



MACOMB COUNTY PUBLIC WORKS 2022 REPORT

COMMISSIONER
CANDICE S. MILLER



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Critical Component of
Economic Prosperity



Our Mission

Improve
Water
Quality

Improve
Quality
of Life

Critical
Component
of Economic
Prosperity

The Macomb County Public Works Office has three goals:

improve water quality, improve the quality of life for our residents, and serve as a critical component of economic development in our community.

The MCPWO administers 474 county drains that prevent flooding in our communities.

Some of these drains are open streams or creeks, while others are massive underground structures that carry storm water away from neighborhoods and businesses. Given our responsibility for these waterways, we are actively engaged in numerous initiatives to enhance the overall water quality in our lakes and rivers, most notably the Clinton River and Lake St. Clair. In addition, we operate 68 miles of sanitary sewer lines which transport waste from more than 800,000 residents and businesses to the Great Lakes Water Authority (GLWA) Water Resource Recovery Facility (WRRF) for proper treatment.

Commissioner's Message

Dear Neighbors,

When it comes to underground infrastructure, 2022 stands to be remembered as the year in which our underground infrastructure in Macomb County received a significant boost it really needs.

We all remember the sinkhole that occurred on December 2016 on 15 Mile Road in Fraser, one week before I took office. I'm committed to doing whatever we can to prevent another such disaster from occurring. Quite frankly, we can't afford another large sinkhole. Underground infrastructure may be out of sight but cannot be out of mind.

We have repeatedly emphasized the need to invest in our storm water and waste water systems. I met with and lobbied every member of Macomb County's delegation in the Michigan Legislature and other leaders in state government, as well as our Congressional delegation. My management team and I have stressed the importance of investing in our underground infrastructure in presentations and meetings with Macomb County Executive Mark Hackel and the county Board of Commissioners.

I'm proud to say that as of this writing, the Macomb County Public Works Office has secured federal, state and county funding with a level of investment in a single year is unprecedented. It's all part of our mission at Public Works to improve water quality, quality of life and being a key component of economic development and prosperity.

Investing in our underground infrastructure is expensive. But not doing so could inevitably prove much costlier, not only financially but in the risk to property as well. I applaud officials at the county, state and federal levels who have the political will and see the wisdom to address underground infrastructure in an impactful way not only in the short term, but for decades to come.

Being successful in obtaining these federal, state and county funds means that these needed improvements won't require us to pass a rate increase to cover them.

More details about how that funding will be applied, and other regular activities and services provided by our office, can be found in this report. You can also check out the Macomb County Public Works page at macombgov.org.

Sincerely,

Carole S. Miller





MAINTAINING DRAINS TO PREVENT FLOODING & IMPROVE WATER QUALITY

Ongoing drain maintenance by the Macomb County Public Works Office helps ensure proper drainage, reduces the risk of flooding, and improves water quality.

Logjams and debris can impede the flow of storm water and snow melt in any of the 401 miles of open drains – streams, creeks and other open channels – under the MCPWO’s jurisdiction. Those obstructions can erode the banks, causing more trees to fall into the water and increases the risk of flooding. Natural debris also causes algae problems which impacts water quality.

Our drain maintenance team has worked on over 100 drains this year, including: the Gibson and Plumbrook drains, both in Sterling Heights; the Harrington Drain in Clinton Township; the Nichol Drain, Pingle Drain and the Salt Slang Gloede Drain in Macomb Township; and the Shafer Drain and the Lambert Drain Richmond Township. After logs and debris are pulled out, sediment is removed and placed on the banks, graded and topped with a bed of top soil, grass seed and a mulch blanket.

Five years ago, Public Works Commissioner Candice S. Miller launched a new program in which funding from the county is matched by local municipalities to pay for the clean out of problem spots in drains in their respective city, township or village. During that time, our office has worked with officials in every community.

