

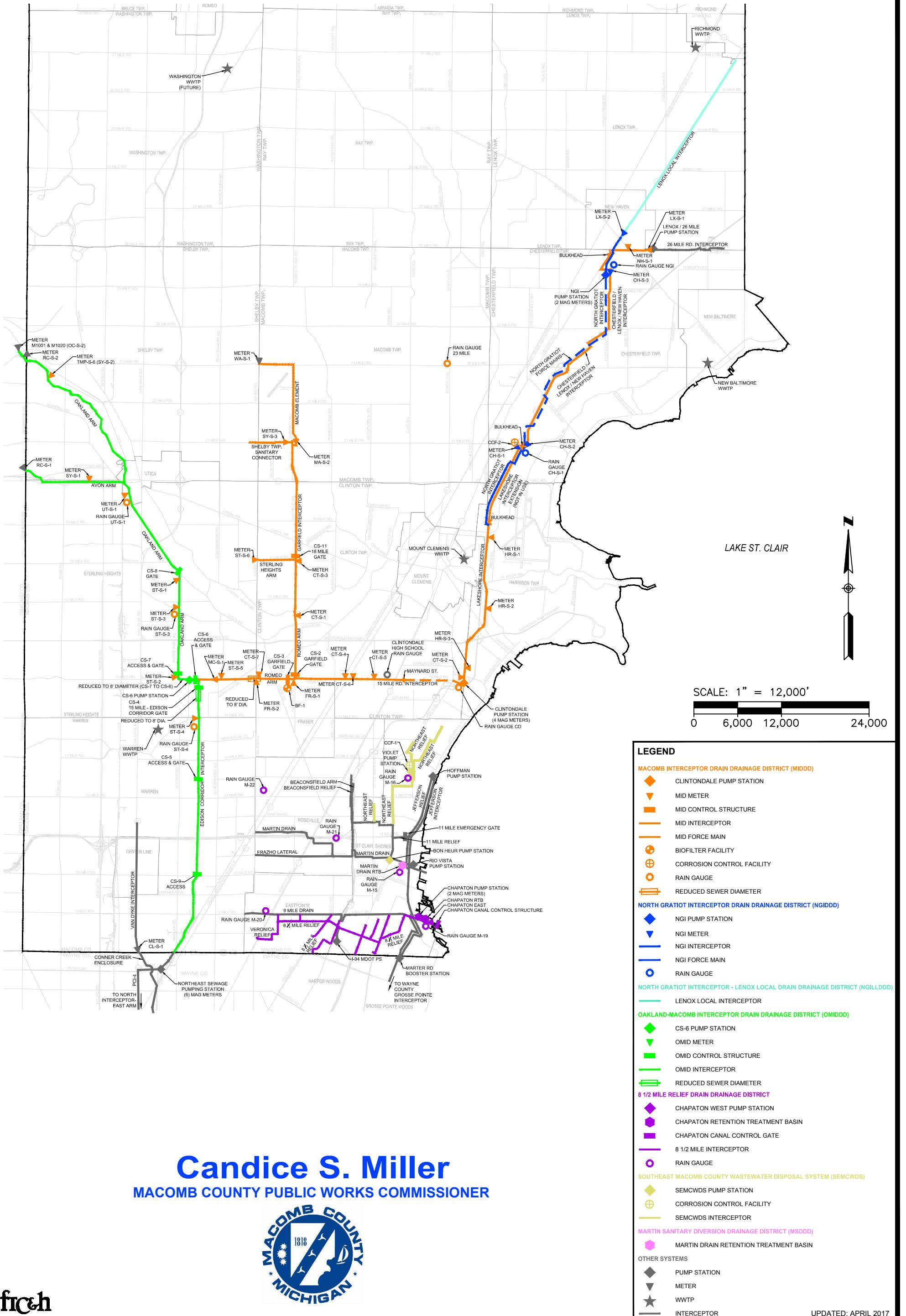
MARTIN SANITARY DIVERSION DRAIN
INTRA-COUNTY DRAINAGE BOARD
MARCH 8, 2021
10:30 A.M.
AGENDA

