract to Taplin Group, LLC in the total Task 2 base bid amount of \$403,919.38 to perform the work associated with the 2023 Interceptor Inspection Program within the 8MRDDD.**

The bid form is based on unit price rates for the pipe lengths to be inspected. The plans were developed using the best available record information but the actual quantities may vary slightly from the as-bid amount. Full-time observation will be performed and the actual inspected areas will be tracked closely. Additionally, the bid form has been structured by Task such that each District will only be invoiced for work performed in the respective District. Upon board approvals, MCPWO staff will coordinate with Taplin Group, LLC to finalize the contract.

Attachments: NTH Recommendation Letter Dated 03-07-23  
Taplin Bid Form Dated 03-03-23



Mr. Steve Wagner, Engineer II  
Macomb County Public Works Office  
21777 Dunham Road  
Clinton Township, Michigan 48036

March 7, 2023  
NTH Project 22000325

**RE: Recommendation for Award  
2023 Interceptor Inspection Program  
MCPWO Project Number: WWS-2022-005**

Dear Mr. Wagner:

This letter presents our recommendation for award of the inspection contract for the 2023 Interceptor Inspection Program Task 1 -Macomb Interceptor Drain Drainage District (MIDDD) and Task 2 Eight and One-Half Mile Relief Drain Drainage District (8MRDDD) sewers in Macomb County, Michigan. As you are aware, NTH Consultants, Ltd. (NTH) issued drawings and specifications in February 2023 to Macomb County Public Works Office (MCPWO) to solicit bids for the inspection of the referenced sewer systems. Bids were received on Monday, March 6, at 2:00 PM at the Chapaton CSO Basin office.

Three bids were received and reviewed by NTH and the MCPWO. The bidders included Red Zone Robotics, Inc., Taplin Group, LLC., and Pipetek Infrastructure Services. The three bidders were responsive and included signed bids along with the required bid bonds. During our initial review, we noted that Taplin and Pipetek had entered values for mobilization in excess of the maximum specified value of 5 percent of the bid price. As instructed, we have corrected these values to 5 percent on the Bid Tab Summaries.

Summaries of the corrected bid tabs are included in Tables 1 and 2, attached to this letter. The total Base Bid for each firm is included in Table 3. We understand the intent of the MCPWO is to issue a single contract to the most favorable bidder for both tasks. Upon our review of the corrected bid tabs, we noted that Taplin Group had used the same unit rate for the inspection for each of the different pipe sizes and for both the multi-sensor inspection and the closed-circuit television inspection portions of the project. In addition, their fees for the traffic control were much less than the other two bidders.

We sent an e-mail to Mr. David Balogh, Executive Vice President of Taplin, to confirm they understood the specifications and requirements of this project. Mr. Balogh responded, "Taplin Group approached this with the concept they are utilizing one inspection system capable of doing both technologies (CCTV and Multi-Sensor) with Cues FSX Platform regardless of active or dry flow conditions. The single unit price covers the cost of the equipment in its entirety being onsite". In addition, Mr. Balogh stated they propose to utilize Spartan Barricade for the traffic control, and they fully understand the requirements from the Macomb County Department of Roads.

Based on the unit prices received, the Total Base Bid Price, and the responses received from Taplin, we recommend awarding the 2023 Interceptor Inspection Project to Taplin Group, LLC.





Mr. Steve Wagner, Engineer II

March 7, 2023

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If you have any questions about this recommendation or require additional information, please contact John Kosnak, P.E.

Sincerely,

NTH Consultants, Ltd.

DocuSigned by:  
*John R. Kosnak*  
08D80029F4504E2...

John R. Kosnak, P.E.  
Principal Engineer / Project Manager  
[jkosnak@nthconsultants.com](mailto:jkosnak@nthconsultants.com)  
(248) 662-2725

DocuSigned by:  
*Charles J. Roarty, Jr.*  
1B505E3681BF483...

