

Miller
Santo
Haugh

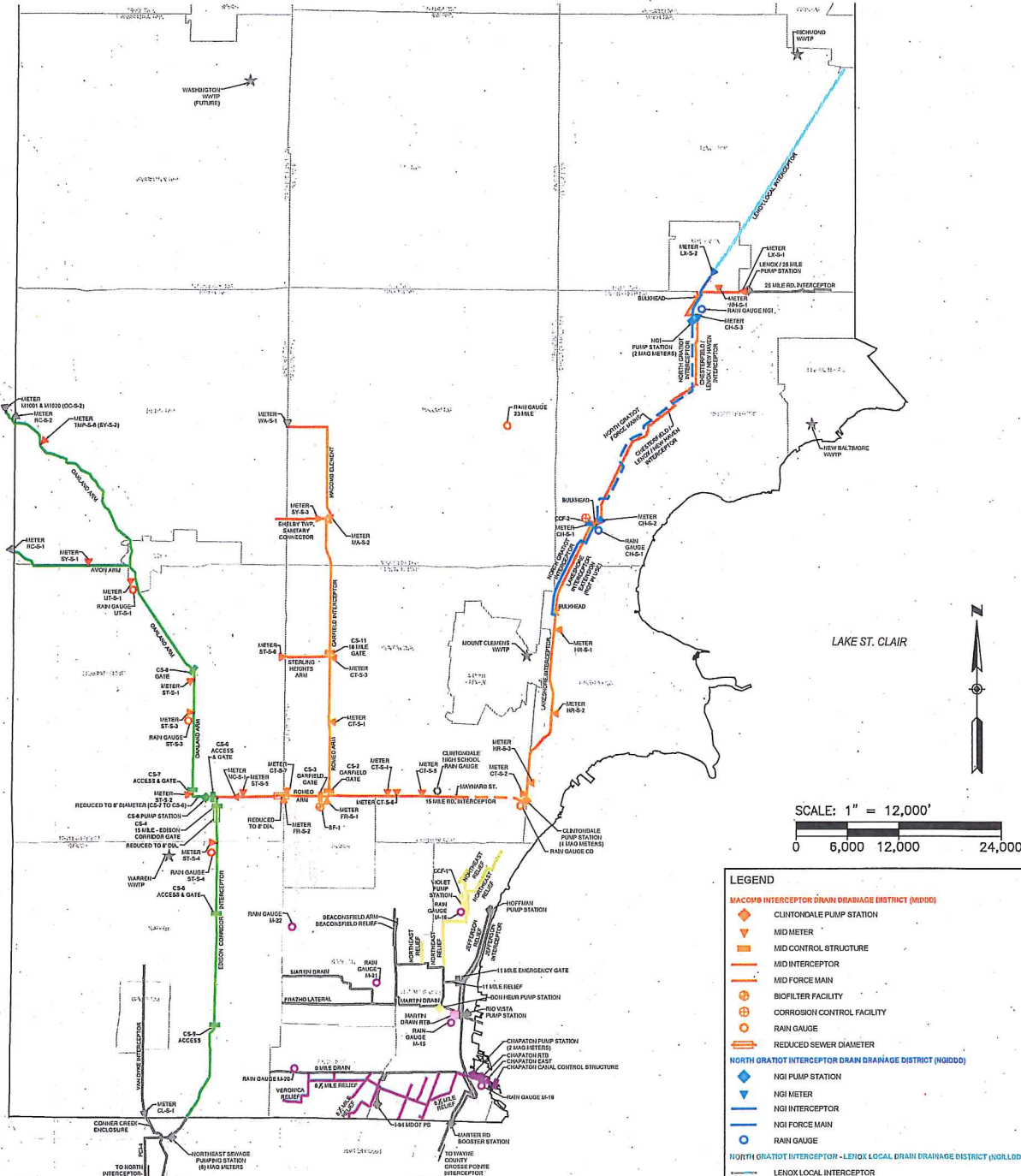
MARTIN SANITARY DIVERSION DRAIN
INTRA-COUNTY DRAINAGE BOARD
JANUARY 11, 2021
10:15 A.M.
AGENDA

