



Michigan  
Water Asset  
Management Council

# *Michigan's Water* Infrastructure Report



2021  
ANNUAL  
REPORT

[Michigan.gov/WAMC](https://Michigan.gov/WAMC)



Michigan's Water Asset Management Council (WAMC) was created to lead, guide, and assist communities in the development and/or enhancement of their drinking water, wastewater, and storm water asset management programs. The WAMC is legislatively charged with the development of asset management templates, as well as annual reporting to the Michigan Infrastructure Council on the asset condition and investment of water infrastructure across the state.

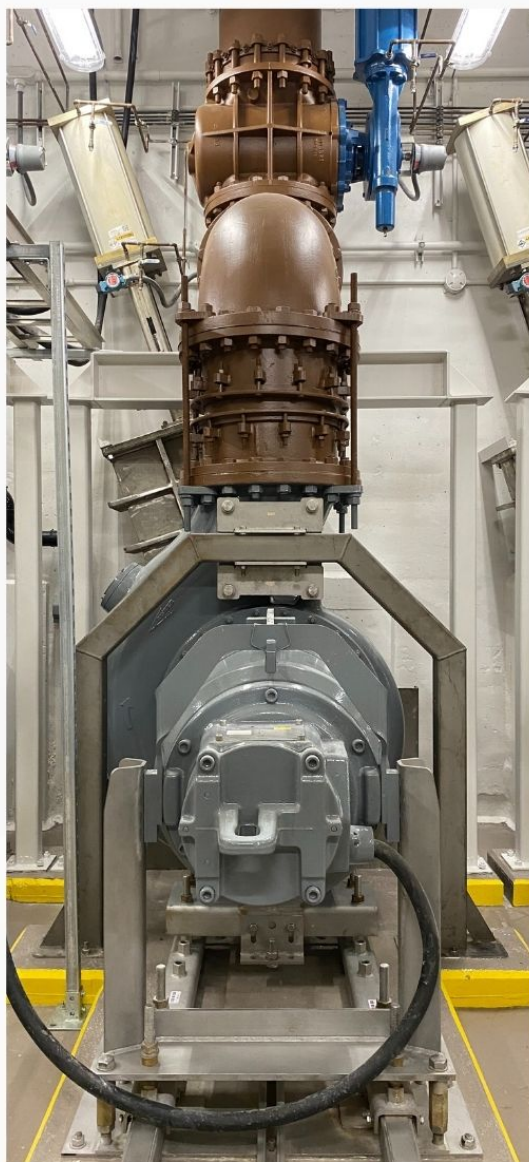


# Summary

## Michigan's Water infrastructure Report

The Water Asset Management Council (WAMC) received its first round of data collection in 2021, after years of discussion and careful planning as well as delays due to COVID-19. Through voluntary submissions of water asset owners, over 42% of requested utilities (requests went to 1/3 of statewide owners) provided the requested information on asset condition, planned capital improvements and replacement costs. Much of this success is due to the efforts of water utility associations that assisted WAMC in getting the message out to their members.

While the results of this first round are encouraging, the effort has exposed many challenges to collecting meaningful data on the current status and future planning efforts for our drinking water, wastewater, and stormwater utilities across the State of Michigan. This report will outline many of those challenges, along with the findings from the first round of data collection, other activities undertaken in the past year, and planned activities for the next year.





# 2021 Activities

The 2021 activities for WAMC centered largely on the first round of asset management data collection from water asset owners, as required under the enabling legislation. Since this was the first time the survey has been sent out, a significant effort was put into training and education for asset owners. With assistance from EGLE, a letter went out in August to all asset owners to explain the intent and purpose of the survey as well as what to expect. In September, WAMC members hosted a training webinar to instruct asset owners on how to properly fill out the survey.

## Survey Data Collected

The first round of asset management surveys went out to one third of water asset owners in September and were collected until the end of January 2022. Overall, WAMC received submissions from 42% of the systems that received the request, representing 113 drinking water, wastewater, and stormwater systems. A summary of the results is presented below:

System Type	Data Requests	Submissions	Percent	Miles of Pipe	Asset Replacement Value*
Drinking Water	168	76	45%	7,800	\$12.45 Billion
Wastewater	52	23	44%	1,326	\$1.7 Billion
Stormwater	48	14	29%	1,750	\$0.17 Billion

*\*Not all asset owners reported asset replacement value or planned capital expenses.*

# 2021 Activities Continued

## Data Collection Challenges

The targeted sample data for the first round was collected method using a Survey Monkey survey aimed at a sample of systems created through the following iteration:

- 1 The goal is to include all Michigan water infrastructure although this goal is somewhat limited due to the fact that not all of this infrastructure is recognized or known by the state.
- 2 Our statute defines a subset that is to represent and report on mostly EGLE permit holders. There are instances where some of the infrastructure does not fall within the required reporting subset as in the case of some major systems where the infrastructure might fall under the permit of another permitted entity or is not permitted.  
  