Charles J. Roarty, Jr., P.E.  
Senior Vice President  
[croarty@nthconsultants.com](mailto:croarty@nthconsultants.com)  
(313) 237-3936

JRK/CJR/mam

Attachment

**TABLE 1 - MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT BID TABS**

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price \$	Bid Amount \$	Bid Unit Price \$	Bid Amount \$	Bid Unit Price \$	Bid Amount \$
<b>TASK 1 - MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT</b>				<b>REDZONE</b>		<b>TAPLIN</b>		<b>PIPETEK</b>	
1.1	Mobilization (5% Max.)	LS	1	40,000.00	40,000.00	29,599.41	29,540.00**	30,000.00	30,000.00
1.2	Traffic Control	LS	1	45,000.00	45,000.00	12,425.40	12,425.40	25,000.00	25,000.00
1.3	San Swr, Inspect, Manage Data, 5' Dia. (force main PCI-15B)	LF	7,289	8.50	61,956.50	6.71	48,909.19	7.20	52,480.80
1.4	San Swr, Inspect, Manage Data, 5' Dia. (PCI-15C)	LF	11,425	7.50	85,687.50	6.71	76,661.75	7.20	82,260.00
1.5	San Swr, Inspect, Manage Data, 7' Dia. And 9' Dia. (PCI-45 and PCI-24)	LF	23,331	10.00	233,310.00	6.71	156,551.01	13.50	314,968.50
1.6	San Swr, Inspect, Manage Data, 11' Dia. (PCI-13, & 14)	LF	22,691	12.50	283,637.50	6.71	152,256.61	18.00	402,438.00
1.7	San Swr, Inspect, Manage Data, 11' Dia. and 11' Dia. w/ 9'-2" Liner (PCI 12A)	LF	12,664	12.50	158,300.00	6.71	84,975.44	18.00	227,952.00
1.8	Structure Modifications (if required)	LS	1	15,000.00	15,000.00	20,000.00	20,000.00	10,000.00	10,000.00
1.9	Permit Allowance	DLR	10,0000	1	\$10,000.00	1	\$10,000.00	1	\$10,000.00
<b>Task 1 - MIDD Subtotal: Total of All Unit Price Bid Items</b>				<b>\$932,891.50</b>		<b>\$591,319.40**</b>		<b>\$1,161,099.30</b>	

\*\* Mobilization value reduced to 5% of total contract value

**Table 2 -- EIGHT & ONE-HALF MILE RELIEF DRAIN DRAINAGE DISTRICT BID TABS**

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price \$	Bid Amount \$	Bid Unit Price \$	Bid Amount \$	Bid Unit Price \$	Bid Amount \$
<b>TASK 2 – EIGHT &amp; ONE-HALF MILE RELIEF DRAIN DRAINAGE DISTRICT</b>				<b>REDZONE</b>		<b>TAPLIN</b>		<b>PIPETEK</b>	
2.1	Mobilization (5% Max.)	LS	1	30,000.00	30,000.00	21,214.14	20,190.00**	30,000.00	27,260.00**
2.2	Traffic Control	LS	1	45,000.00	45,000.00	8,283.60	8,283.60	25,000.00	25,000.00
2.3	San Swr, Inspect, Manage Data, 24"-35" Dia.	LF	2,935	8.00	23,480.00	6.71	19,693.85	5.00	14,675.00
2.4	San Swr, Inspect, Manage Data, 36"-60" Dia.	LF	11,962	8.00	95,696.00	6.71	80,265.02	6.50	77,753.00
2.5	San Swr, Inspect, Manage Data, 61"-90" Dia.	LF	12,266	8.00	98,128.00	6.71	82,304.86	8.50	104,261.00
2.6	San Swr, Inspect, Manage Data, 11.5'-12.0' Dia.	LF	21,571	15.00	323,565.00	6.71	144,741.41	10.00	215,710.00
2.7	Structure Modifications (if required)	LS	1	10,000.00	10,000.00	20,000.00	20,000.00	10,000.00	10,000.00
2.8	Manhole, Inspect, Manage Data	EA	152	195.00	29,640.00	121.32	18,440.64	400.00	60,800.00
2.9	Permit Allowance	DLR	10,0000	1	10,000.00	1	10,000.00	1	10,000.00
<b>Task 2 - 8MRDDD Subtotal: Total of All Unit Price Bid Items</b>				<b>\$665,509.00</b>		<b>\$403,919.38**</b>		<b>\$545,459.00**</b>	