NOTE: THIS MEETING WILL BE HELD BY TELECONFERENCE

**Call in Number: 1-240-490-2589
Access Code: 251 806 942**

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for March 8, 2021	
3. Approval of Minutes for February 8, 2021	3
4. Public Participation	
5. Construction Project Status Updates – Vince Astorino	5
6. Martin In-System Storage Presentation – Vince Astorino	10
7. Consideration for approval of invoices (see attached)	15
8. Financial Report – Bruce Manning	16
9. Adjourn	

MACOMB COUNTY WASTEWATER SYSTEMS



Candice S. Miller

MACOMB COUNTY PUBLIC WORKS COMMISSIONER



UPDATED: APRIL 2017

An adjourned meeting of the Intra-County Drainage Board for the **MARTIN SANITARY DIVERSION DRAIN** was held via telephone conference per the State Public Act 228 of 2020 due to the COVID-19 pandemic, on February 8, 2021, at 10:12 A.M.

PRESENT: Brian Baker, Acting Chair
Location: Clinton Township, MI

Harold Haugh, Member
Location: Roseville, MI

Bryan Santo, Member
Location: Mt. Clemens, MI

ALSO PRESENT: Don VanSyckel, Macomb County Board of Commissioners; Karen Czernel, Deputy, Stephen Downing, Construction & Maintenance Manager, Bruce Manning, Financial Manager, Tom Stockel, Construction Engineer, Vince Astorino, Operations & Flow Manager, Kellie Kource, Drain Account Specialist, Emily Engelmann, Administrative Assistant, Macomb County Public Works; Sydney Hilgendorf, Sterling Heights

The meeting was called to order by the Acting Chair, Brian Baker. A motion was made by Mr. Haugh, supported by Mr. Santo to approve the agenda as presented.

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of January 11, 2021 were presented. A motion was made by Mr. Santo, supported by Mr. Haugh to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

The meeting was opened to public participation, then closed, there being no comments from the public.

Mr. Astorino updated the board that the disinfection project is moving along well. The TRC project is moving and we have purchased 3 units to measure chlorine levels throughout the basin. One unit is installed with the other 2 being installed soon. There is an in-system storage project potential, and there will be an update on the opportunity in March.

A motion was made by Mr. Haugh, supported by Mr. Santo to receive and file the project update by Mr. Astorino.

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$88,165.65 to the board for review and approval.

A motion was made by Mr. Haugh, supported by Mr. Santo to approve the invoices as presented.

Adopted: YEAS: 3
NAYS: 0

A motion to receive and file the financial report given by Mr. Manning was made by Mr. Santo and supported by Mr. Haugh.

Adopted: YEAS: 3
NAYS: 0

There being no further business, it was moved by Mr. Haugh, supported by Mr. Santo that the meeting of the Martin Sanitary Diversion Drain Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 10:19 a.m.



Brian Baker, Acting Chair
Macomb County Public Works Chief Deputy

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taking by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on February 8, 2021 the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.



Brian Baker, Acting Chair
Macomb County Public Works Chief Deputy

DATED: 2/8/21



Candice S. Miller

Public Works Commissioner
Macomb County

To: 8 ½ Mile Relief Drain Drainage District Board Members
Martin Sanitary Diversion Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: March 8, 2021

Subject: Construction Projects Status Updates for March 2021 Board Meeting

The following provides a status update for construction work completed within the 8 ½ Mile Relief Drain Drainage District (8MRDDD) and Martin Sanitary Diversion Drain District (MSDDD) for the previous month within both districts.

Chapaton Pump & Screen Project

Contractor: J.F. Cavanaugh

Engineering Consultant: HRC

Project Description:

This project consists of the replacement of the influent bar screens, addition of a third intermediate pump, and replacement of the manhole covers located at level B3 within the Chapaton Pump Station. The bar screens have reached the end of their useful life and are critical to protecting the pumps to not allow large objects to enter the wet well. The third intermediate pump is being installed as a redundant measure for dewatering of the in-system storage increased stored flows. The manhole covers are being replaced with pressure rated sealed covers to allow staff to raise the operating level of the wet well by 6 feet. This will provide approximately 3 million gallons of additional storage and will provide additional pumping capacity for the stormwater pumps.