NOTE: THIS MEETING WILL BE HELD BY TELECONFERENCE

Call in Number: 1-931-622-9061
Access Code: 296 407 544

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for January 11, 2021	
3. Approval of Minutes for December 14, 2020	3
4. Public Participation	
5. Project Update – Vince Astorino	
6. Martin Flushing System Design Recommendation – Vince Astorino	5
Motion: To approve the proposal from Fishbeck and AEW for the design of the Martin Flushing System at a not to exceed cost of \$69,960.	
7. Consideration for approval of invoices (see attached)	11
8. Financial Report – Bruce Manning	12
9. Adjourn	

MACOMB COUNTY WASTEWATER SYSTEMS



SCALE: 1" = 12,000'
0 6,000 12,000 24,000

- LEGEND**
- ◆ MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (MDDD)
 - ◆ CLINTONDALE PUMP STATION
 - ▽ MID METER
 - ▽ MID CONTROL STRUCTURE
 - MID INTERCEPTOR
 - MID FORCE MAIN
 - ⊕ BIOFILTER FACILITY
 - ⊕ CORROSION CONTROL FACILITY
 - RAIN GAUGE
 - ▬ REDUCED SEWER DIAMETER
 - ◆ NORTH GRATIOT INTERCEPTOR DRAIN DRAINAGE DISTRICT (NGIDD)
 - ◆ NGI PUMP STATION
 - ▽ NGI METER
 - ▽ NGI INTERCEPTOR
 - NGI FORCE MAIN
 - RAIN GAUGE
 - ◆ NORTH GRATIOT INTERCEPTOR - LENOX LOCAL DRAIN DRAINAGE DISTRICT (NGLLDD)
 - LENOX LOCAL INTERCEPTOR
 - ◆ OAKLAND-MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (OMIDD)
 - ◆ CS-6 PUMP STATION
 - ▽ OMID METER
 - ▽ OMID CONTROL STRUCTURE
 - OMID INTERCEPTOR
 - ▬ REDUCED SEWER DIAMETER
 - ◆ 1/2 MILE RELIEF DRAIN DRAINAGE DISTRICT
 - ◆ CHAPATON WEST PUMP STATION
 - ▽ CHAPATON RETENTION TREATMENT BASIN
 - ▽ CHAPATON CANAL CONTROL GATE
 - 1/2 MILE INTERCEPTOR
 - RAIN GAUGE
 - ◆ MARTIN SANITARY DIVERSION DRAINAGE DISTRICT (MSDD)
 - ◆ MARTIN DRAIN RETENTION TREATMENT BASIN
 - OTHER SYSTEMS**
 - ◆ PUMP STATION
 - ▽ METER
 - ★ WWTP
 - INTERCEPTOR

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 December 14, 2020, at 10:11 A.M.

PRESENT: Candice S. Miller, Chair
Location: Harrison Township, MI

Harold Haugh, Member
Location: Roseville, MI

Bryan Santo, Member
Location: Mt. Clemens, MI

ALSO PRESENT: Robert Mijac, Rob Leonetti, Macomb County Board of Commissioners; Board of Commissioner Elect Don VanSyckel; Brian Baker, Chief Deputy, Karen Czernel, Deputy, Stephen Downing, Construction & Maintenance Manager, Bruce Manning, Financial Manager, Tom Stockel, Construction Engineer, Jeff Bednar P.E., Environmental Resources Manager, Vince Astorino, Operations & Flow Manager, Kellie Kource, Drain Account Specialist, Emily Engelmann, Administrative Assistant, Macomb County Public Works; Sebastian Previti, Patrick Meagher, Washington Township; Sydney Hilgendorf, Sterling Heights; Bob Gorski

The meeting was called to order by the Chair, Candice S. Miller. 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 November 9, 2020 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 will mobilize in January 2021. The real time TRC pilot from Chapaton will be mobilized at Martin soon. The design for the flushing system should be brought to the board in January 2021.

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

Mr. Astorino updated the board that every 3 years we have some type of inspection in the system. This year will be one of our biggest inspection years at approximately 26 miles of pipe through multiple systems. We received many bids and Doetsch came back at a price that was way under budget for a large savings. We are very confident in their work, and would like to proceed with them.

A motion was made by Mr. Haugh, supported by Mr. Santo to award the bid from Doetsch Environmental Services in the total amount of \$421,254.75 to perform the work associated with the 2020 Interceptor Inspection Program (Martin Drain costs of \$8,703).

