

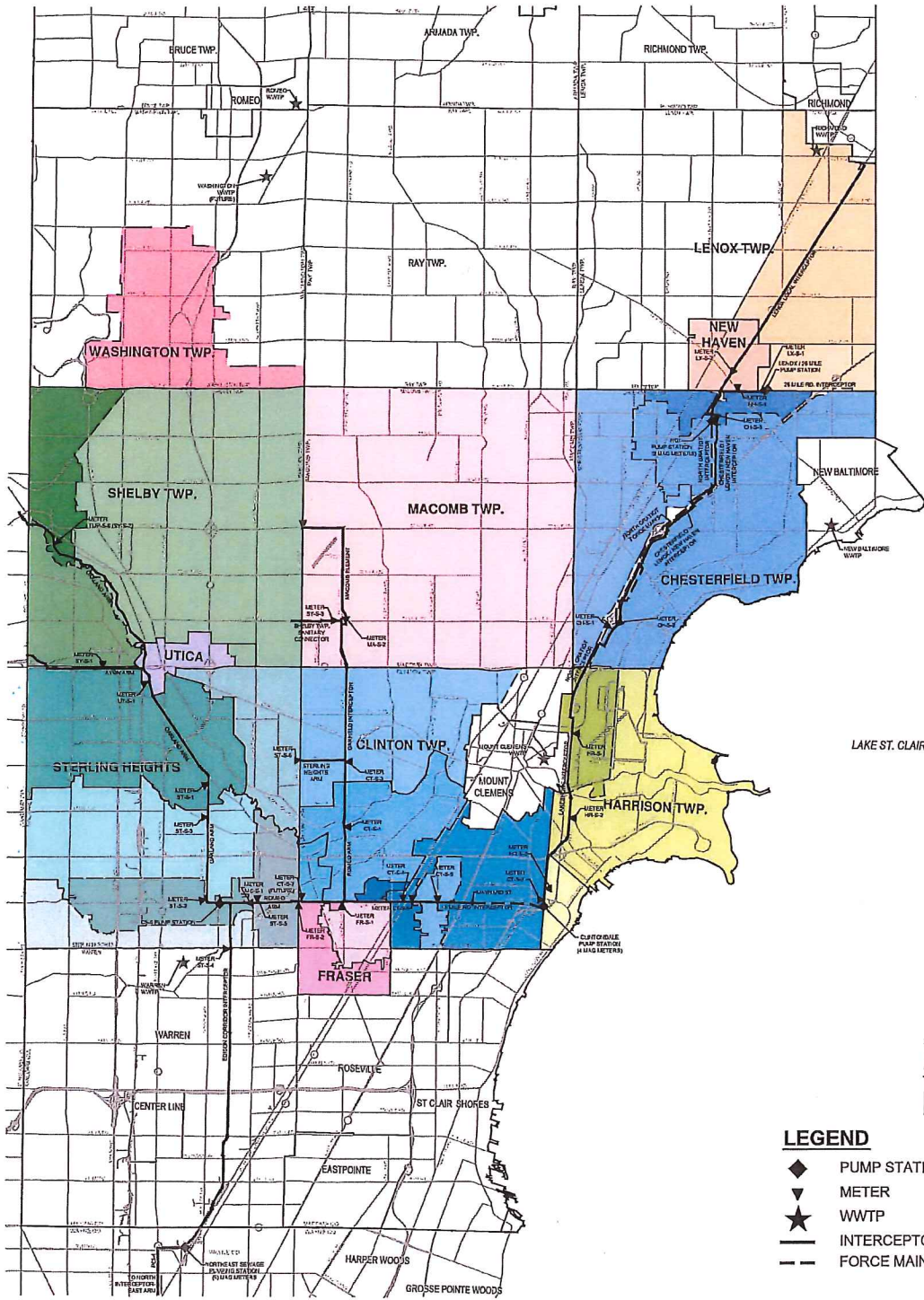
MACOMB INTERCEPTOR DRAIN
JANUARY 14, 2019
11:00 A.M.
AGENDA

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for January 14, 2019	
3. Approval of Minutes for December 10, 2018	3
4. Public participation	
5. Project Updates (Project Plan, Master Plan, Segment 5 Update, MIDD Brochure) – Vince Astorino and Steve Downing	6
6. Consideration for approval of invoices (see attached)	16
7. MIDD Financial Report – Bruce Manning	18
8. Old Business	
9. New Business	
10. Adjourn	

Next Regular Meeting

February 11, 2019 at the Office of the Macomb County Public Works Commissioner,
21777 Dunham Road, Clinton Township, Michigan 48036

MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT



Candice S. Miller
 MACOMB COUNTY PUBLIC WORKS COMMISSIONER



UPDATED: FEBRUARY 2017

An adjourned meeting of the Intra-County Drainage District for the **MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Road, Clinton Township, Michigan, on December 10, 2018 at 10:27 A.M.

PRESENT: Candice Miller, Chair
Bryan Santo, Member
Robert Mijac, Member

ALSO PRESENT: Brian Baker, Chief Deputy, Karen Czernel, Deputy, Evans Bantios, P.E., Construction and Maintenance Manager, Jeff Bednar, P.E., Environmental Resources Manager, Bruce Manning, Financial Manager, Steven Rozycki, Engineer II, Tom Stockel, Construction Engineer, Dan Heaton, Public Relations Manager, Barbara Delecke, Administrative Services, Macomb County Public Works (MCPW), Patti Dibb, Chief of Staff, Mike Keys, Legislative Assistant, Macomb County Board of Commissioners

The meeting was called to order by the Chair, Candice Miller. A motion was made by Mr. Mijac, supported by Mr. Santo to approve the agenda as presented.

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of November 19, 2018 were presented. A motion was made by Mr. Mijac and supported by Mr. Santo to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

The Master Plan is on-going and the Project Plan will be available next week. Meetings will be held with the northern communities to discuss their future needs. Mr. Bantios explained the grading system for determining the structural integrity of the pipe and operations and maintenance. Once a plan is in place for future repair and maintenance, a presentation will be given to the Board. That State approved \$60 million in SRF Loans that can be used for future repairs and maintenance.

Mr. Santo had to leave the meeting for another obligation.

A motion was made by Mr. Mijac, supported by Ms. Miller to receive and file the project updates given by Mr. Bantios.