Significant project tasks that have occurred over the past month:

1. Third intermediate pump has been installed and put through start-up testing.
2. New manhole covers have been tested and had minor leaks. Contractor has submitted a plan to correct the issue and MCPWO has approved.
 - o This work has been completed and MCPWO will test during the next rain event.
3. All new piping has been painted.

4. Punch list has been developed for close-out tasks and work has begun on that.

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$1,162,522.00
Change Order #1	2/25/20	\$40,000.00
Change Order #2	2/26/20	(\$136,200.00)
Revised Contract Amount		\$1,066,272.00
Total Spent to Date	1/19/21	\$986,628.00
Remaining Budget		\$79,644.00

Figure 1 - Pumps installed and painted

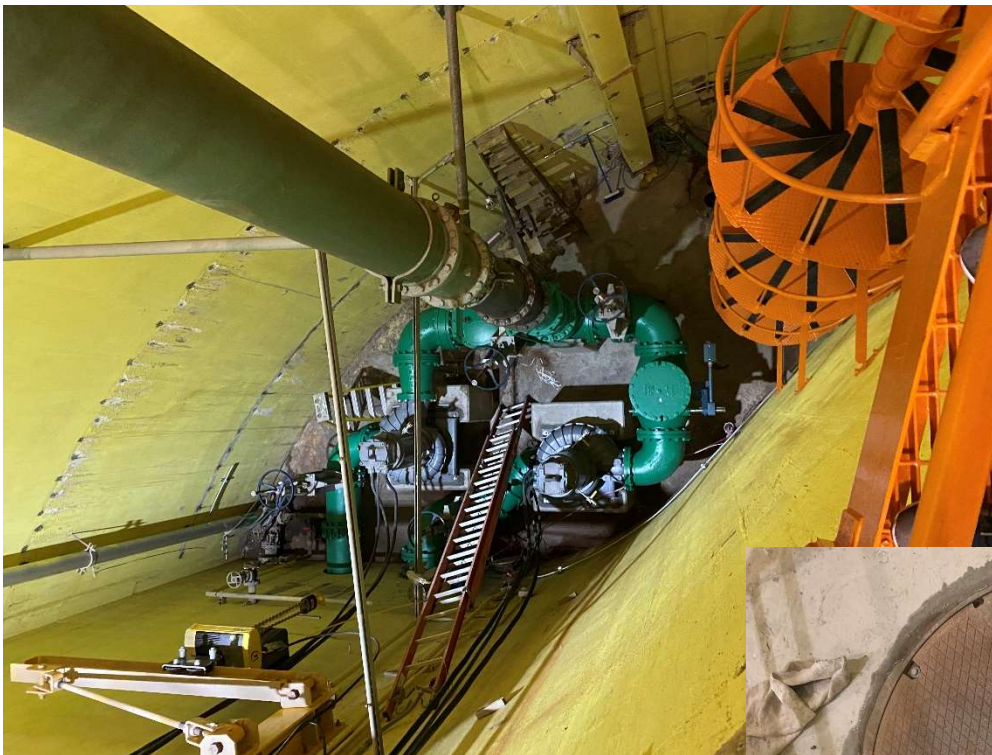


Figure 2 - New Manhole Cover

Chapaton & Martin Disinfection Replacement Project

Contractor: Weiss Construction

Engineering Consultant: Wade Trim

Project Description:

This project consists of the complete replacement of the disinfection systems at Chapaton and Martin. Macomb County Public Works Office (MCPWO) staff identified that a critical capital improvement need for the Chapaton and Martin RTB's was the replacement of the disinfection systems. These are systems that were installed in approximately 1978 and have exceeded the end of their useful life. MCPWO staff has worked diligently to keep the existing disinfection pumps in service as they are prone to failure and require expensive, difficult to obtain parts. The project involves all disinfection chemical feed pumps, new electrical controls and VFDs, and new disinfection and sample piping within the Chapaton RTB.