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$59,864.50 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 10:20 a.m.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

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 December 14, 2020 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.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

DATED: 12/14/20



Candice S. Miller

Public Works Commissioner
Macomb County

To: Martin Sanitary Diversion Drainage District (MSDDD) Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

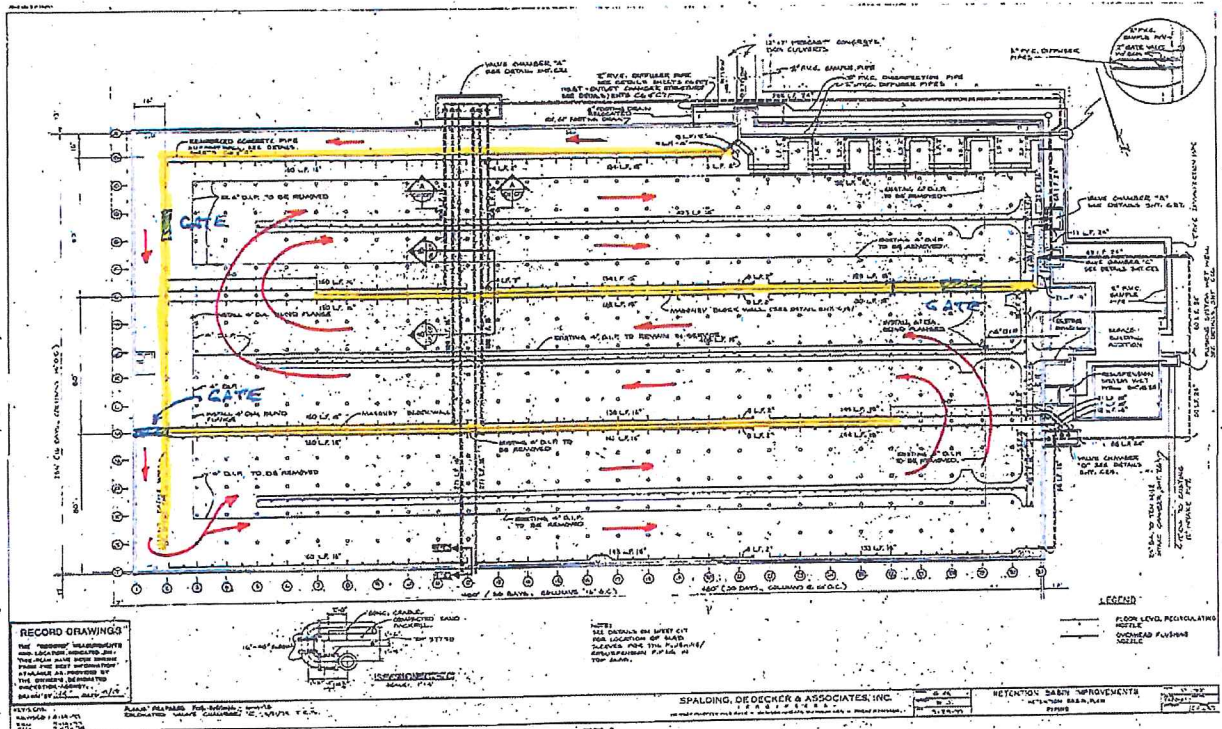
Date: January 11, 2021

Subject: Martin Flushing System Design Recommendation

Macomb County Public Works Office (MCPWO), on behalf of the Martin Sanitary Diversion Drainage District, has developed a plan to retrofit the existing flushing system at the Martin Retention Basin (RTB). In 2005, the existing Martin flushing system which utilized the 10 Mile Drain water to be pumped into the facility through multiple zones was abandoned due to PCB's being identified within that drain. In 2015, a confined space entry was performed in the Martin RTB and it was found that the lack of any flushing being performed since 2008, which was the last documented time that the RTB was cleaned, had caused up to approximately 12 inches of sludge to build up. This accumulated debris reduced the storage volume by approximately 1 million gallons and contributed to water quality values that were on the border of being poor to be sent to the lake.