Adopted: YEAS: 2
NAYS: 0

A motion was made by Mr. Mijac, supported by Ms. Miller to approve the Purchase Agreement for the sale of 15370 15 Mile Road and authorize Candice Miller to sign the closing documents and finalize the sale of the property.

Adopted: YEAS: 2
NAYS: 0

A motion was made by Mr. Mijac, supported by Ms. Miller to authorize the transfer of property located at 34980 Eberlein, Fraser, MI from the Macomb Interceptor Drain Drainage District to the City of Fraser and authorize Candice Miller to finalize and sign any needed documents.

Adopted: YEAS: 2
NAYS: 0

The Chair presented the invoices totaling \$9,283,296.74 to the board for review and approval.

A motion was made by Mr. Mijac, supported by Ms. Miller to approve the invoices as presented.

Adopted: YEAS: 2
NAYS: 0

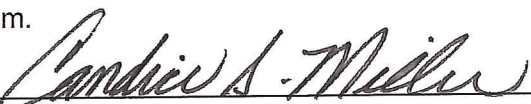
A motion to receive and file the financial report given by Mr. Manning was made by Mr. Mijac and supported by Ms. Miller.

Adopted: YEAS: 2
NAYS: 0

There being no further business, it was moved by Mr. Mijac, supported by Ms. Miller, that the meeting of the Macomb Interceptor Drain Board be adjourned.

Adopted: YEAS: 2
NAYS: 0

The meeting was adjourned at 10:50 a.m.



Candice S. Miller
Macomb County Public Works Commissioner

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage District shown on the attached set of minutes, on December 10, 2018, 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

Macomb County Public Works Commissioner

DATED: 12/11/18

9569.bd



Candice S. Miller

Public Works Commissioner
Macomb County

January 3, 2019

Dear Supervisor Trombly,

Have you ever wished that “they” had planned for the future a bit better? Now is our opportunity to do just that. The Macomb County Public Works Office has collected information, forecasts and plans from every community in the county as part of a comprehensive master plan to deal with future infrastructure needs. This is a planning process that is long, long overdue. The need is particularly acute in our northernmost communities, where the bulk of the development is expected to take place over the next 20 to 30 years.

This master planning process has given us a great understanding of where we are today. Now it is time to use this information to sharpen our focus on the future. Fundamental to our planning process is the belief that the best plan comes from the local level. Our intention is to gather the decision-makers from each of the northern tier communities and facilitate a discussion to ask questions about how sewer services should be expanded to the north in the future – or not. Would a new multi-community sewer district make the most sense? Is there benefit for some of the northern communities to join in to the MIDD, which serves central Macomb County? Should the county be involved in this process, or would the communities prefer to go it alone? Ultimately the question is really where are we going and how best do we get there?

Thank you for the input your team has provided to our office as we have gotten this process started. The next step is for us all to hear from each other. To that end, I would like to invite you, members of your board, public works staff, engineering consultant and/or other appropriate personnel to join us at a discussion meeting at 4 p.m. Thursday, Jan. 17, at the Lenox Township Hall, 63775 Gratiot Avenue. The following communities are invited to this meeting:

- Armada
- Armada Township
- Bruce Township
- Lenox Township
- Memphis
- Ray Township
- Richmond
- Richmond Township
- Romeo
- Washington Township

At the meeting, we will review the survey inputs we received from each of the communities, gauge interest in some of the possibilities listed above and hear your ideas about alternatives. Ultimately, we hope to emerge with a solid roadmap to guide our paths forward.

OFFICE LOCATION: 21777 Dunham Road, Clinton Township, Michigan 48036 • Phone: 586-469-5325 • Fax: 586-469-5933
ENGINEERING • Phone: 586-469-5910 • Fax: 586-469-7693 ♦ **SOIL EROSION** • Phone: 586-469-5327 • Fax 586-307-8264

I believe Macomb County is the best place in the world to live, raise a family and have a career. Working together, we can maintain and enhance the standard that we have worked so hard to achieve. I look forward to seeing you on Jan. 17.

Of course, as always, if you have any questions or comments, please feel free to contact my office directly at 586-469-6101.

