



MICHIGAN'S WATER

INFRASTRUCTURE REPORT



2023
Annual Report
Michigan.gov/WAMC

SUMMARY

The Water Asset Management Council (WAMC) was established to support Michigan communities in developing asset management plans for public water infrastructure and to keep state legislators and regulators informed about the condition of these assets. This 2023 Annual Report provides a comprehensive review of the water asset owners permitted to serve more than 1,000 people in Michigan. Despite significant progress in collecting standardized water asset data and enhancing asset management practices, the report also notes areas for potential improvement.

The WAMC has focused on opportunities to meet the legislative intent in a way that is meaningful and useful for local utilities, the State of Michigan, and its residents. After three years of data collection only 31% of water utilities in Michigan submitted asset management plans to WAMC. The conclusions reached in these discussions include the need to:



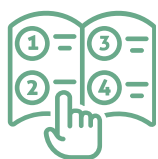
Develop a streamlined data collection method for utilities that helps them meet compliance with the Department of Environment, Great Lakes, and Energy's (EGLE) data reporting requirements.



Focus on the key performance indicators (KPI) that will provide the best measure of outcomes leading to proper infrastructure maintenance.



Coordinate long-term strategy and efforts across infrastructure types, including transportation and energy under the leadership of the Michigan Infrastructure Council (MIC).



Revise the legislative mandate to better reflect efforts that will lead to positive outcomes for water utilities and the residents of Michigan.

2023 ACTIVITIES

WAMC continued with year three of a three-year cycle of data collection from local water utilities. However, with limited resources to contact data providers and no mandate for utilities to comply, the response rate was once again extremely low.

The council also continued discussions on how to improve the effort over the voluntary survey approach that is currently in place. The focus of these discussions have been on developing standardized templates and key performance indicators (KPIs) that best measure asset condition. The WAMC is working closely with EGLE staff to ensure that any data collection effort is useful without being redundant with current EGLE requirements or an additional burden for the utility.

The council is working closely with the Michigan Infrastructure Council (MIC) and their staff on developing a 30-year strategy for integrated asset management that encompasses multiple asset classes beyond water utilities. This effort is ongoing, with a developed strategy expected in the next year.

In addition to this annual report, we also provide an annual report to the legislature that details activities from the prior year.



PLANNED FUTURE ACTIVITIES



WAMC will continue a new round of data collection from water asset owners, as required by statute. A significant effort will be dedicated to developing a streamlined data collection process. To achieve this, we will collaborate with EGLE to develop KPIs that effectively measure asset condition and future investment needs. The goal is to simplify data reporting for utilities and reduce redundancy. The survey for drinking water, wastewater, and stormwater will be updated to include additional information that could significantly impact infrastructure over the next five to 20 years, such as data on lead service lines



We will continue to work with the MIC and the Transportation Asset Management Council (TAMC) to complete the 30-year strategy for infrastructure improvements throughout the state. This effort is intended to be comprehensive for all types of public infrastructure with an eye toward cost efficiencies through coordinated infrastructure maintenance and replacement.



We have received funding from the MIC to hire a consultant to help develop a strategic plan. We will work with the consultant in 2024 to develop a plan that is consistent with the MIC's 30-year strategy and specific to advancing water asset management efforts throughout the state.