\*\* Mobilization value reduced to 5% of total contract value

**TABLE 3 - TOTAL BASE BID PRICE**

REDZONE	TAPLIN	PIPETEK
<b>\$1,598,400.50</b>	<b>\$995,238.78**</b>	<b>\$1,706,558.30**</b>

\*\* Mobilization value reduced to 5% of total contract value

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>	
<b>Macomb Interceptor Drain</b>	Chapter 20							
	Chesterfield – 7.4212%							
	Clinton – 21.2122%							
	Fraser – 4.1667%							
	Harrison – 6.3461%							
	Lenox – 1.1179%							
	Macomb – 14.0617%							
	New Haven – 0.8255%							
	Shelby – 9.7911%							
	Sterling Heights – 30.6812%							
	Utica – 1.6170%							
	Washington – 2.7596%							
			Astorino	Access Interactive LLC	\$ 2,954.10	Invoice #INV3761 - 02.13.23	SCADA Maintenance	
			Astorino	American Car Care	\$ 597.72	Invoice #8922 - 02.03.23	Wheel Bearing Replacement - 2007 Ford Explorer - Joel	
			Astorino	Aquasight	\$ 83,824.00	Invoice #000744 - 01.03.23	Covid-19 Monitoring - Grant	\$ 505,561.00
			Astorino	Aquasight	\$ 69,789.00	Invoice #000755 - 03.03.23	Covid-19 Monitoring - Grant	\$ 365,983.00
			Astorino	City of Mt. Clemens	\$ 16,292.85	Invoice #28005214 - 01.30.23	Monthly Utilities - December 2022	
			Astorino	Fishbeck	\$ 1,624.00	Invoice #420354 - 02.22.23	As-Needed Services - Confined Space/LOTO	\$ 21,360.86
			Astorino	Fishbeck	\$ 2,798.50	Invoice #420436 - 02.22.23	As-Needed Services - Flow Analysis	\$ 71,927.50
			Downing	FK Engineering Associates	\$ 101,744.06	Invoice #20-152-026 - 02.13.23	Segment 5 CCA - 01.08.23 - 02.04.23	\$ 1,239,523.82
			Downing	FK Engineering Associates	\$ 67,503.85	Invoice #20-058-032 - 02.13.23	Segment 6 CCA - 01.08.23 - 02.04.23	\$ 487,494.20
			Astorino	FK Engineering Associates	\$ 12,197.03	Invoice #22-126-003 - 02.22.23	Critical Areas Inspection Program	\$ 60,145.14
			Baker	KHVVPF, PLC	\$ 5,230.00	Invoice #49294 - 02.01.23	Segment 6 Insurance Claim	
			Astorino	METCO Consulting Services	\$ 8,790.85	Invoice #2206A-02 - 03.01.23	Flow Control Assistance	\$ 87,989.49
			Astorino	METCO Consulting Services	\$ 3,654.92	Invoice #2206B-02 - 03.01.23	CPS Electrical Room AC Upgrades Project	\$ 84,334.57
			Manning	Michigan Finance Authority	\$ 23,905.49	Invoice #1484-MFA - 02.14.23	Debt - 2015A	
			Manning	Michigan Finance Authority	\$ 475,072.25	Invoice #1483-MFA - 02.27.23	Debt - 5487-01	
			Manning	Michigan Finance Authority	\$ 13,449.99	Invoice #1483-MFA - 02.27.23	Debt - 5540-01	
			Manning	Michigan Finance Authority	\$ 1,240,059.92	Invoice #1484-MFA - 03.01.23	Debt - Segment 5	
			Astorino	NTH Consultants, Ltd	\$ 1,149.50	Invoice #631959 - 02.03.23	2023 Interceptor Inspection Program - Design	\$ 63,009.50
		Astorino	NTH Consultants, Ltd	\$ 1,192.25	Invoice #632062 - 02.17.23	2023 Interceptor Inspection Program - Design	\$ 61,817.25	
		Downing	Oscar Renda Contracting	\$ 278,685.00	Invoice #WO19024 Est #30 - 03.02.23	Romeo Arm Segment 5 Lining through 02.28.23	\$ 16,018,106.32	
		Astorino	Premier Safety	\$ 1,190.00	Invoice #04226515 - 02.03.23	2 Gas Monitors		
		Engelmann	Printing By Johnson	\$ 1,478.44	Invoice #45232 - 03.02.23	Booklet - Report to MIDDD Communities		
		Downing	Ric-Man Construction	\$ 255,043.40	Invoice #WO21026 Est #18 - 02.28.23	Segment 6 Services 01.21.23 - 02.20.23	\$ 6,287,983.22	
		Downing	Tetra Tech, Inc.	\$ 6,375.00	Invoice #52029161 - 02.21.23	Odor & Corrosion CCA through 01.27.23	\$ 959,996.53	
		Downing	Tetra Tech, Inc.	\$ 31,118.75	Invoice #520033415 - 03.02.23	Odor & Corrosion CCA through 02.24.23	\$ 928,877.78	
		Astorino	Verizon	\$ 1,297.39	Invoice #9926062623 - 01.23.22	Monthly Cellular - 12.24.22 - 01.23.22 (Eq. Fund)		
		Astorino	Verizon	\$ 1,748.81	Invoice #9926062623 - 01.23.22	Monthly Cellular - 12.24.22 - 01.23.22		