Significant project tasks that have occurred over the past month:

1. Poured seven (7) new concrete pump pads to support hose pumps – Chapaton 5; Martin 2.
2. Hung 3" recirculation piping from ceiling in Storage Tank Room in the Chapaton East Building
3. Set new Bredel hose pumps on concrete pads at Chapaton
4. Installed new FRP uni-strut supports and piping from hose pumps to wall. Note: existing disinfection system was not taken out of service. Full demo of the existing system and final piping will be installed within a 24 hour period to limit down-time.

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$995,925.00
Change Order #1	12/16/20	(\$16,337.83)
Revised Contract Amount		\$979,587.17
Total Spent to Date	Pay Apps #1-3	\$119,471.40
Remaining Budget		\$860,115.77



Figure 3 – New Pump Pads being poured at Martin

Figure 4 – New Pumps installed at Chapaton (new manifold staged on floor)



Figure 5 – New disinfection feed piping and supports (adj. to existing)

Chapaton Lab & Mezzanine Project

Contractor: Cross Construction

Engineering Consultant: Fishbeck

Project Description:

This project consists of relocating the Lab to the Chapaton East Building to allow for the complete overhaul of the Mezzanine level within the Chapaton Pump Station which includes new crew quarters, conference room, kitchen area, and SCADA control room. All areas were original to the facility dating back to 1968 and in need of improvements.

Significant project tasks that have occurred over the past month:

1. Demolished existing wall tiles, drop ceiling, door, electrical, and lockers in East Building
2. Installed new electrical, plumbing, and drywall in East Building (all building inspections passed)
3. Installed new metal laboratory casework
4. Began preliminary demolition of Mezzanine level then performed abatement of existing previously identified hazardous materials.
5. Removed existing interior masonry walls on the Mezzanine level

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$667,777.00
Revised Contract Amount		N/A
Total Spent to Date	Pay Apps #1-3	\$118,618.20
Remaining Budget		\$549,158.80