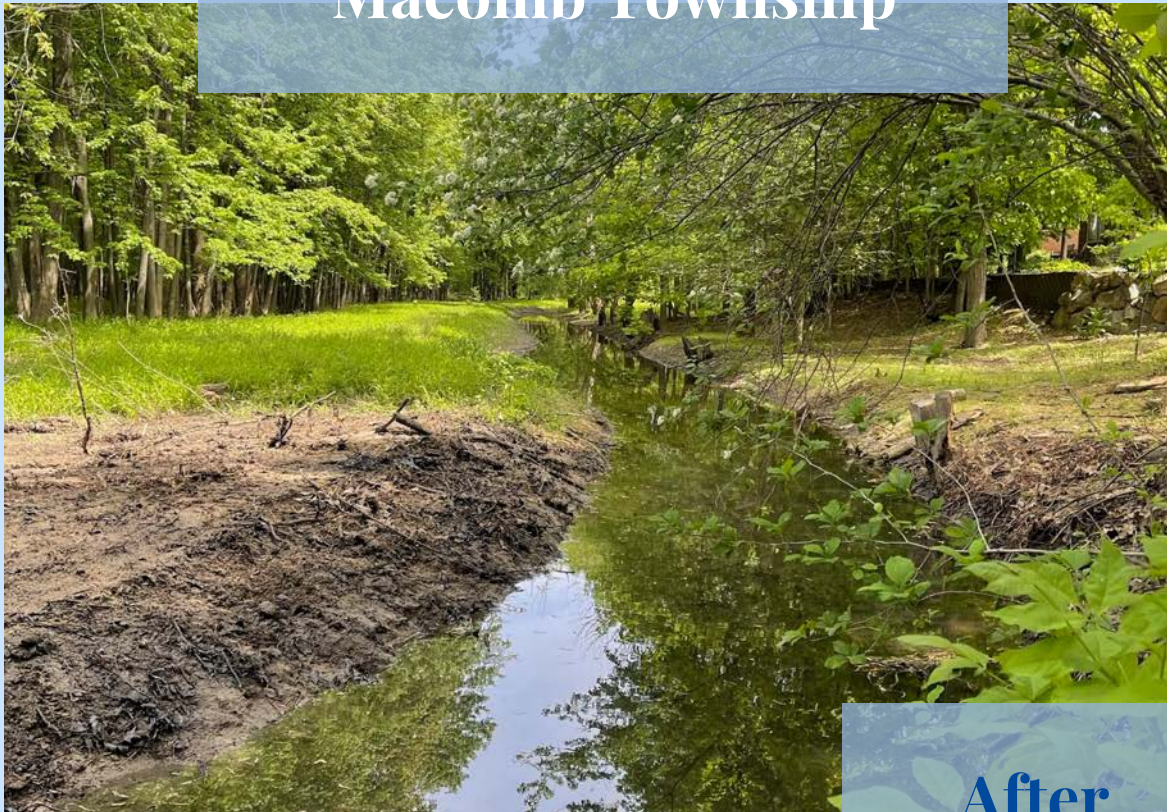
“We appreciate the yearly allocation that the county Board of Commissioners has made toward this program in their budget,” Miller said.

Funding from grants and prior assessments to inspect, maintain and improve our drains have also been used.