Sincerely,



Candice S. Miller
Macomb County Public Works Commissioner

AGENDA

PROJECT: MIDD - Wastewater Master Plan

PROJECT NO. 181052

SUBJECT: Meeting with Northern Communities

MEETING DATE: 4 p.m. Jan. 17

1. COMMISSIONER INTRODUCTIONS

- a. MCPWO Staff
- b. WWMP Team

2. PURPOSE OF WASTEWATER MASTER PLAN

- a. Commissioner's Vision
- b. Overall Scope

3. PROGRESS TO DATE

- a. Community Surveys
- b. Our Interpretation of the Survey Results

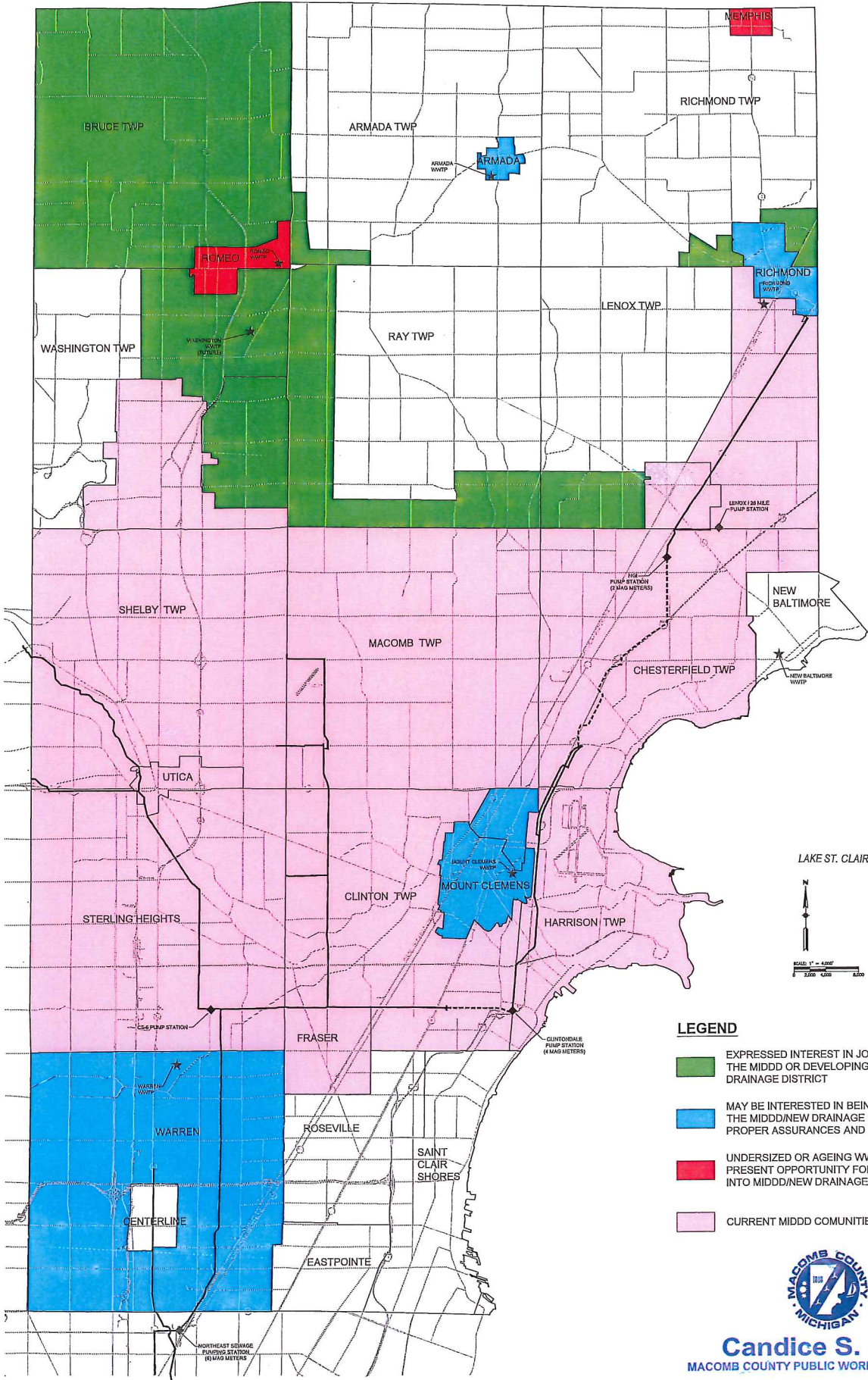
4. REASON FOR MEETING

- a. Thank you for Completing the Survey.
- b. Did we capture the information from the Surveys correctly?
- c. If community is interested (no formal acceptance), please verify:
 - How much capacity is requested?
 - When is it needed (today thru 2045)?

5. NEXT STEPS

- a. Need any missing information in the next 2 weeks
- b. Based on the information we receive, we will develop options for providing service and associated preliminary costs.
- c. Meet again to review the options.

MACOMB COUNTY WASTEWATER METER DISTRICTS



LAKE ST. CLAIR



LEGEND

- EXPRESSED INTEREST IN JOINING THE MIDD OR DEVELOPING NEW DRAINAGE DISTRICT
- MAY BE INTERESTED IN BEING PART OF THE MIDD/NEW DRAINAGE DISTRICT WITH PROPER ASSURANCES AND PROTECTIONS
- UNDERSIZED OR AGEING WWTP THAT MAY PRESENT OPPORTUNITY FOR FUTURE INCLUSION INTO MIDD/NEW DRAINAGE DISTRICT
- CURRENT MIDD COMMUNITIES



Candice S. Miller
MACOMB COUNTY PUBLIC WORKS COMMISSIONER



2019 Report to the MIDD Communities

Macomb Interceptor Drain Drainage District
Candice S. Miller, Macomb County Public Works Commissioner

15 Mile Interceptor Forensic Report & Insurance Claim

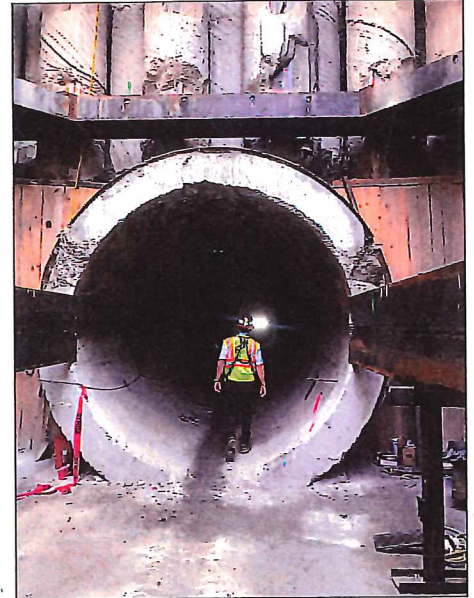
MCPWO hired an independent, outside engineering firm, Dr. Gary Brierley from Denver, Colorado, to conduct a forensic study of the 15 Mile Road pipe and the cause of the Christmas Eve 2016 collapse. What our expert found was that the 2016 collapse was completely different than either the 1978 or 2004 collapse. With his analysis, we have concluded that the collapse was caused by contractor error on the Oakland Macomb Interceptor Drain (OMID), which is downstream from the 15 Mile Road interceptor.

A contractor operating the OMID, on multiple occasions, opened internal gates in the system too quickly, causing a water hammer to form. This water hammer caused enormous spikes in the internal pressure in the 15 Mile Road pipe, directly and ultimately leading to

the Christmas Eve collapse. The errors happened during a series of construction projects on the OMID. During this construction, at least three different contractors were involved, each of which carries insurance on its work. Further, OMID carried insurance on the work and the system.

We have therefore taken the first step in filing a claim against these contractors and OMID, which has been turned over to their insurance carriers. You may recall that there was no separate insurance policy on the MIDD itself. We are seeking repayment in excess of \$70 million, the final cost of repairs on the 15 Mile Road collapse.

As your public works commissioner, I believe it is my duty to bring this claim to protect the financial interests of the rate payers in the 11



MIDD communities. This claim has been sent and we will keep you apprised on the progress.

The **Macomb Interceptor Drain Drainage District** is governed by Chapter 20 of the Michigan Drain Code of 1956.

The MIDD board members are:

Candice S. Miller,
MCPWO

Robert Mijac,
Macomb County
Commissioner

Bryan Santo,
designee of County
Executive Mark
Hackel.

The MCPWO serves as the agent of board in managing operations.