Figure 6 – Demo and partial new construction of East Building lab



Figure 7 – Demolition of ex. office area on Mezzanine level



Figure 8 – Before demolition of Mezzanine level



Figure 9 – Full demolition of Mezzanine level

MACOMB COUNTY PUBLIC WORKS OFFICE



CANDICE S. MILLER

MACOMB COUNTY PUBLIC WORKS COMMISSIONER

Martin In-System Storage Project

Presented on: March 8, 2021

WWMP Goals

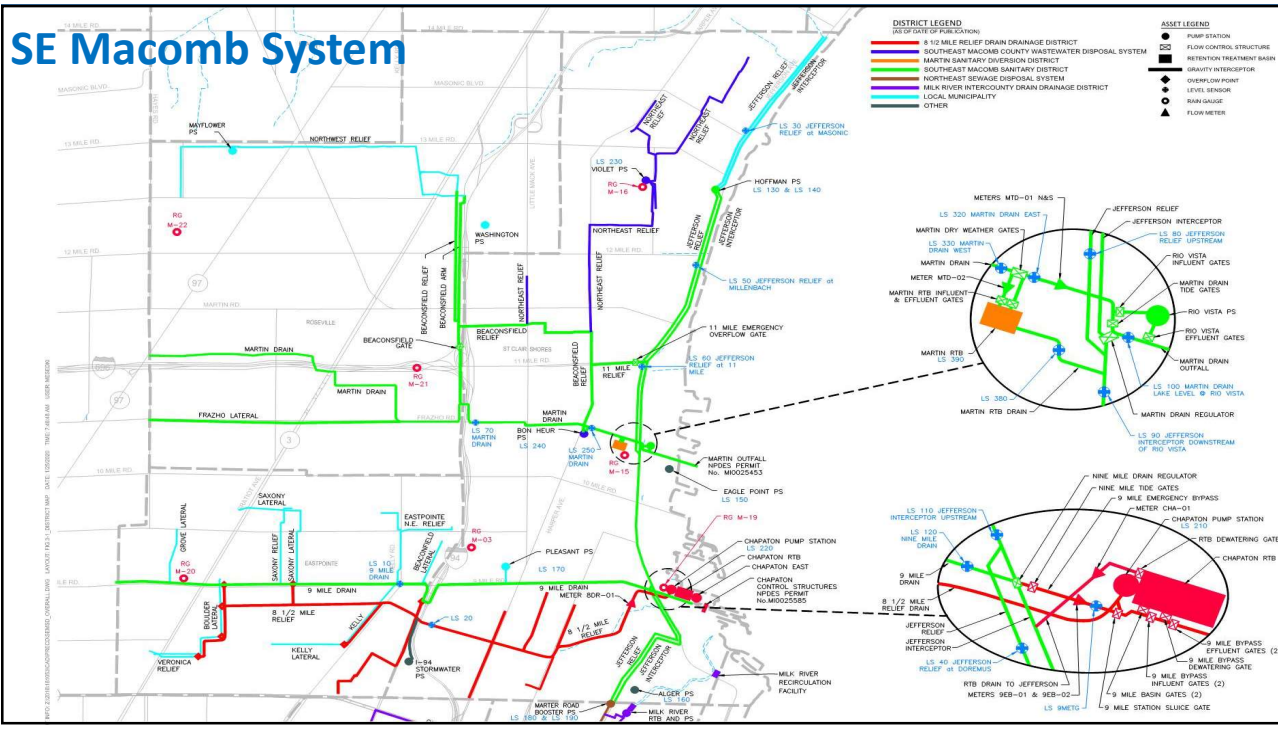
Candice S. Miller

Macomb County Public Works Commissioner



1. Reduce CSO's and improve the water quality in Lake St. Clair.
2. Maximize the use of existing infrastructure.
3. Optimize and coordinate existing and future system operations.
4. Develop a functional, cost-effective, and flexible CIP.





Overflow History

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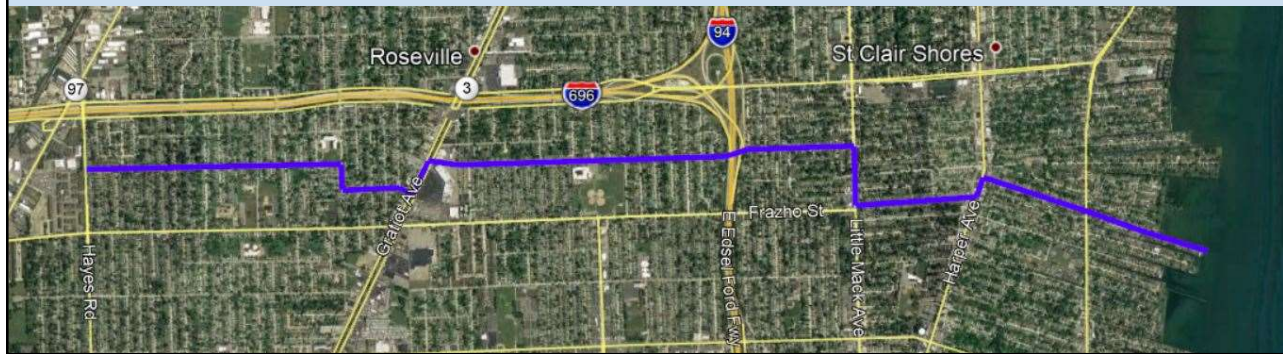
Year	Chapaton RTB		Martin RTB	
	Number of Discharges	Overflow Volume (MG)	Number of Discharges	Overflow Volume (MG)
2008	8	818	9	426
2009	6	469	11	566
2010	5	248	2	64
2011	16	1,251	17	1,033
2012	2	64	3	107
2013	7	299	7	375
2014	9	574	6	351
2015	7	273	8	231
2016	7	496	10	525
2017	5	254	7	327
2018	8	588	10	696
2019	5	294	6	298
2020	7	174.7	8	302.9
Average	7	446	8	408
Total	92	5,803	104	5,302