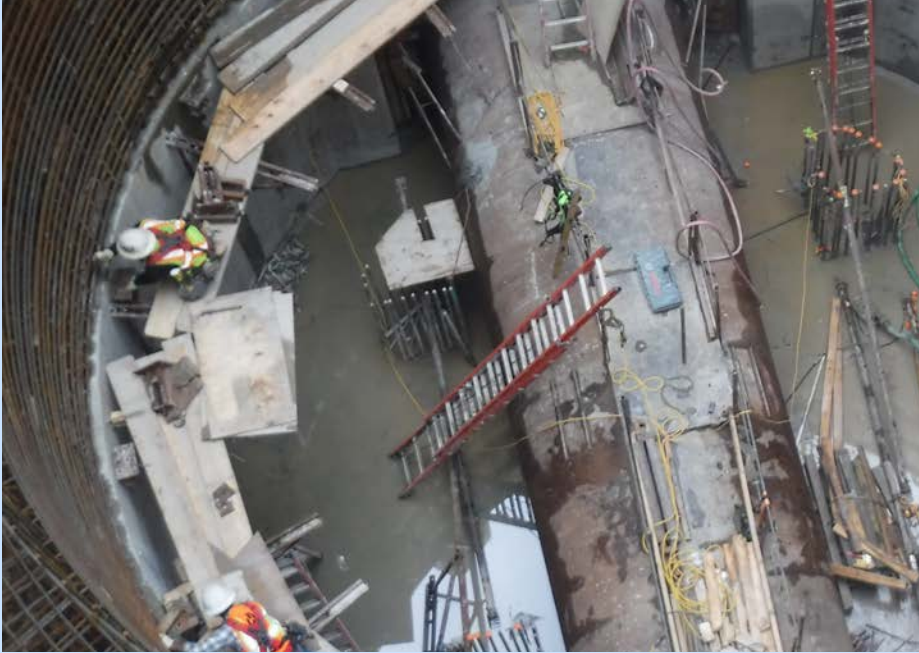
Before



**Pingle Drain Clean Out
Macomb Township**



After



NO MORE SINKHOLES

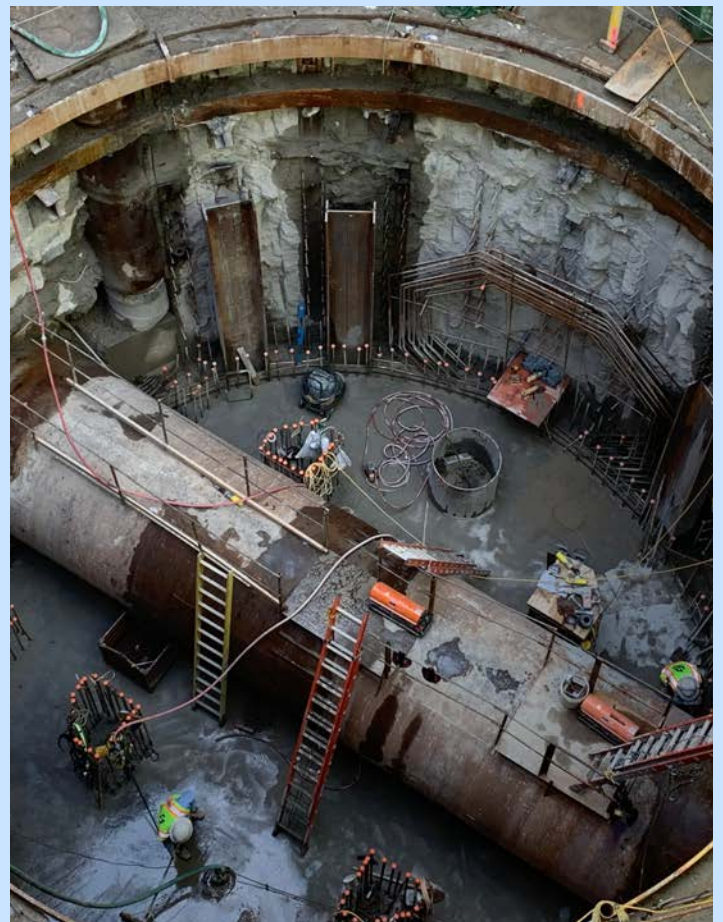
Segment 5 & Segment 6 Rehabilitation Project Updates

Construction continues at companion underground projects to ensure that another sinkhole disaster does not occur in the massive sewer that carries the sanitary sewage from nearly 600,000 people from 11 of Macomb County's communities.

Inside "Segment 5" of the Macomb Interceptor Drain along 15 Mile Road west of Schoenherr to Hayes Road, crews are removing sediment to prepare for the installation of impervious lining in the widest stretch of the pipe near Schoenherr Road in Sterling Heights, and pouring concrete walls in the 70-foot-deep shaft for a permanent pump station. Where the interceptor narrows to 8 feet in diameter near Hayes Road, crews have begun to spray a polymer on the inside of the pipe to protect it from further degradation.

At "Segment 6" on 15 Mile near Garfield Road, slip-lining with the impervious liner – known as HOBAS – continues.

"Investing in our underground infrastructure is necessary to greatly reduce the risk of similar disasters that would threaten not only homes and businesses, but also the environment," Macomb County Public Works Commissioner Candice S. Miller said.



**"We can't afford to have another major sinkhole like the one that occurred in Fraser in late 2016 – one of the worst infrastructure collapses in Michigan history."
-Commissioner Candice S. Miller**

PROJECTS REDUCING COMBINED SEWER OVERFLOWS (CSO'S)

The Macomb County Public Works Office continues to make steady progress with projects that have -- or will upon completion -- reduce combined sewer overflows. These projects include In-System Storage devices, a new pump station and operational changes.