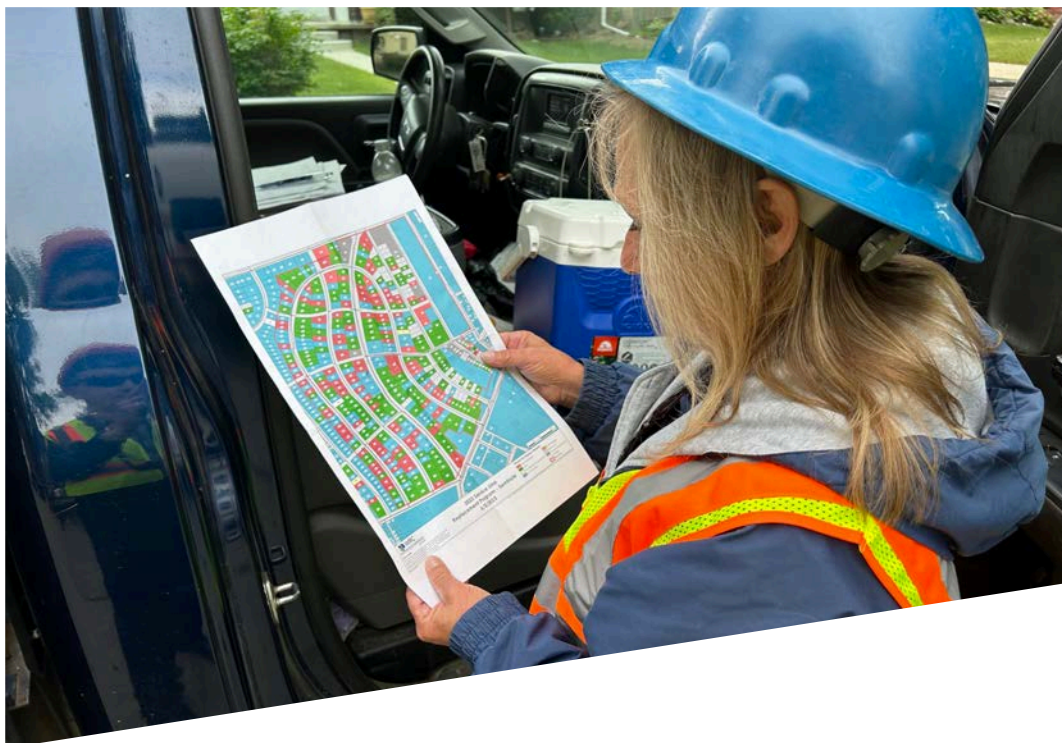


We will work with partners, including EGLE and the MIC, to continue to promote the need for proper asset management throughout the state. The intent is to build a culture where asset management is accepted and appreciated for its ability to reduce cost and ensure the reliability of public infrastructure for generations to come.

DATA COLLECTION CHALLENGES

The challenges previously identified by the WAMC still remain, with the primary challenge centered on the lack of funding for the survey effort. Without funding, the WAMC has faced significant challenges in meeting its legislative mandate by hindering the WAMC's ability to effectively communicate with asset owners, collect and securely store data, and analyze submitted information.

The WAMC also lacks the ability to effectively incentivize asset owners to comply with submitting asset management plans, as required by statute. WAMC members are confident that a successful approach would include incentives for compliance with plan submittals while simplifying plan submittals requirements particularly for small utility systems.



ADDITIONALLY, DURING DATA COLLECTION, THE FOLLOWING CHALLENGES BECAME APPARENT:



Insufficient contact information. WAMC relied on EGLE’s database for permits to reach out to utility owners to inform them of their obligation to submit information. However, letters were often not sent to the individual most appropriate to complete the task.



WAMC’s enabling legislation describes in detail the type of data that is to be collected from water utilities. We recognize this represents only a fraction of the critical assets of a water utility and does not present a complete picture of current asset condition or future replacement cost.



There is a need to standardize and streamline reporting methods. We intend to work with EGLE in the creation of templates to improve consistent measurement methods and terminology.



Limitations on meeting the requirements of the enabling legislation, particularly in regard to understanding the full extent and condition of water infrastructure in Michigan.



SURVEY DATA COLLECTED

System Type	Data Requests	Submissions	Percent	Miles of Pipe	Asset Replacement Value
Drinking Water	210	68	32.4%	5,900	\$8.1 Billion
Wastewater	68	9	13.2%	1,384	\$1.4 Billion
Stormwater	68	7	10.3%	473	\$57 Million
<i>Total</i>	<i>346</i>	<i>84</i>	<i>24.3%</i>	<i>7,752</i>	<i>\$10 Billion</i>

The third round of asset management surveys went out to one-third of water asset owners in September 2023 and were collected until January 31, 2024.