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>
<u>CPS</u>		Astorino	Cintas Fire	\$ 1,081.56	Invoice #0D26621017 - 02.13.23	Inspection/Batteries/Fire Extinguishers	
		Astorino	Clinton Township Treasurer	\$ 2,381.10	Invoice #23-068 - 01.31.23	Monthly Water - 12.28.22 - 01.24.23	
		Astorino	DTE Energy	\$ 20,298.34	Invoice #23-078 - 02.03.23	Monthly Electric - 01.04.23 - 02.01.23	
		Astorino	Global Industrial	\$ 2,272.74	Invoice #120166326 - 02.22.23	Work Platform	
		Manning	Huntington Nation Bank	\$ 500.00	Invoice #50700 - 01.03.23	Series 2020 Bond Fee	
<u>NGI</u>		Astorino	DTE Energy	\$ 1,296.00	Invoice #23-075 - 01.31.23	Monthly Electric - 12.30.22 - 01.30.23	
		Astorino	Excel	\$ 15,465.20	Invoice #INV33041 - 02.22.23	Replacement VFD - Spare	
		Astorino	Fishbeck	\$ 1,308.00	Invoice #420376 - 02.22.23	Inspection Program through 02.17.23	\$ 60,000.63
<b>Total</b>				\$ 2,753,370.01			