We requested information for a subset of the assets that the statute defines as water infrastructure specifically underground piping. We did this for two reasons. First, most systems have maps and asset data on piping infrastructure. Therefore, we are using piping as a surrogate for the entire system. Second, one of the findings of the 20th Century Infrastructure report was that coordination of infrastructure in the road right of way is a key part of the potential long term savings for Michigan. The statute does charge us with reporting on all assets within the above described grouping including, plants and pumping stations.
- 3
- 4 Consistent with the statute, we requested information from one third of the permitted systems in the first year's sample group.
- 5 We received responses from 42% of that group as shown in the table above.

# Michigan Water Asset Infrastructure



One of the toughest challenges to our first round of data collection is extrapolating the data collected to the water assets in the state. The figure below depicts how the data collected is a small subset of the total water infrastructure in the state.



# Data Analysis

EGLE collected and correlated the data submitted by the respondents. EGLE redacted any information that could identify the individual systems and provided to WAMC members for review. A subcommittee representing a number of stakeholders was convened to work on the concept of the performance measurement through key performance indicators and review the surveys requested data and it's sufficiency to meet the Council's reporting criteria. The subcommittee also reviewed the collected survey data, organized data, and provided recommendations for the future.

The Subcommittee was generally satisfied with the number and quality of the survey results, given their understanding of the level of data currently available to systems and that systems did not have incentive to participate. It is understood that as WAMC works through its goals and long range plan the data collected may change. Several large-scale changes are not recommended until WAMC has completed the 30-year strategic planning process.



# Data Analysis Recommendations

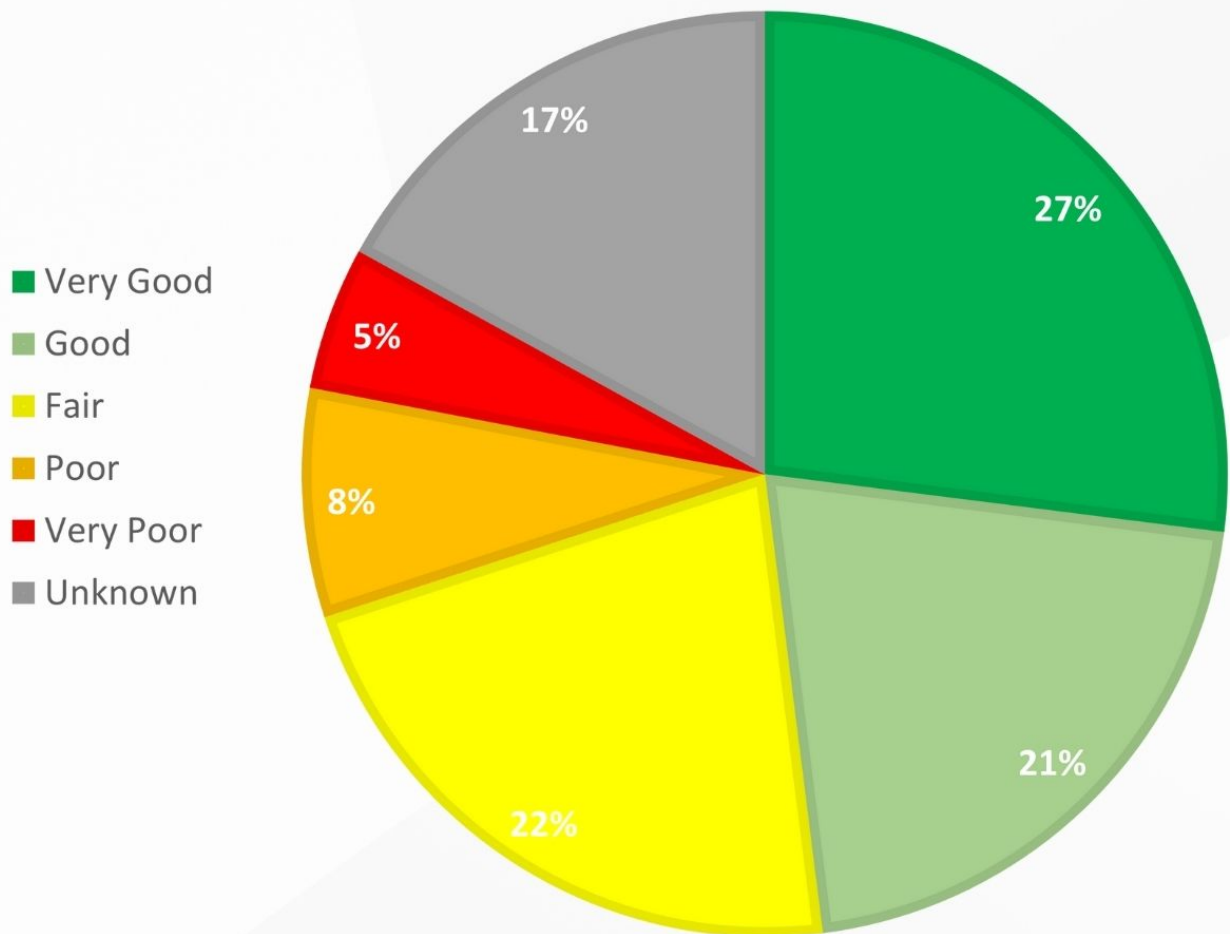
## The subcommittee made three recommendations for WAMC to consider:

- 1** In general, the WAMC is limited because there was no funding allocated to allow it to execute and complete its required tasks and goals. The TAMC and MIC have funding available. One of the primary needs for budget is to support a data entry tool. A data entry tool or platform would provide several advantages in the long term, specifically:
  - Saving partial input of data
  - Clearer direction for data entry
  - Easier ability to mine and run analytics
- 2** Data standards and templates for standard EGLE and Treasury submissions. EGLE and Treasury already have and continue to collect significant amount of useful data through other required submittals from systems. Creating a platform for submitting electronic data in a format that allows it to be mined would prevent resubmission of the same data by systems and would drastically increase the valuable data available to WAMC. In most cases, however, EGLE and Treasury do not have a means to share data or to use budget to improve these systems. In some cases, the data collected is by acts promulgated by Legislature, and therefore Legislature will likely need to support these efforts.
- 3** Create a standard pressure pipe rating process. Pressure pipe (drinking water distribution mains and sanitary force mains) is very different than gravity sewers (sanitary, storm and combined collection systems). Pressure pipe cannot typically be physically inspected for condition in a cost-effective manner and therefore, most condition rating methods are based on assumptions related to asset attributes such as age and material or lagging factors such as break history. A uniform consistent rating scale is needed to maintain data integrity for pressure pipe systems.



# Survey Results

## Round 1 Overall Condition Summary



# Other activities during 2021:

- ✓ Initiated 30-year planning with the Michigan Infrastructure Council (MIC)
- ✓ Worked with EGLE on methods to efficiently collect and share asset data, working to reduce regulatory burden on asset owners
- ✓ Began work on identifying Key Performance Indicators for water utilities
- ✓ Discussed funding needs to meet the legislative intent of WAMC
- ✓ Assisted MIC in training opportunities through the Asset Management Champions program





# Planned Future Activities

In 2022, WAMC will proceed to the second round of data collection from water asset owners, as required by statute. This will include approximately 268 drinking water, wastewater, and stormwater utilities across the State of Michigan.

## **Additionally, WAMC plans to accomplish the following tasks:**

- Continue efforts with MIC and EGLE on long-term strategic planning to ensure Michigan's water utilities are managed through proper asset planning and implementation to support public health for decades to come
- Develop a work plan to identify how WAMC will better assess water infrastructure throughout the state
- Continue working with EGLE on streamlined data collection and storage methods to reduce duplicative efforts and costs for asset owners and the State of Michigan
- Continue work with MIC, EGLE, and utility associations to educate asset owners on the need to prepare and submit asset management plans
- Continue to identify, communicate, and secure funding needs for proper and sustainable asset management planning and implementation



# Challenges

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

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 the course of data collection, the following challenges also became apparent:**