WAMC received submissions from 24% of the systems that received the request, receiving 84 surveys from drinking water, wastewater, and stormwater utilities.

A CONSISTENT CONDITION RATING SCALE

The WAMC survey methodology used a condition rating scale that is consistent with internationally accepted rating systems of categorizing assets based on condition. This increases the comparability of the data over time.

THIS IS THE CONDITION RATING SCALE USED:

-  • **Very poor:** The asset is unfit for sustained service. It is near or beyond its expected service life and shows widespread signs of advanced deterioration. Some assets may be unusable.
-  • **Poor:** There is an increasing potential for its condition to affect the service it provides. The asset is approaching the end of its service life, the condition is below the standard and a large portion of the system exhibits significant deterioration.
-  • **Fair:** The asset requires attention. The asset shows signs of deterioration and some elements exhibit deficiencies.
-  • **Good:** The asset is fit for the future. It is well maintained, in good condition, new or recently rehabilitated through mid-stage of its expected life.

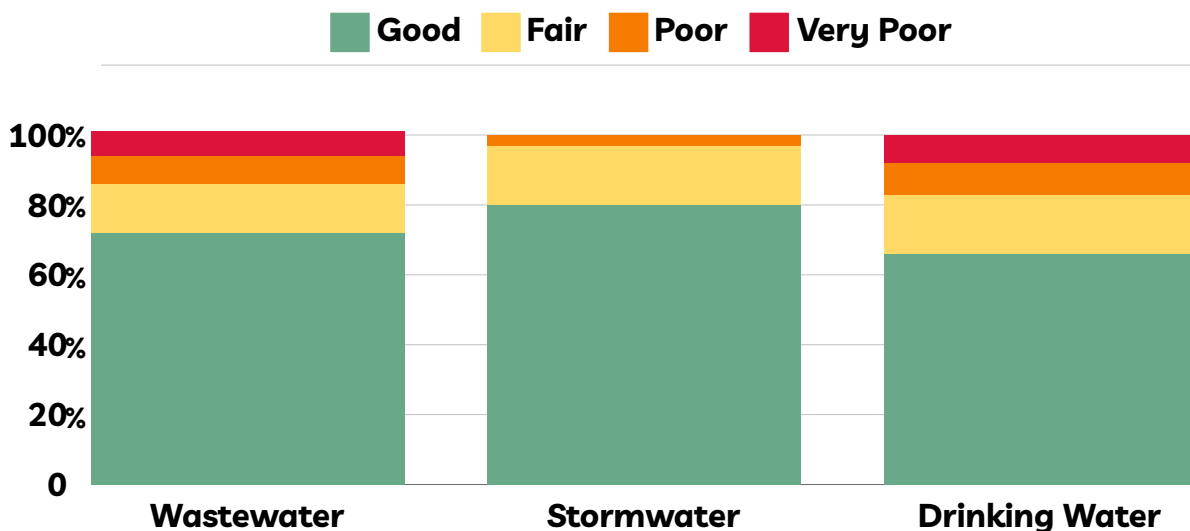
The survey only asked respondents to evaluate the current condition of their assets using the above rating scale, but it did not provide specific guidelines or references for each asset category. For example, there was no specific reference like the Pipeline Assessment Certification Program for sewer gravity mains. Therefore, the results of the survey are based on the opinions and perspectives of the asset owner's representative(s) who completed the survey, utilizing the rating scale provided.

SURVEY RESULTS

Over 7,700 miles of water assets reported condition for the WAMC Round 3 Survey. Approximately 68% of the water infrastructure reported in Round 3 was in good condition. However, over a quarter of the water infrastructure reported is in poor or very poor condition. Infrastructure in poor or very poor condition represents an immediate need for action, as the rehabilitation or replacement of these assets is required in the next five to 10 years to ensure that the services it provides continue to meet the community's expectations.