**Budget to Actual**  
**MIDDD**  
**As of Feb 28, 2023 = 67%**

DESCRIPTION	2023		ACTUAL	REMAINING BUDGET	PCT UTILIZED
	FINAL BUDGET	ENCUMBERED			
<b>REVENUE ACCOUNTS</b>					
GLWA-OMID	48,014,249		32,012,778	16,001,471	66.7%
OMID O&M	4,358,913		2,905,942	1,452,971	66.7%
Settlement	100,000			100,000	0.0%
Reimbursements	225,000		512,127	(287,127)	227.6%
PY Revenue-Fund Balance	16,738,220			16,738,220	0.0%
Reimb-Local Communities	17,159,080		11,439,387	5,719,693	66.7%
COVID Grant	-		937,709		100.0%
Interest	50,000		256,712	(206,712)	513.4%
<b>Total Revenue Accounts</b>	<b>86,645,462</b>	<b>-</b>	<b>48,064,655</b>	<b>39,518,516</b>	<b>55.5%</b>
<b>EXPENSE ACCOUNTS</b>					
GLWA-OMID	48,014,249		32,012,778	16,001,471	66.7%
OMID O&M	4,358,913		2,905,942	1,452,971	66.7%
Public Works Wastewater Disposal Division	1,889,760		749,032	1,140,728	39.6%
Office Operations/Insurance	343,100		53,258	289,842	15.5%
SCADA	461,990		118,633	343,357	25.7%
<b>Engineering</b>					
Replenish reserve from CPS refunding	618,680			618,680	0.0%
Drop shaft rehab Design	1,600,000		177,965	1,422,035	11.1%
METCO As Needed	75,000		53,426	21,574	71.2%
Data Review-Aquasight	58,000		18,000	40,000	31.0%
Annual Meter Dye Testing	50,000		35,650	14,350	71.3%
As Needed Engineering	250,000		43,604	206,396	17.4%
Odor and Corrosion Construction/CCA	3,280,000		4,223	3,275,777	0.1%
GLWA Assistance	30,000		5,345	24,655	17.8%
General Construction/Engineering Contingency-All Projects	450,000			450,000	0.0%
Garfield Interceptor Lining Pilot	-		58,086	(58,086)	100.0%
As Needed Applied Science	25,000		26,181	(1,181)	104.7%
As Needed Metco	60,000		26,140	33,860	43.6%
Level Sensors/Pressure/H2S-Meters	214,200			214,200	0.0%
Odor and Control-Construction	7,010,000		199,223	6,810,777	2.8%
Segment 6 Construction Administration	685,530		683,615	1,915	99.7%
Segment 6 Construction/CCA from reserve	-		3,862,775	(3,862,775)	100.0%
Wastewater Master Plan from reserve	-		32,105	(32,105)	100.0%
SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab	927,790		17,090	910,700	1.8%
Segment 5 Construction Admin	972,500		786,787	185,713	80.9%
COVID Grant	-		937,709	(937,709)	100.0%
Segment 5 Construction from reserve	611,240		2,263,691	(1,652,451)	370.3%
Legal Services	75,000		13,036	61,964	17.4%
Clintondale PS O&M	870,000		317,373	552,627	36.5%
NGI O&M	307,500		74,905	232,595	24.4%
Meters O&M	228,400		33,725	194,675	14.8%
Control Structures and Pump Station O&M	281,370		52,136	229,234	18.5%
Biofilter O&M	25,500		8,016	17,484	31.4%
Contribution Life Cycle Reserve	184,300			184,300	0.0%
Interceptor O&M	9,898,300		534,938	9,363,362	5.4%
Stormwater Pump Stations	131,000		87,333	43,667	66.7%
Sewage Disposal Charges - Mt. Clemens	200,000		132,938	67,062	66.5%
Debt Service - Revenue Bonds	2,458,140		1,638,760	819,380	66.7%
<b>Total Expense Accounts</b>	<b>86,645,462</b>	<b>-</b>	<b>47,964,419</b>	<b>38,681,043</b>	<b>55.4%</b>

	O&M Balance 6/30/2022	O&M	Total 2/28/2023
Cash - Operating	34,922,137	100,236	35,022,374
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		48,064,655	48,064,655
Expenditures		47,964,419	47,964,419
			0
Equity*	34,922,137		35,022,374

**Detail of 2022 Equity\***

Reserve at 6/30/2022	10,665,604
Construction/ Engineering Reserve	23,088,928
Life Cycle Reserve	1,167,605