Martin Sewer Separation

Candice S. Miller
Macomb County Public Works Commissioner



- 750 acres of combined sewers area in Martin System
- Looked at sending storm flow to the Stephens Relief Drain or the 11 ½ Mile Relief Drain but no capacity available
- Only Option is to construct 5 miles of new storm sewer from Hayes Rd to the Lake. (7 to 9 ft in diameter)
- **Cost: \$140 million.** CSO Events estimate to be eliminated 11-17% and does not include local sewer separation
- **Not a Cost-Effective Option**



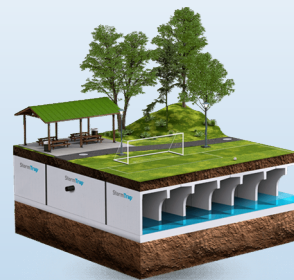
Treated CSO Reduction – Increase Storage

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Macomb County Public Works Commissioner



Martin System Additional Storage Option 1

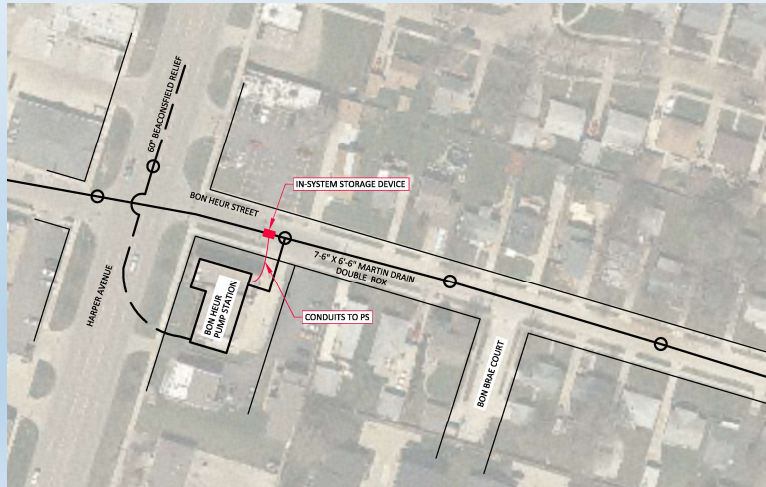
- Huron Park EQ Basin
- Provides 25 MG of Storage at Huron Park EQ Basin
- Eliminates CSO for 1 year, 24 hr Design Storm
- **Cost: \$163 Million**





Martin Drain In-System Storage Device (ISD) Option 2

- 2 ISD's on Martin Drain double box near Harper & Bon Heur
- Utilize Bon Heur Pump Station building for system controls to save cost
- Provides 5.2 MG of Storage in Martin Drain
- 20% reduction in annual overflow volume
- **Conceptual Cost: \$5 Million Total**



**Macomb 8 ½ Mile Drain:
In-System Storage Devices**

Projected Project Costs

Candice S. Miller
Macomb County Public Works Commissioner



	In-System Storage
Estimated Project Costs	\$5,000,000
Funds Already Raised*	(\$1,000,000)
Net Project Costs to Finance	\$4,000,000
Estimated Annual Debt Financing Cost (20-year 1.875% SRF Bond)	\$250,000
Current Budgeted One-Time Costs Dropping Off Next Year	\$510,000

*SEMSD has committed \$1,000,000 for this project.

- Attempted to secure Section 219 USACE funding but were denied.
- Started the SRF Loan process and will be submitting a project plan by 6/1/21.

Apportionment of Martin Costs
St. Clair Shores = 21.91%
Roseville = 78.09%

**There is also other Chapter 20 debt (Lake St. Clair Clean Water Initiative Bonds) expiring in 2022 which will save Roseville \$521,000 and St. Clair Shores \$1.6 million in payments annually.