Stormwater assets were in the best condition, with over 80% rated as good. Additionally, all stormwater utilities that reported data included footage and asset condition, demonstrating a high level of asset management proficiency among these utilities. However, the committee reviewing the data remains concerned about stormwater funding and believes that the proficient utilities reporting may not reflect the overall condition of stormwater assets across the state.

ROUND 3 SURVEY RESULTS

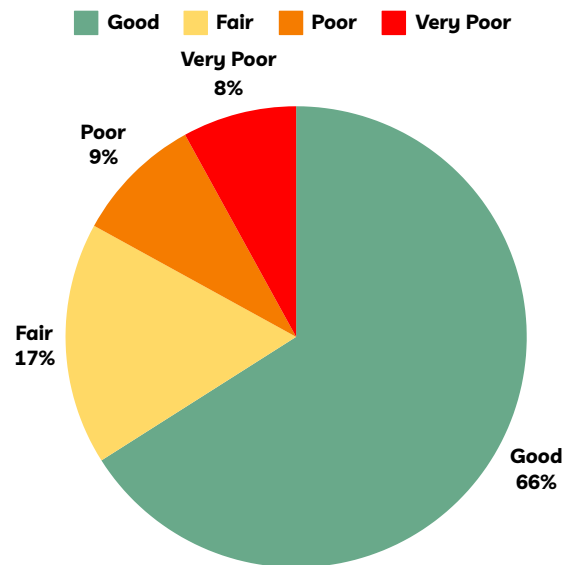


DRINKING WATER DATA SUMMARY

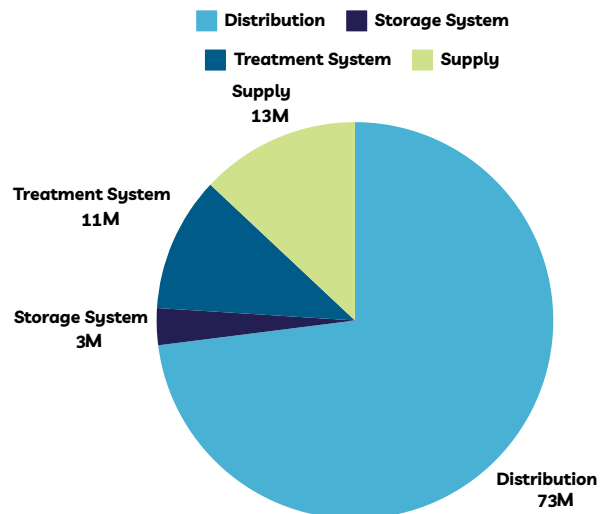
Over 5,800 miles of drinking water assets reported condition for the WAMC Round 3 Survey. Approximately 66% of the water infrastructure reported in Round 3 was in good condition. However, 17% of the water infrastructure reported is in poor or very poor condition. Infrastructure in poor or very poor condition represents an immediate need for action, as the rehabilitation or replacement of these assets is required in the next 5-10 years to ensure that the services it provides continue to meet the community's expectations.

Asset management maturity is high for water systems, with over three-quarters of drinking water asset owners assessing the probability of failure, consequence of failure, and business risk for their assets. Additionally, most owners plan to coordinate with other utilities and maintain a water main break rate below the AWWA distribution system optimization goal of 15 breaks per 100 miles. However, the proposed five-year capital improvement plans for drinking water appear insufficient to meet the anticipated needs over the next five years, given the number of existing assets in poor and very poor condition.