In 2015, MCPWO worked with Anderson, Eckstein, and Westrick, Inc. (AEW) to evaluate several options to correct the flushing system at this facility. The top option that was selected to be evaluated further was a concept that would use the dry weather flow already in the system. Below in Figure 1 you will see a layout of how this pilot study would be built. This would be accomplished by closing gates in the system to store sewage and then installation of new gates within the basin to force that stored water through different zones. To test this option, a pilot study was commenced using manually controlled stop logs by MCWO staff. This pilot was a success and has since been able to keep the basin free of settled sludge build up within the RTB. Not only was this option the cheapest to construct but it will also provide significant long-term savings to the rate payers. The reason for this is that it utilizes the existing dry weather sewage within the system instead of pumping in drain/lake water that would need to be treated ultimately by GLWA.

Figure 1 - Pilot Study Layout for Temporary Stop Logs



Since the pilot project for this was such a success, MCPWO would like to move forward with turning the temporary setup into a permanent solution. This will require installing either hydraulic or electric actuated gates and then incorporating everything into the MCPWO SCADA system. MCPWO has been budgeting for this work during the past two fiscal years and has reached a point where design and construction can be funded. There is currently \$865,000 set aside for this complete project.

MCPWO has reached out to the approved as-needed engineers for the MSDDD which are AEW and Fishbeck to request a proposal to design the permanent solution. AEW will take the lead for the design and Fishbeck will provide overall management and electric design support.

MCPWO staff is recommending to award the contract to Fishbeck and AEW in the total amount of \$69,960 to perform the work associated with the Martin Flushing System Design. AEW came up with the initial idea for this work and the MCPWO staff feels confident that AEW and Fishbeck will be able to handle the design for this project. Their proposal is attached.

Attachments: Fishbeck & AEW Design Proposal - Dated January 4, 2021

January 4, 2021

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

**Proposal for As-Needed Professional Engineering Services
Martin Sanitary Diversion Drainage District Task 2.F – Martin Retention Treatment Basin Source Water for
Flushing System**

Dear Mr. Astorino:

At your request, Fishbeck and Anderson, Eckstein & Westrick, Inc. (AEW) are pleased to submit this proposal for professional engineering services as part of the Martin Sanitary Diversion Drainage District (MSDDD) As-Needed Engineering Services.

Scope of Services

While Fishbeck is the lead engineer for the As-Needed Engineering Services, AEW will take the lead in completing this Task 2.f. Fishbeck will provide overall management and electrical engineering services.

Attached is AEW's proposal to complete the design and bidding services requested. construction administration and construction inspection services are currently not part of the scope of this task.

Fishbeck's electrical scope includes one site visit to identify power and input/output (I/O) connection locations. Fishbeck will coordinate with AEW to design the electrical power and controls for the gate system designed by AEW. We understand that equipment cannot be placed above grade. Equipment located inside the basin will need to be corrosion-resistant and explosion-proof. We have assumed the existing power distribution and control systems have capacity to serve the new equipment. As part of our scope, Fishbeck staff will attend three virtual meetings with AEW and MCPWO staff.

Proposed Fees

We propose to complete the scope of services described herein on a time-and-materials basis for a not to exceed fee of Sixty-Nine Thousand Nine-Hundred Sixty Dollars (\$69,960). The estimated fees are detailed as follows:

AEW Design and Bidding Services	\$50,867.
Fishbeck PM and Electrical Services	\$16,550
Markup (5%)	<u>\$2,543</u>
Total	\$69,960

We propose to complete these services under the terms of our As-Needed Contract for MSDDD as Task 2.F.

Vincent Astorino
January 4, 2021

Fishbeck | Page 2

If you have any questions or require additional information, please contact me at 248.324.1228 or mesedki@fishbeck.com.

Sincerely,



Maria E. Sedki, PE

Vice President/Senior Civil Engineer

Attachments

By email



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

51301 Schoenherr Road, Shelby Township, MI 48315
586.726.1234 | www.aewinc.com

January 4, 2021

Maria E. Sedki, P.E.
Vice President – Senior Civil Engineer
Fishbeck
45200 Card Road, Suite 128
Macomb Township, Michigan 48044

Reference: Proposal for Professional Services
Martin Retention Treatment Basin
Source Water for Flushing System

Dear Ms. Sedki:

Anderson, Eckstein and Westrick, Inc. (AEW) is pleased to submit our proposal for improvements to the Martin Retention Treatment Basin (RTB) flushing system under the MSDDD As-Needed Task 2.f contract.