For example, operational changes by staff including replacement of manhole covers at the Chapaton Pump Station enabled us to more fully utilize the capacity of the system including the large interceptor that carries combined storm water flow and sanitary sewage in St. Clair Shores and Eastpointe.

"For decades, CSO's were too often shrugged off and accepted by many folks as long as the discharges met state guidelines. However, we don't need to keep living this way," Macomb County Public Works Commissioner Candice S. Miller said. "We can't keep pushing this problem onto the next generation hoping they might solve it."

**Overall, when
completed our
projects will
reduce CSO's in
to Lake St. Clair
by
approximately
80%!**

Other key projects in various stages of planning, design or construction:

- "In-system storage" in the drainage district serving Eastpointe and St. Clair Shores. A bladder to be installed this year upstream in the 8 ½ Mile Drain interceptor will be inflated as necessary to temporarily hold back the flow before releasing it downstream to the Great Lakes Water Authority facility in Detroit for full treatment. The bladder and the operational change will provide 12 million gallons of additional storage and reduce CSO's by 36%.
- Martin Relief Drain in-system storage, using a weir to temporarily hold back flow reducing CSO's by 20% annually.
- A new pump station on Nine Mile at Jefferson Avenue, next to the Chapaton Pump Station.
- Rehabilitation of the canal that leads from the Chapaton Retention Treatment Basin to Lake St. Clair, providing 10 million gallons of additional storage to reduce CSO's by 30%.

FUNDING SECURED

FOR CRITICAL
INFRASTRUCTURE PROJECTS
IN MACOMB COUNTY



**IN 2022,
COMMISSIONER
MILLER HAS
SECURED
FUNDING FROM
FEDERAL, STATE
AND COUNTY
SOURCES.**

The conditions of roads and bridges get a lot of attention, and rightfully so. But road flooding, basement flooding, sewer collapses and sinkholes are harsh reminders that we cannot forget our underground infrastructure either.

Emergency measures and inspecting, repairing, rehabbing or replacing our waste water systems is expensive. It also requires the political will to make those investments.

Macomb County Public Works Commissioner Candice S. Miller has emphasized the need to invest in our underground infrastructure in order to prevent the sewer collapses – like the one that occurred on 15 Mile Road in Fraser in December 2016 shortly before she took office – from occurring again. Officials at the county, state and federal levels have listened, and agreed.

"Investments in our infrastructure improve water quality, quality of life and can prevent environmental disasters."

- Commissioner Candice S. Miller



\$72 million allocation from the State of Michigan in federal American Rescue Plan Act (ARPA) funding for Segment 5, Segment 6 and 9 Mile Pump Station thanks to help from our state delegation.



\$6.5 million thanks to our Congressional Delegation. That money will be applied to our "In-System Storage" project for the 8 1/2 Mile Drain district to reduce combined sewer overflows into Lake St. Clair, an In-System Storage project in the Martin Sanitary Drain district, serving Roseville and part of St. Clair Shores and for the Segment 6 Rehabilitation Project serving the MIDD.



In addition, the Public Works Office is anticipating ARPA funds from the County Executive Mark Hackel & the Macomb County Board of Commissioners.

CRITICAL COMPONENT OF ECONOMIC PROSPERITY

Hart Drain – Stillwater Crossing Macomb Township



Before groundbreaking on new economic development occurs, the Macomb County Public Works Office reviews engineering plans of parcels large and small, to ensure proper storm water drainage. During ground construction, our inspectors monitor the progress, including improvements of open channels, new basins and installation of sewer pipes, culverts and manholes. Each process exemplifies how the Public Works Office is a key component to foster economic development and prosperity.

For example, our inspectors checked the major improvements to the Hart Drain in Macomb Township that will accommodate upcoming phases of home construction at Stillwater Crossing, a large residential development with hundreds of planned homes just north of 23 Mile Road, east of North Avenue.

“This type of drain will serve a new neighborhood for generations – on what had been a sod farm for many years,” Public Works Commissioner Candice S. Miller said.