SAW Grants support MIDD Repair Projects

We received a \$2.4 million SAW grant to inspect the MIDD system which commenced in 2017. We have completed the CCTV inspection of the Romeo Arm, Garfield, 15 Mile Road and Lakeshore Interceptors totaling over 17 miles. The remaining portion of the MIDD (Shelby Connector, Macomb Element and Sterling Heights Arm) was inspected earlier and repairs were made on portions of the Macomb Element and Sterling Heights Arm in 2016. Inspection of the manhole structures will be done soon. A final report will be submitted to the MDEQ this year.

As part of the SAW grant, we are evaluating repair options including several observed Grade 4 and 5 defects. We are conducting a value engineering project to evaluate and identify the cost vs. benefit to line vs. grout portions of the system. The lining option will have a significantly higher initial cost, but will greatly increase the longevity of the sewer. The spot repairs will have a lower initial cost, but will require more ongoing maintenance. Additional information

In the MIDD

The MIDD communities are: **Fraser, New Haven, Sterling Heights, Utica and Chesterfield, Clinton, Harrison, Lenox, Macomb, Shelby and Washington Townships.**

on probable construction cost for both options will be made available in the near future and MIDD communities will be involved in the decision. The sale of the M-59 property, the OMID insurance claim, as well as low-cost SRF funding will help to lower the overall financial impact.

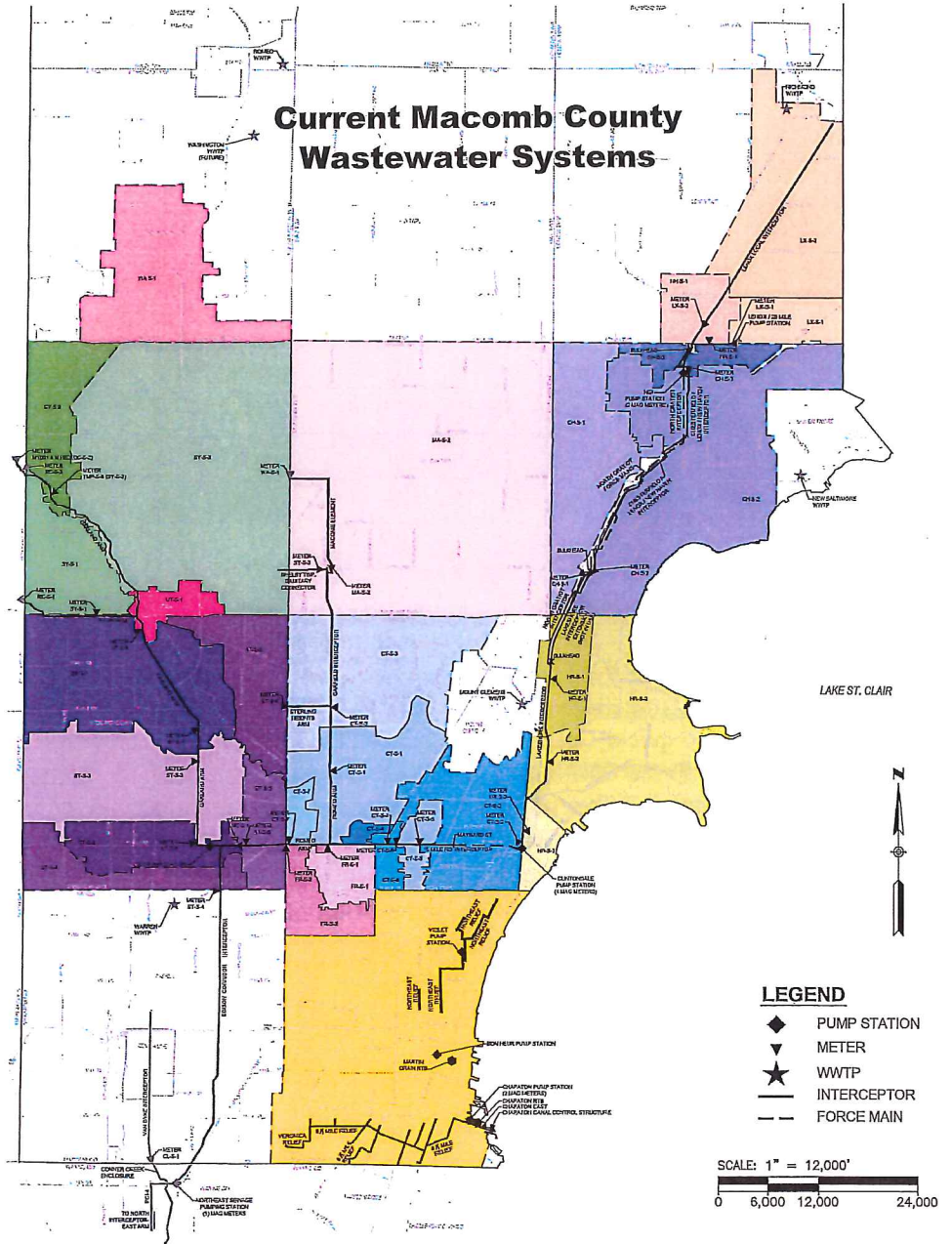
This office also obtained a SAW grant to inspect 21 drop shaft structures which connect the local sewer systems to the MIDD interceptor. We funded and are currently designing repairs at six of the most critical structures in need of rehabilitation. The design for these will be complete in the next few months with construction to start this year.

MCPWO leads sewer infrastructure master plan

This office is currently analyzing survey data submitted by each community as part of a new County-wide Sewer Master Plan. Our underground infrastructure is a critical component of both current and potential future economic activity and is a foundational part of our responsibility to protect our environment. This new master plan will allow the MCPWO to analyze our system as a whole, to improve operating efficiency, maximize capital projects, and enhance the level of service to current and future residents.

This plan will not only assess current needs of our communities, but will consider potential future growth as well. Infrastructure condition, project planning, and operational improvement all play a part in how best to maintain or provide sanitary service to the Macomb County communities. This master plan will allow the MCPWO to take a comprehensive look at reducing combined sewer overflows (CSO's), which will result in improvements to the water quality in Lake St. Clair and our Great Lakes as a whole.

This plan will allow us to best serve our communities by ensuring we have the infrastructure necessary to continue to enhance the quality of life we all enjoy here in Macomb County and to serve as the critical component necessary to economic prosperity for the future.