Next Steps

Candice S. Miller
Macomb County Public Works Commissioner



1. Started the SRF Loan process and will be submitting a project plan by 6/1/21
 - a. Attempting to secure funding from the State \$500 million infrastructure package
2. MCPWO to put together a design Request for Proposal (RFP)
3. Targeting to have the RFP out by July 2021
4. Design will take approximately 1 year after award
5. Construction could start in late 2022

MARTIN SANITARY DIVERSION - 2/16/21 - 3/2/21

<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>	
Martin Sanitary Diversion Drain	Chapter 20 Roseville - 78.09% St. Clair Shores - 21.91%							
			Astorino	BPH Pump & Equipment	\$ 3,460.82	Invoice #9613 - 2.1.21	Chemical Transfer Pump - Chlorine Tanks	\$ 3,460.82
			Astorino	Colville Electric Co., LLC	\$ 977.53	Invoice #210081 - 2.4.21	Relocate Equipment - TRC Project	
			Astorino	DTE Energy	\$ 2,064.62	Invoice #R8M7H-NMZ81 - 2.17.21	Monthly Electric - 1.16.21 - 2.16.21	
			Astorino	Home Depot	\$ 540.79	Invoice #1361948 - 1.21.21	Miscellaneous Tools	
			Astorino	Wade Trim	\$ 1,001.25	Invoice #2020145 - 2.2.21	Martin RTB Disinfection Improvements	\$ 26,163.71
			Astorino	Wade Trim	\$ 1,220.04	Invoice #2020352 - 2.25.21	RTB Disinfection Administration through 2.19.21	\$ 24,943.67
			Astorino	Weiss Construction	\$ 20,204.10	Invoice #PAY EST #3 - 1.28.21	RTB Disinfection Improvements - 2.1.21 - 2.28.21	\$ 860,115.77
Total			\$ 29,469.15					

YTD Budget

Fund: Martin Sanitary Diversion

As of Fiscal Period: Oct 1, 2020-Feb 28, 2021(42%)

DESCRIPTION	2021 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
Investment Inc-Interest	4,500		279	4,221	6.2%
Reimb-Local Communities	920,550		460,275	460,275	50.0%
PY Revenue-Fund Balance	611,175			611,175	0.0%
<i>Total Revenue Accounts</i>	1,536,225	-	460,554	1,075,671	30.0%
EXPENSE ACCOUNTS					
Application/Permit Fee	6,000			6,000	0.0%
Dues, Training, Conf, Subs.	2,560			2,560	0.0%
Engineering					
-As Needed Engineering	18,725			18,725	0.0%
-Misc Sewer Repairs	20,000				
- Disinfection System Replacement	175,000		16,448	158,552	9.4%
-CCTV of Dewatering Line and Influent and Effluent Boxes	25,000		17,178	7,822	68.7%
-Design Flushing System Upgrades & First Flush Capture	865,000			865,000	0.0%
-Replace Drain Gate Hydraulic Accumulator ⁽¹⁾	-		11,036	(11,036)	100.0%
-Design Basin Equipment Hatch	9,950			9,950	0.0%
New Equipment	34,000		19,620	14,380	57.7%
Operating Supplies	48,640		5,318	43,322	10.9%
Other Professional Svcs	11,000		2,389	8,611	21.7%
Personnel Services	205,200			205,200	0.0%
Repair & Maintenance	28,740		15,599	13,141	54.3%
Scada System	46,260		7,497	38,763	16.2%
Utilities	40,150		1,586	38,564	4.0%
<i>Total Expense Accounts</i>	1,536,225	-	96,671	1,419,554	6.3%

	O&M Balance 9/30/2020	O&M	Total 2/28/2021
Cash - Operating	1,123,849	363,883	1,487,732
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		460,554	460,554
Expenditures		96,671	96,671
Equity	1,123,849		1,487,732

Detail of 2020 Equity

Design Basin Equipment Hatch	9,950
Replace Drain Gate Hydraulic Accumulator ⁽¹⁾	33,844
As Needed Engineering	18,725
Design Flushing System Upgrades & First Flush Capture	375,000
CCTV of Dewatering Line & Influent and Effluent Boxes	25,000
Disinfection System Replacement	129,501
TRC Equipment	7,500
Pickup Truck	3,900
SCADA Reserves	16,913
Capital Reserves	503,516