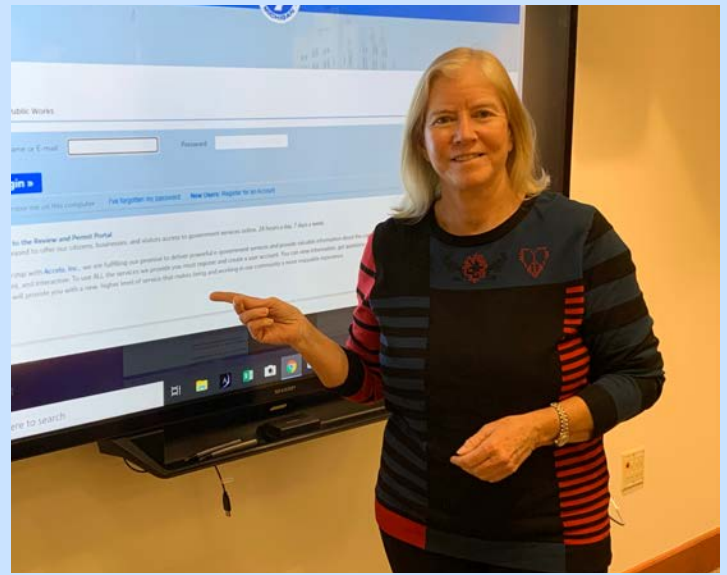
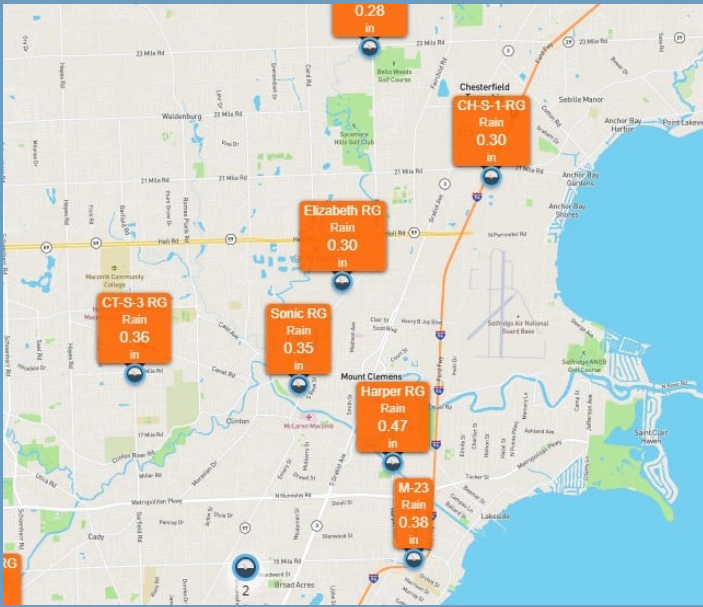
Just as the foundation of any newly constructed home is extremely important for the structure itself, the proper design and construction of storm water drainage is the foundation of infrastructure improvement.

Whether it’s the drilling of taps into existing sewer pipes, installation of culverts, shaping banks to ensure proper drainage or the placement of limestone boulders known as “rip rap” to prevent erosion – and ensuring it’s all done correctly – is something we take very seriously.

How Much Rain Did YOU Get?

You can track how much precipitation has fallen in your area by checking the Macomb County Public Works Office's online data from our department's rain gauges.

In 2021, we completed the installation of 22 rain gauges across the county. The near-real-time data can be viewed on an interactive map on the Public Works website main page.



LIVE 24/7:

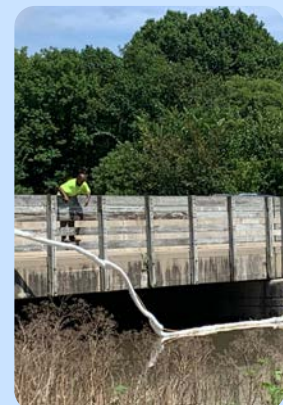
Macomb County Public Works Permit & Plan Review Portal

- Request a drain permit or soil erosion permit
- Submit plans for review by Public Works staff and schedule an inspection
- See comments by engineers and inspectors in real time
- Pay the permit fee online using a credit card
- Download the permit once it's approved

Visit the Permit and Plan Review Portal on our website today!

REPORT A POLLUTER: 24-Hour Toll Free Emergency Hotline 1-877-679-4337

If a discharge is detected in a Macomb County drain, please contact the Macomb County Public Works Office.



Pictured: National Award Winning Sterling Relief Drain



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