Forecast for Oakland-Macomb Interceptor District

The Oakland Macomb Interceptor District (OMID) is working on an agreement with the Great Lakes Water Authority (GLWA) to assume responsibility for needed improvements and maintenance of the Northeast Pump Station (NEPS) and a portion of the downstream North Interceptor - East Arm (NIEA).

These facilities transport sanitary flow from OMID only and GLWA bills

OMID 100% of the costs. OMID can better maintain and make the need repairs to these facilities (\$70 million over the next several years) at a lower cost to the 11 Macomb and 12 Oakland County communities.

OMID is also starting the process of amending its district boundaries to include these facilities.

The petitions submitted by two communities (Sterling Heights &

Waterford) are the first step towards this process with the eventual apportionment and financing of the improvements.

The state mandated drain petition process requires an augmented drain board with the OMID Board (Mike Gregg State, Candice Miller & Jim Nash Oakland) and the County Board

Continued on next page

Great Lakes Water Authority remains work in progress

MACOMB UPDATE

Macomb's representative on the GLWA is also a Public Works employee, deputy commissioner Brian Baker, who was appointed to the GLWA board by Macomb County Executive Mark Hackel. Baker's duties on the board allows this office to have a direct impact on water and sewer wholesale issues for our Macomb communities. GLWA has now been in operation for three years. Unfortunately, GLWA has not yet achieved the promised savings to offset the annual \$50 million lease payment, though charge increases have lessened primarily due to savings from refinancing debt.

GLWA has built up over \$400 million in reserves for needed future improvements due in part to delays in implementing capital projects. GLWA has consistently come in under budget which has also allowed it to build up reserves to offset high debt levels.

While overall charge increases have lessened, there is still rate variability among customers. All water contracts now have the same reopener period which should lessen future variability. On the sewer side, this office continues to push for charges that incentivize customers to tighten their systems and reward those who hold back wet weather flows to lessen regional discharges. Unfortunately, past sewer rate changes have not benefitted suburban customers and act as a disincentive to reduce flows to the treatment plant. In light of the ongoing GLWA sewer master plan, we believe peaking or storage should be a cost factor.

We further want a system that incentivizes regional efficiencies and leverages existing infrastructure to save the region from future costly GLWA CSO investments. We continue to seek charges that encourage investments and

operations that improve water quality and promotes the storing and hold back of flow to lessen overall CSO's. We also continue to review that GLWA assets are in the correct cost buckets to ensure promised equitable charges.

We also continue to make sure Detroit pays its fair share. Detroit owes GLWA \$55 million as DWSD under budgeted their sewer costs the past two years. We are making sure GLWA is paid back with interest. Further, GLWA is in arbitration with Detroit to determine who pays the maintenance of certain sized water mains. When the lease was signed in late 2015, dividing ownership of water mains in the City was in-precise. To reach a deal, water mains

larger than 24" would be operated by GLWA, smaller mains would remain with the local Detroit system. A hydraulic study has now concluded many of these mains are only used by the City. GLWA is spending \$4 million per year on maintenance of these mains that instead should be paid by DWSD. Since 2016, GLWA is owed \$12 million from DWSD for these mains and the matter is now in arbitration as required by the lease.

Macomb is working with GLWA to modify the Water Residential Assistance Program (WRAP) to increase suburban utilization. The suburbs have not fully spent their WRAP allocations leading to Detroit and Flint taking the unspent funds. Macomb is proposing each County have the option to remove the 2-year limit for low-income seniors or disabled, increased bill assistance for those not eligible for bill arrearage payments, reduce program complexities for the local communities who help process the customers, and allocate funds for direct mailers to low income residents. These program changes will be discussed over the next several months.



OMID forecast...

Chair and Finance Chair from each County.

Each community will receive notices of the public meetings occurring over the next several months. Most importantly, it is expected that OMID will save several million dollars per year in lower GLWA charges and \$1 million per year in bond financing costs as a result of the agreement.

Needed OMID Improvements

- NEPS - Bio-Trickling Filter and HVAC Upgrades – Estimated Completion September 2020
- NIEA – Rehabilitate/Line first 1,500 feet of 17' diameter pipe downstream of NEPS – Estimated Completion September 2021
- NEPS - Design, Bid & Construct New Pumps, Motors, Electrical System, Knife Gates – Estimated Completion June 2022
- NIEA - Rehabilitate/Seal Leaks remaining 33,900 feet – Estimated Completion October 2022

SCADA Service Sharing

Public Works has upgraded and invested in expandable SCADA (Supervisory Control And Data Acquisition) technology that allows our staff to remotely control and manage our wastewater and storm water system assets. We are currently developing a service sharing plan that will allow us to share our scalable technology and host this service for communities in the county.

By partnering with the County, this plan can save communities tens of thousands of dollars in expensive SCADA upgrade fees as well as lower operating costs, saving communities 30%-40%.

Several Macomb County communities have already expressed interest in partnering with MCPWO to handle their SCADA operations at a cost savings. If your community would like to explore this possibility, please contact vincent.astorino@macombgov.org



NGI SAVINGS: Upon taking office, Commissioner Miller scrapped a proposed \$5 million upgrade to the North Gratiot Pump Station, part of the MIDD system located in Chesterfield Township. She charged her engineers to go back to the drawing board to find a more cost-acceptable solution to the buildup of sewer gas in the line in that area that was causing underground pipes to slowly degrade — not a danger for today, but a problem that needed a long-term solution. The team came up with a solution to alternate the use of two interceptors in the area and to add a small trickle of chemical reagent to reduce the naturally-occurring sewer gas. The new cost: about \$450,000 — a savings of more than \$4.5 million!

MIDD sells surplus property for \$3.5 million; sells land for library

The Macomb County Public Works Office has received a \$3.5 million offer on a parcel of land on M-59 and Garfield Road in Macomb Township. The offer on the nearly 9-acre property was received in a public auction held by the MCPWO on Nov. 14.

The property, one of the larger vacant parcels available along M-59 in the county, has been owned by the Macomb Interceptor Drain Drainage District for about 20 years. The property was purchased by the MIDD for \$2.5 million during the construction of a sewer interceptor along Garfield

Road in the late 1990s.

With this sale, nearly \$4 million in property sales have been completed by the MCPWO since Commissioner Candice S. Miller took office in January 2017.