2023 DRINKING WATER SYSTEM CONDITION ROUND 3



2023 DRINKING WATER REPLACEMENT VALUE IS \$100M ROUND 3

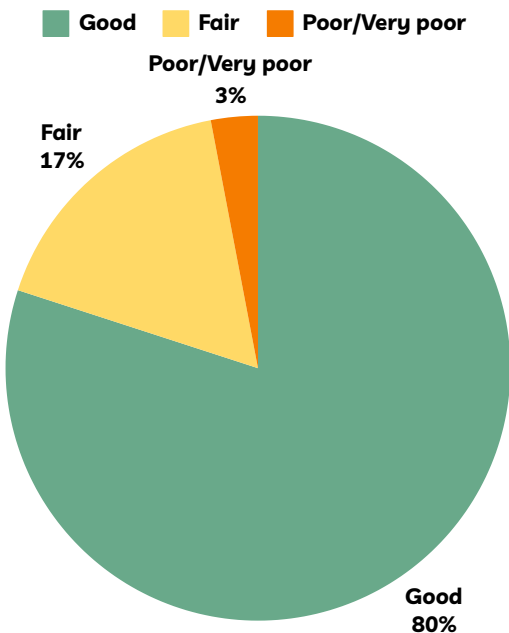


STORMWATER DATA SUMMARY

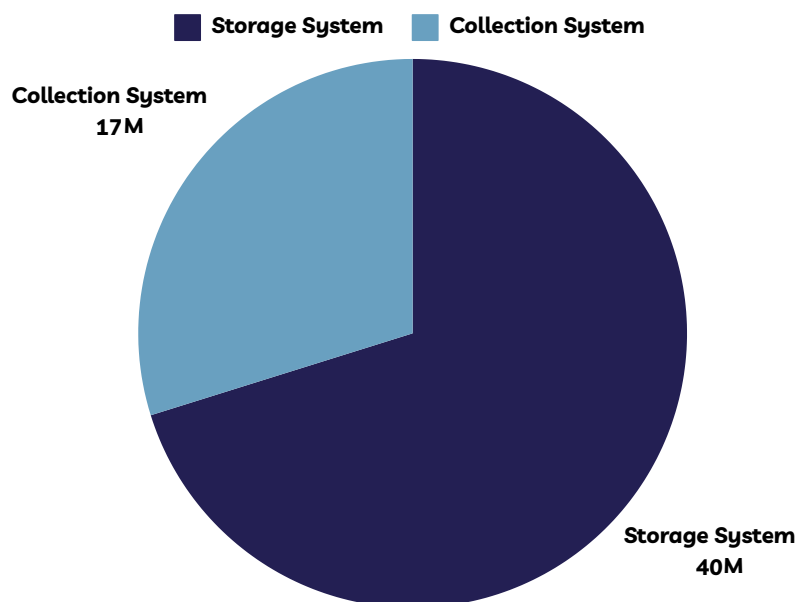
Over 470 miles of stormwater assets reported condition for the WAMC Round 3 Survey. Approximately 80% of the water infrastructure reported in Round 3 was in good condition. However, in Round 3 only 3% of the water infrastructure reported is in poor or very poor condition. Infrastructure in poor or very poor condition represents an immediate need for action, as the rehabilitation or replacement of these assets is required in the next five to 10 years to ensure that the services it provides continue to meet the community's expectations.

Stormwater assets reported the largest portion of the system in good to fair condition, which is potentially a result of the limited funding mechanisms for stormwater utilities in Michigan. This lack of funding may have led to a lack of maintenance and repair for stormwater assets, resulting in their deterioration over time.