Understanding of the Project

The Martin Retention Treatment Basin is currently being flushed utilizing temporary stop logs and openings that were fabricated and installed in the inlet flow routing channel in 2017. This was part of a pilot program where the logs and openings were used to provide Macomb County a low-cost method to model an automated, actuated and gated flushing system utilizing stored Martin Drain dry weather flow. The pilot project exceeded expectations and resulted in 95% of the basin being clean down to the bare concrete.

Per our discussion, the Macomb County Public Works Office (MCPWO) would like to engage Anderson Eckstein and Westrick together with Fishbeck to design, prepare construction drawings and specifications, assist in the bidding process and contractor selection for the Martin RTB automated gate flushing system. The design will utilize the existing pilot program openings and add automated gates connected to the MCPWO SCADA system. The automated gates will allow the operators to flush each segment individually using water from the Martin Drain. This system would replace the labor-intensive manual installation of the logs and wood opening closure plates after rain events.

Services to be Provided

Design, permitting and bidding for the proposed Flushing System

1. Survey measurements of the existing conditions for engineering design.
2. Prepare construction drawings and specifications for the installation of an



Maria E. Sedki, P.E.

Page 2

automated flushing gate system.

3. Evaluate hydraulics on new inline gate(s) and weir wall.
4. Submit for permits and approvals to all local and state regulatory agencies.
5. Assist Fishbeck and the MCPWO with solicitation of competitive bids and contractor selection.

Fee for Professional Services

The attached costing spreadsheet provides a breakdown of the opinion of probable costs. The not to exceed fee for our services will be as follows:

Survey, Engineering Design, Permitting and Bidding Services \$50,867.00

We thank you and look forward to working with you on this project.

Sincerely,

Anderson, Eckstein and Westrick, Inc.

Louis J. Urban, PE
Senior Project Engineer

Scott P. Lockwood, P.E.
Executive Vice President

M:\0999\0999-0852\2021\LJU\Martin RTB Flushing Source Water LJU 010421.docx

MARTIN SANITARY DIVERSION - 12/15/20 - 1/5/21

<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	Access Interactive	\$ 1,150.68	Invoice #AI-MCPW009142020 -	SCADA Server Upgrade	
		Astorino	DTE Energy	\$ 601.83	Invoice #QZP22-T2MN2 - 11.18.20	Monthly Electric - 10.17.20 - 11.16.20	
		Astorino	JCI Jones Chemicals Inc.	\$ 4,166.98	Invoice #839280 - 11.24.20	Hypochlorite Solution - 4,616 Gallons	
		Astorino	State of MI	\$ 6,000.00	Invoice #761-10591519 - 12.1.20	NPDES Annual Permit Fee	
		Astorino	TREMCO/Weatherproofing Tech	\$ 1,236.00	Invoice #96065750 - 11.21.20	Roof Warranty	
		Astorino	Waide Trim	\$ 2,851.29	Invoice #2019680 - 12.2.20	Martin RTB Disinfection Improvements -	\$ 27,651.21
				Total		\$ 16,006.78	

YTD Budget
Fund: Martin Sanitary Diversion
As of Fiscal Period: Oct 1, 2020-Dec 31, 2020(25%)

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		8,140	166,860	4.7%
-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	-		6,936	(6,936)	100.0%
-Design Basin Equipment Hatch	9,950			9,950	0.0%
New Equipment	34,000		15,591	18,409	45.9%
Operating Supplies	48,640		4,167	44,473	8.6%
Other Professional Svcs	11,000		2,115	8,885	19.2%
Personnel Services	205,200			205,200	0.0%
Repair & Maintenance	28,740		9,641	19,099	33.5%
Scada System	46,260		362	45,898	0.8%
Utilities	40,150		1,586	38,564	4.0%
<i>Total Expense Accounts</i>	1,536,225	-	65,716	1,450,509	4.3%

	O&M Balance 9/30/2020	O&M	Total 12/31/2020
Cash - Operating	1,123,849	394,838	1,518,687
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		460,554	460,554
Expenditures		65,716	65,716
Equity	1,123,849		1,518,687

Detail of 2020 Equity

Design Basin Equipment Hatch	9,950
Replace Drain Gate Hydraulic Accumulator	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