"We're not in the business of holding on to land and doing nothing with it for decades. My goal is to sell these excess properties, get them back on the tax roll and let them be developed in a way that benefits the community," Miller said.

The successful bidder on the M-59 property is a local private developer

who stated he plans to build luxury apartments on the parcel.

Two other properties sold by the MCPWO since Miller took office are:

- \$100,000 for a lot at the corner of 21 Mile and Sugarbush roads. That property was recently purchased by the Chesterfield Township Library Board as the site for a proposed new library.

- \$250,000 for a 4.5-acre parcel along the Hawken Drain, just west of Ryan Road, between 19 Mile and M-59 in Sterling Heights. That property is now in the process of being developed for luxury homes.

Macomb County Public Works Office Major Accomplishments, 2018



Sterling Relief:

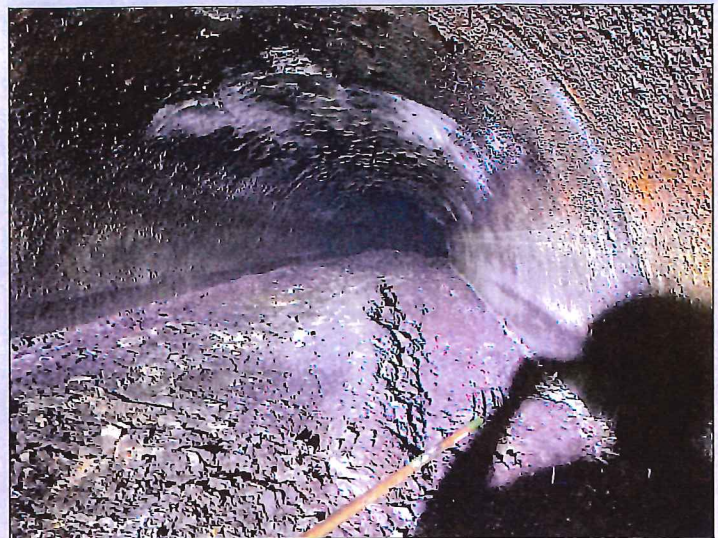
The MCPWO received grants totaling \$1.8 million from the Environmental Protection Agency and the National Fish & Wildlife Fund for a major green infrastructure project on the Sterling Relief Drain, to begin work in December 2018. This project will improve flood control and greatly beautify the drain property, enhancing the quality of life along the drain. As part of the project, plants that will create a “butterfly flyway” will be planted along the drain. About 5,000 trees, shrubs and flowering bushes will be planted in all. The work will be mostly completed in 2019.

Nature Center Partnership: A new partnership with Clinton Township to allow for improved maintenance and public awareness of the Nicholson Nature Center, located adjacent to the MCPWO office.

Fatberg removed:

A 19-ton glob of fats, oils & grease – along with diaper wipes and other solids – was discovered in the Lakeshore Interceptor under Clinton Township. The Fatberg was removed and the removal was used as a teaching opportunity to tell the public what items should not be sent down the drain.

MCPWO has worked with Wayne State University and the Michigan Science Center to secure an \$80,000 National Science Foundation grant to study ways to prevent Fatbergs and create additional public education programs.



Sinkhole Averted / SCADA Expanded: A sinkhole had begun to develop along the Murdock-Ballard Drain adjacent to Jefferson Avenue in Harrison Township. The problem was discovered after the drain and pump was added to our internal SCADA control system. Across the county, MCPWO added more than a dozen pump stations to the SCADA, allowing us to better track and monitor remote operations. This project has proven so successful, MCPWO is now working with several Macomb County municipalities that have contacted us about providing SCADA service to their local systems, an idea that is now under review.

Say hello to Ellie!

The MCPWO has been working with the Huron-Clinton Metropark Authority and other agencies to improve water quality at the beach at Lake St. Clair Metropark. We are working on improving testing protocols, eliminating pollution outfalls and reducing goose droppings on the beach. Our primary partner in this last task is Ellie, a border collie who works with the firm GooseBusters. Several times a day, Ellie chases geese off the beach, giving beach-goers a cleaner place to walk and reducing the amount of E. coli in the water at the shoreline. Thanks to Ellie and other efforts — aided in part by a relatively dry summer — the beach at Lake St. Clair Metropark was only closed three days during summer 2018.



Macomb County Public Works Office Major Accomplishments, 2018



Awards received:

In 2018, MCPWO received the national Project of the Year Award from the American Public Works Association for successful conclusion of the 15 Mile Road Sewer Interceptor Repair. This was in addition to numerous regional awards for that project, and an award for leading the federal Great Lakes Restoration Initiative-funded \$4.4 million habitat restoration and shoreline stabilization project on the Clinton River Spillway.

Master Planning:

In a move that will help define economic development and residential patterns for the next generation, MCPWO has launched a \$1.5M county-wide master plan process for sanitary sewer needs. All 27 Macomb County communities have provided input and discussions are ongoing on what steps come next.

We Find It, We Fix It: Thanks to a citizen's report of an odor and sheen on the Red Run Drain, we discovered a commercial/industrial building in Warren that was sending its sanitary sewer flows in to the underground Schoenherr Relief storm drain. Working with the City of Warren, the business owner corrected the problem. To further this effort throughout the county, we have contracted with a firm that utilized E. Coli-sniffing dogs to help us locate further potential illicit connections.



Public Works Commissioner Candice S. Miller and County Commissioner Rob Leonetti at the Chapaton Retention Basin in St. Clair Shores.

CSO Reduction:

MCPWO is moving forward on a plan that will eliminate more than 70 percent of combined sewer overflows at the Chapaton Retention Basin in St. Clair Shores, greatly improving Lake St. Clair water quality. Construction on this project could begin in late 2019, bringing a transformational change in our relationship with the lake.

Drain match program

Utilizing \$75,000 in funding from the Board of Commissioners, MCPWO provided a 50-50 match grant to any Macomb County city, village or township that had a particular drain that need-



ed maintenance work. Under the program two dozen drains in 10 communities were serviced. The program was in such demand, that the BOC has approved \$100,000 for 2019.

"Ultimately, every initiative our office engages in has one goal: to improve water quality."