**2023 STORM SEWER CONDITION
ROUND 3**



**2023 STORMWATER REPLACEMENT VALUE
ROUND 3**

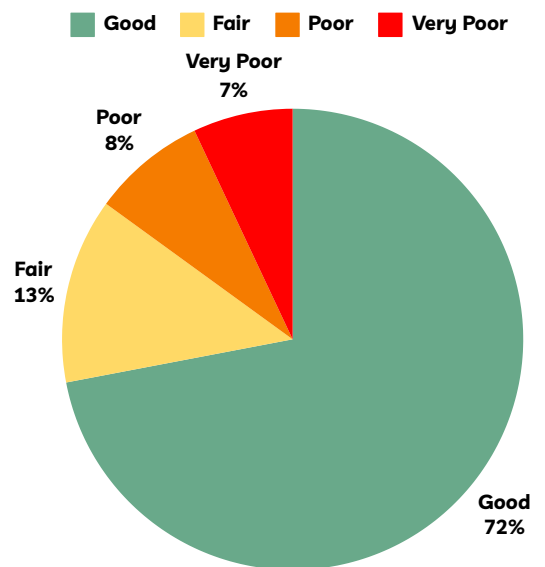


WASTEWATER DATA SUMMARY

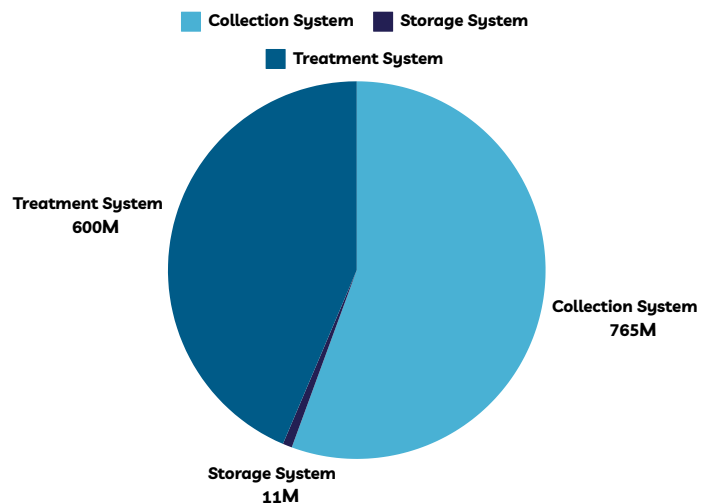
Over 1,380 miles of wastewater assets reported condition for the WAMC Round 3 Survey. Approximately 72% of the water infrastructure reported in Round 3 was in good condition. However, 15% of the water infrastructure reported is in poor or very poor condition. Infrastructure in poor or very poor condition represents an immediate need for action, as the rehabilitation or replacement of these assets is required in the next 5-10 years to ensure that the services it provides continue to meet the community's expectations.

The wastewater systems seem to be the most advanced in asset management maturity, with nearly 90% of asset owners having coordination plans in place. Additionally, all responding asset owners have implemented assessments for probability of failure, consequence of failure, and business risk for their assets. Furthermore, the planned expenditures for the next five years significantly surpass the costs of replacing the poor and very poor mains. This indicates that Michigan's wastewater systems are actively working to maintain an appropriate level of service.