- Insufficient contact information – WAMC relied on EGLE's permit database to reach out to utility owners to inform them of their obligation to submit information. However, letters frequently were not sent to the individual most appropriate to complete the task and email addresses to the appropriate asset management team member would be preferential.
- WAMC's enabling legislation describes in detail the type of data that is to be collected from water utilities. WAMC recognizes 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 water infrastructure needs in the State.
- There is a need to standardize and streamline reporting methods. WAMC intends to work with EGLE in the creation of templates to improve consistent measurement methods and terminology.
- Limitations on meeting the requirements of WAMC's enabling legislation, particularly in regard to understanding the full extent and condition of water infrastructure in Michigan
- The current influx of federal funding for utilities does not tie to requirements for proper asset management planning. While much of this funding is not reoccurring, the State of Michigan should take this opportunity to use this and future funding assistance to promote the need for asset management plans.



# Budget

WAMC was not allocated any specific funding from the legislature. 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.

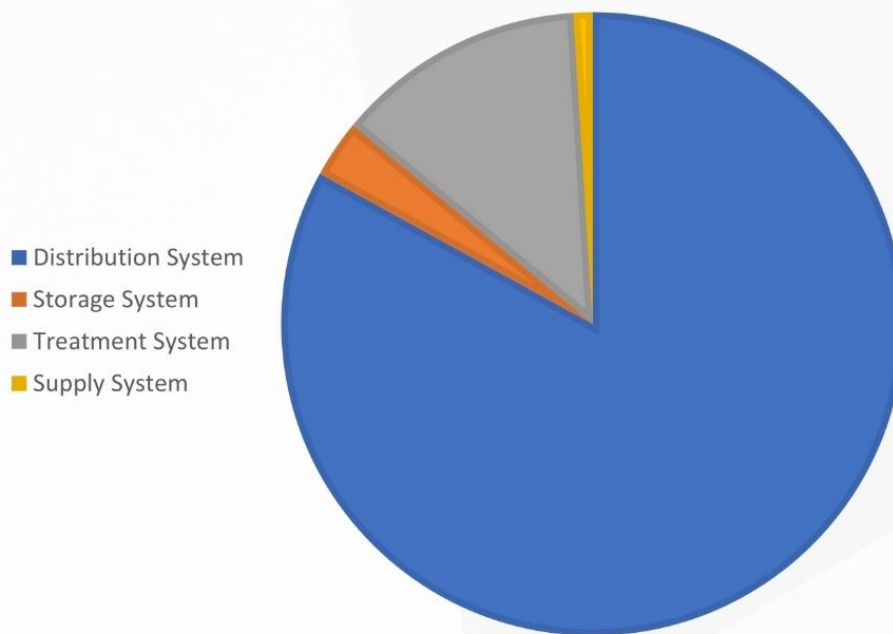
WAMC is also thankful for the volunteered efforts offered by several individuals serving on the KPI subcommittee.

WAMC convened a subcommittee on budgeting. They reviewed the needs of the council over the next several years. Using estimated costs from TAMC and industry experience, WAMC provided MIC with a 3 year budget request for \$10M. This cost included budget for a data collection tool and for EGLE staff support.