- Candice S. Miller
Macomb County Public Works Commissioner

MACOMB INTERCEPTOR DRAIN - 1/14/19

Funding Source	Apporntionment	Manager	Vendor	Amount	Invoices Detail	Project Summary	Project Balance
Macomb Interceptor Drain	Administration						
	Chapter 20						
	Chesterfield - 6.9899%	Keskeny	Aloia & Associates, P.C.	\$ 745.75	Invoice #17867 - 11/1/18 Legal Services - ending 10/31/18	Sale of 45345 Garfield	
	Clinton - 20.9164%	Keskeny	Aloia & Associates, Inc.	\$ 722.00	Invoice #17422 - 12/1/18 Legal Services - ending 11/30/18	Iafrate Temporary Lease	
	Fraser - 4.1343%	Baker	Aloia & Associates, Inc.	\$ 1,292.00	Invoice #17986 - 12/1/18 Legal Services - ending 11/30/18	Sale of Property at 21 Mile Road & Sugarbush	
	Harrison - 5.9902%	Keskeny	Aloia & Associates, Inc.	\$ 2,356.00	Invoice #17987 - 12/1/18 Legal Services - ending 11/30/18	Sale of Property at 45345 Garfield Road	
	Lenox - 8610%	Astorino	Belle Tire	\$ 509.80	Invoice #32519693 - 12/10/18 Wastewater Services Truck - Bantios	Tires	
	Macomb - 14.5180%	Bantios	CH2M Hill Engineering, Inc.	\$ 12,753.34	Invoice #707997CH - 12/5/18 Engineering Services - 9/29/18 - 10/26/18	Odor & Corrosion Study	\$ 342,919.72
	New Haven - .8150%	Bantios	CH2M Hill Engineers, Inc.	\$ 24,012.78	Invoice #707997CH003 - 12/17/18 Engineering Services - 10/27/18 - 11/30/18	Odor & Corrosion Study	\$ 318,906.94
	Shelby - 9.9241%	Bantios	Doctor Mole Incorporated	\$ 19,917.18	Invoice #18012-04 - 11/29/18	Project Plan Review	\$ 15,428.50
	Sterling Heights - 31.2761%	Astorino	Stephen Downing	\$ 667.71	Invoice #18-640 - 12/5/18	Conference Reimbursement	
	Utica - 1.7244%	Astorino	Fishbeck, Thompson, Carr & Huber, Inc.	\$ 3,475.00	Invoice #379374 - 12/10/18 Engineering Services - ending 11/30/18	GLWA Assistance	
	Washington - 2.8507%	Astorino	Fishbeck, Thompson, Carr & Huber, Inc.	\$ 12,424.15	Invoice #379583 - 12/10/18 Engineering Services - ending 11/30/18	MIDDD WYMP	\$ 656,955.40
		Astorino	Fishbeck, Thompson, Carr & Huber, Inc.	\$ 13,805.05	Invoice #379693 - 12/10/18 Engineering Services - ending 11/30/18	SEMSD WYMP	\$ 380,478.90
		Astorino	Hubbell, Roth & Clark, Inc.	\$ 1,816.47	Invoice #0166497 - 12/1/18 Engineering Services - ending 12/1/18	MID Condition Assessment Task D	\$ 568,601.15
		Astorino	Johnson & Anderson	\$ 500.00	Invoice #42423 - 12/19/18 Engineering Services - ending 12/1/18	Conversion of MCMARS to Bluewater	\$ 14,487.50
		Astorino	Macomb County Dept. of Roads	\$ 1,025.72	Invoice #301125 - 11/14/18	Monthly Fuel	
		Astorino	Macomb County Dept. of Roads	\$ 640.40	Invoice #301150 - 12/10/18	Monthly Fuel	
		Astorino	METCO Consulting Services	\$ 2,263.79	Invoice #1717-02 - 12/16/18 Engineering Services - 9/3/18 - 12/2/18	Flow Control Services	\$ 66,099.92

MACOMB INTERCEPTOR DRAIN - 1/14/19

Funding Source	Apporntionment	Manager	Vendor	Amount	Invoice Detail	Project Summary	Project Balance	
Administration (Cont'd)		Astorino	City of Mount Clemens	\$ 14,473.41	Invoice #0028000073 - 11/8/18	Sewage Flow Billing - October		
		Astorino	City of Mount Clemens	\$ 13,405.77	Invoice #0028000139 - 12/6/18	Sewage Flow Billing - November		
		Bantios	Viviano Law	\$ 2,219.17	Invoice #20210 - 12/5/18 Legal Services - ending 11/30/18	General Matters		
		Bantios	Viviano Law	\$ 11,039.00	Invoice #20216 - 12/5/18 Legal Services - ending 11/30/18	General Matters		
	Clintondale P.S.		Astorino	DE-CAL, Inc.	\$ 944.00	Invoice #W018151301 - 11/29/18	Annual Testing - Backflow Preventers	
			Astorino	DE-CAL, Inc.	\$ 1,075.00	Invoice #W018250311 - 12/5/18	Replace Defective Contactors on HVAC	
			Astorino	DE-CAL, Inc.	\$ 2,941.00	Invoice #W018000914 - 12/13/18	3rd Qtr. PM on HVAC	
			Astorino	Doetsch Environmental Services	\$ 43,505.12	Invoice #70357 - 9/17/18	Fatberg Removal - Final	
			Astorino	DTE Energy	\$ 21,568.43	Monthly Electric - 11/2/18 - 12/3/18		
			Astorino	HESCO	\$ 4,640.00	Invoice #20180983 - 12/4/18	Annual Maintenance of Sluice Gates	
			Bantios	Aloia & Associates, PC	\$ 905.75	Invoice #17870 - 11/1/18 Legal Services - ending 10/31/18	Sinkhole	
			Baker	Aloia & Associates, Inc.	\$ 709.50	Invoice #17991 - 12/1/18 Legal Services - ending 11/30/18	Sterling Heights vs. MID	
	15 Mile Sinkhole		Bantios	Anderson, Eckstein & Westrick, Inc.	\$ 18,512.27	Invoice #0120094 - 12/4/18 Engineering Services - 10/15/18 - 11/11/18	Recovery Shaft	
			Bantios	Anderson, Eckstein & Westrick, Inc.	\$ 6,587.45	Invoice #0120308 - 12/18/18 Engineering Services - 11/12/18 - 12/9/18	Recovery Shaft	
		Bantios	Viviano Law	\$ 7,437.53	Invoice #20214 - 12/5/18 Legal Services - ending 11/30/18	Sinkhole		
Meters			Bantios	Anderson, Eckstein & Westrick, Inc.	\$ 17,487.75	Invoice #0119999 - 11/30/18 Engineering Services - 10/15/18 - 11/11/18	Dropshaft & Connecting Sewer Rehab	\$ 237,139.30
			Bantios	Anderson, Eckstein & Westrick, Inc.	\$ 4,563.30	Invoice #0120995 - 12/19/18 Engineering Services - 11/12/18 - 12/9/18	Dropshaft & Connecting Sewer Rehab	\$ 232,576.00
NGI			Astorino	DTE Energy	\$ 532.08	Monthly Electric - 11/20/18 - 12/20/18	16 Metering Sites	
			Astorino	HESCO	\$ 2,300.00	Invoice #10340 - 12/12/18	MID Meter Repair	
			Astorino	HESCO	\$ 15,580.00	Application #25 - 12/13/18	MID Meter Maintenance	\$ 263,520.00
			Bantios	Hubbell, Roth & Clark, Inc.	\$ 514.62	Invoice #166499 - 12/14/18 Engineering Services - ending 12/1/18	SY-S-1 Meter Rehabilitation	\$ 24.77
			Bantios	NTH Consultants, Ltd.	\$ 22,607.96	Invoice #616805 - 12/4/18 Engineering Services - ending 11/23/18	Dropshaft & Connecting Sewer Rehab	\$ 318,295.80
		Astorino	DTE Energy	\$ 1,302.20	Monthly Electric - 10/29/18 - 11/29/18			
SCADA		Astorino	J.G.M. Corporation	\$ 1,276.15	Invoice #18-12709 - 12/12/18	Service Kits/Float Sets - ARV Maintenance	\$ 42,624.75	
		Astorino	Wade Trim	\$ 12,798.75	Invoice #M2013209 - 12/3/18 Engineering Services - 10/28/18 - 11/24/18	As-needed Engineering Services Task 03 - Sluice Gates Task 06 - NGI Pump Addition		
		Astorino	Verizon	\$ 1,570.59	Invoice #9819000273 - 11/23/18	SCADA Internet Access		
Total				\$ 329,423.94				