2023 WASTEWATER SYSTEM CONDITION ROUND 3

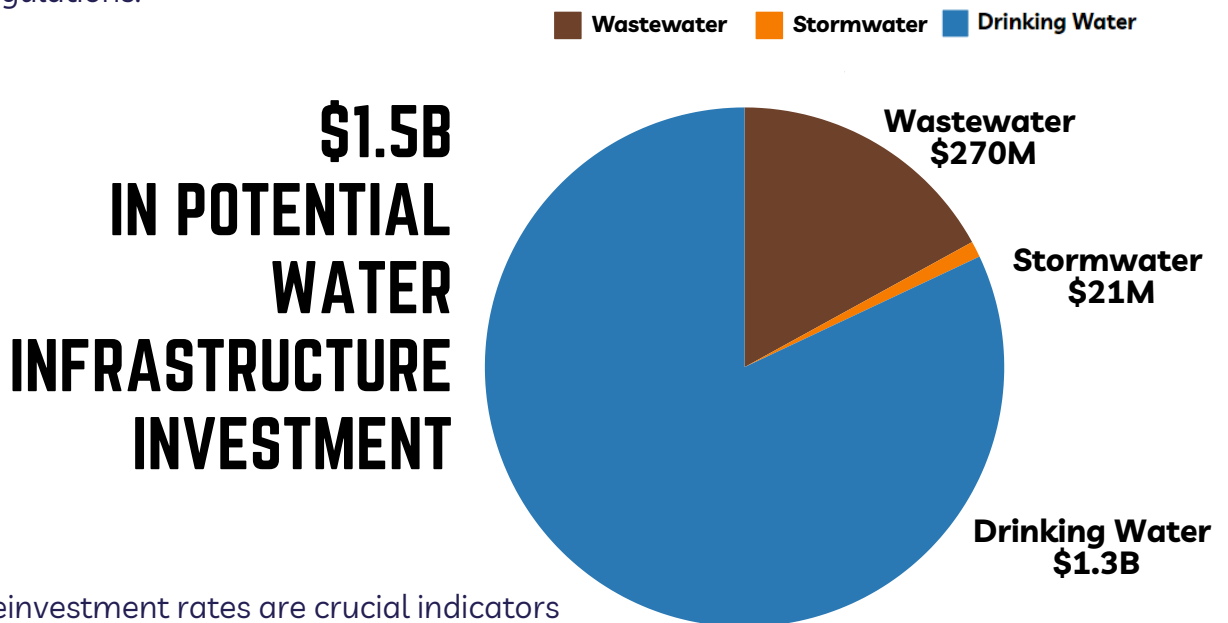


2023 WASTEWATER REPLACEMENT VALUE ROUND 3



CAPITAL INVESTMENT

Without adequate reinvestment, Michigan's water infrastructure will deteriorate over time. The planned \$1.5 billion in capital improvements over the next five years is a positive step toward addressing this issue. These funds appear sufficient to replace the existing poor and very poor mains, but may not be enough when considering treatment and storage facilities or future investments needed for new or changing regulations.



Reinvestment rates are crucial indicators of expected changes in infrastructure conditions. If the reinvestment rates remain similar to those indicated in round 3, it suggests the possibility of maintaining the condition of our water infrastructure over time. It is essential for Michigan water utilities to prioritize and allocate sufficient funding for water infrastructure improvements. This will not only address immediate needs but also ensure the long-term sustainability and reliability of the state's water utilities.

As we prepare to collect data from all Michigan water asset owners for a second time, the WAMC is looking forward to continued improvement in asset investment. However, we remain cautiously optimistic, as over 70% of Michigan's water asset owners have not yet submitted data.

BUDGET

The WAMC was not allocated any specific funding from the Legislature. The WAMC is thankful to EGLE staff for the support they have been able to provide, even though no funding has been allocated to EGLE for the effort.

BACKGROUND

Michigan's WAMC was created in 2018 to lead, guide, and assist communities in the development and/or enhancement of their drinking water, wastewater, and stormwater asset management programs.

The WAMC is legislatively charged with the development of asset management templates, as well as annual reporting to the MIC on the asset condition and investment of water infrastructure across the state.

The WAMC is considered a 'sister council' to the Transportation Asset Management Council (TAMC).

MEMBERSHIP

WAMC members are appointed to three-year terms, with the initial terms staggered. The Michigan Infrastructure Council (MIC) held their first meeting on September 6, 2018, at which time the MIC voted to appoint the initial nine WAMC voting members. The table below illustrates the 2022 appointees, their affiliation, and term limits. Additionally, the Department of Technology, Management and Budget has appointed one nonvoting member.

WAMC Member	Represented Affiliation	Term Ends
Sue McCormick <i>Council Chairperson</i>	Representing an Authority	December 2026
Cameron VanWyngarden <i>Council Vice-Chairperson</i>	Michigan Townships Association	December 2024
Carrie Ricker Cox	Water Infrastructure Association	December 2024
Tim Zebell	Michigan Municipal League	December 2026
William Bohlen	Member with Experience	December 2025
Aaron Keatley	Michigan Department of Environment, Great Lakes, and Energy	December 2025
Bernie Barnes	Michigan Association of Drain Commissioners	December 2024
Kelly Karll	Member Representing a Region SEMCOG	December 2025
Carl Overly	Michigan Association of Counties	December 2026



LEGISLATIVE REQUIREMENT

In accordance with Section 5006(4) of Part 50, Water Asset Management Council, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the Water Asset Management Council (WAMC) is required to report annually on the activities conducted and the expenditure of funds related to the processes and activities identified by the WAMC. The WAMC receives technical and administrative support from the Michigan Department of Environment, Great Lakes, and Energy.