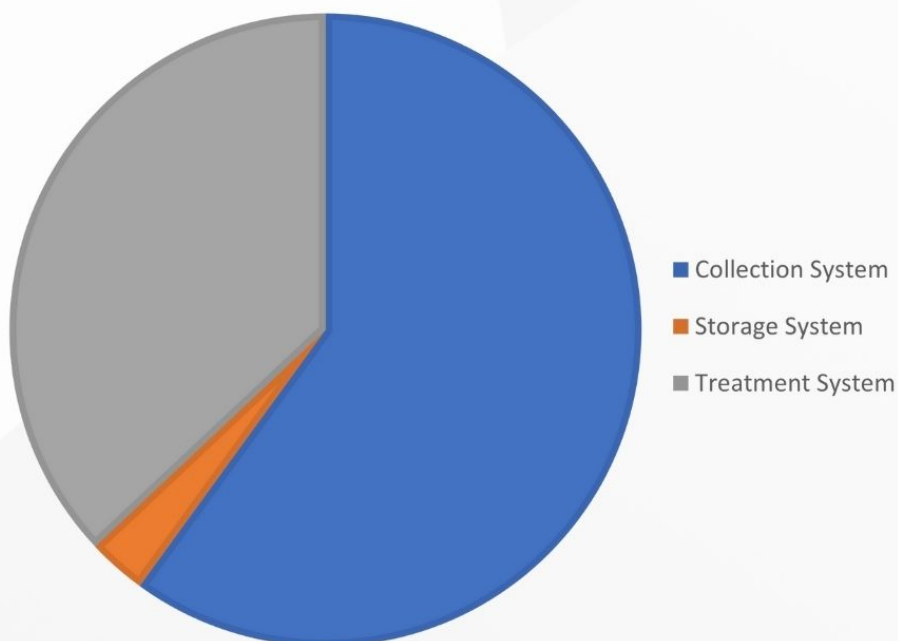


# Survey Results

## Drinking Water Replacement Cost \$12.45B



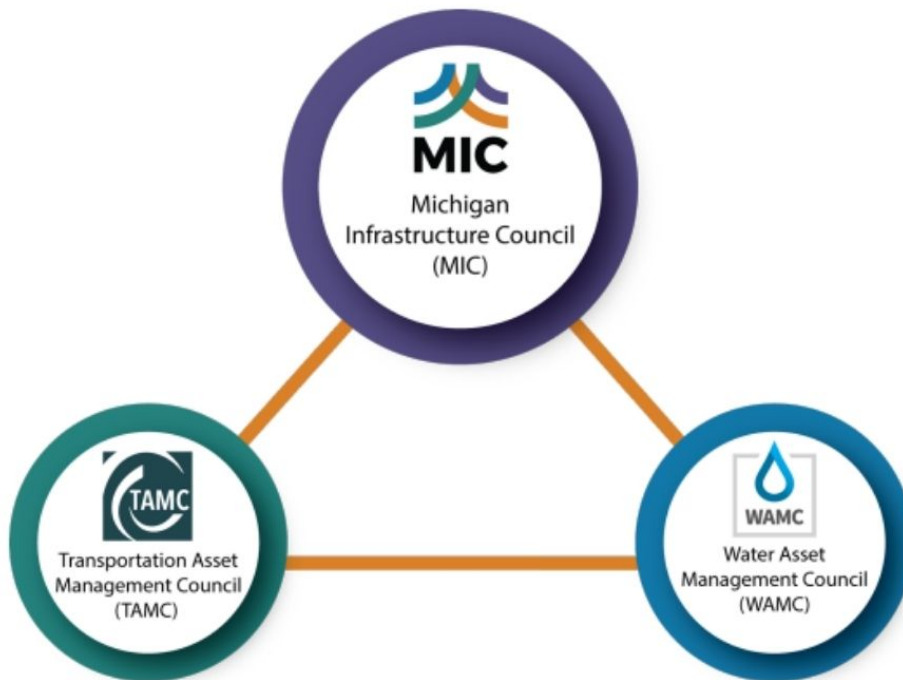
## Replacement Value \$1.74B





# Background

Michigan's Water Asset Management Council (WAMC) was created in 2018 to lead, guide, and assist communities in the development and/or enhancement of their drinking water, wastewater, and storm water asset management programs. The WAMC is legislatively charged with the development of asset management templates, as well as annual reporting to the Michigan Infrastructure Council 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.



# 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 three WAMC members whose terms were expiring in 2021 were reappointed by the MIC to another three-year term, and Tim Zebell joined the Council representing the Michigan Municipal League, filling the remainder of the term previously held by Scott House. The table below illustrates the appointees, their affiliation, and term limits. Additionally, the Department of Technology, Management and Budget has appointed one ex officio, nonvoting member.

WAMC Member	Represented Affiliation	Term Ends
Sue McCormick <i>Council Chair</i>	Representing an Authority	December 31, 2023
Cameron Van Wyngarden Council Vice Chair	Michigan Townships Association	December 31, 2024
Carrie Cox	Water Infrastructure Association	December 31, 2024
Evan Pratt	MI Association of Drain Commissioners	December 31, 2024
Tim Zebell	Michigan Municipal League	December 31, 2023
Scott Noesen	Michigan Association of Counties	December 31, 2023
Randy Scott	Member with Experience	December 31, 2022
Aaron Keatley	EGLE	December 31, 2022
Jane Fitzpatrick	Representing a Region	December 31, 2022



# 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 Department of Environment, Great Lakes, and Energy (EGLE).

Public Act 324 of 2018 establishes a Water Asset Management Council within the Michigan Infrastructure Council that requires “asset owners” to compile and report asset management plans annually.











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