Budget to Actual
MIDDD
As of Dec 31, 2018 = 50%

DESCRIPTION	2019 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
GLWA-OMID	52,458,900		21,607,754	30,851,146	41.2%
OMID O&M	2,391,427		996,431	1,394,996	41.7%
Reimbursements	125,000		303,064	(178,064)	242.5%
Grants/SRF Funding	500,000		40,005	459,995	8.0%
PY Revenue-Fund Balance	3,325,000			3,325,000	0.0%
Sale of Land	-		100,742	(100,742)	100.0%
Reimb-Local Communities	8,989,650		3,745,693	5,243,957	41.7%
Surplus	3,000,000			3,000,000	0.0%
Interest	30,000		103,786	(73,786)	346.0%
Total Revenue Accounts	70,819,977	-	26,897,476	43,922,502	38.0%
EXPENSE ACCOUNTS					
GLWA-OMID	52,458,900		21,868,218	30,590,682	41.7%
OMID O&M	2,391,427		996,427	1,395,000	41.7%
Public Works Wastewater Disposal Division	1,602,641		392,167	1,210,474	24.5%
Administration and Operations	288,653		156,452	132,201	54.2%
SCADA	151,626		26,622	125,004	17.6%
Engineering					
As Needed FTCH	75,000		22,386	52,614	29.8%
AS Needed CH2M	75,000		1,413	73,587	1.9%
As needed FK Engineering	75,000		15,248	59,752	20.3%
As Needed Wade Trim	75,000		23,272	51,728	31.0%
AS Needed Metco	75,000		2,264	72,736	3.0%
As Needed Applied Science	75,000			75,000	0.0%
Meter Dye Dilution Testing/As needed	100,000			100,000	0.0%
Engineering Design for MID repairs	1,000,000			1,000,000	0.0%
Drop Shaft Repairs(MA-S-2), CT-S-2, HR-S-2, ST-S-5, UT-S-1)	4,000,000			4,000,000	0.0%
SY-S-1 & SY-S-2 Meter Rehab	1,000,000		22,603	977,397	2.3%
System wide odor and corrosion study	500,000		114,984	385,016	23.0%
Lining Evaluation	-		24,861	(24,861)	100.0%
McMARS Operations	50,000		4,563	45,437	9.1%
SAW Engineering	625,000		25,613	599,387	4.1%
Bluewater	100,000			100,000	0.0%
Eng Meter Rehab Design(SYS-1 & SYS-2)	250,000			250,000	0.0%
Drop Shaft Repair	2,000,000		134,138	1,865,862	6.7%
Wastewater Master Plan/Contract Capacity	600,000		244,000	356,000	40.7%
Level Sensors/Pressure/H25	300,000			300,000	0.0%
Legal Services					
Clintondale PS O&M	400,000		80,048	319,952	20.0%
Clintondale PS O&M	550,000		142,148	407,852	25.8%
NGI O&M	371,000		60,742	310,258	16.4%
Meters O&M	330,000		76,363	253,637	23.1%
CS-3 O&M	52,000			52,000	0.0%
Biofilter O&M	304,500		5,299	299,201	1.7%
Contribution Life Cycle Reserve	171,700		85,850	85,850	50.0%
Sewage Disposal Charges - Mt. Clemens	200,000		75,353	124,647	37.7%
Debt Service - Revenue Bonds	572,530		286,265	286,265	50.0%
Total Expense Accounts	70,819,977	-	24,887,299	45,932,678	35.1%

	O&M Balance 6/30/2018	O&M	Total 12/31/2018
Cash - Operating	24,259,763	2,233,601	26,493,364
Accounts Receivable		371,863	371,863
Assets			0
Liabilities		223,425	223,425
Revenues		26,897,476	26,897,476
Expenditures		24,887,299	24,887,299
Equity*	24,259,763		26,641,802

Detail of 2018 Equity*

Projected reserve at 6/30/2018	15,675,763
Projected Engineering Reserve	3,250,000
Projected Sinkhole Surplus	4,800,000
Life Cycle Reserve	534,000
Use of surplus for 18/19	(3,000,000)

Dec 2016 Sinkhole

Revenue	75,639,952
Expenditures	71,355,168
Net	4,284,784