

Michigan Department of Environmental Quality
Office of Drinking Water and Municipal Assistance

Common Questions and Answers Regarding Asset Management
October 2017

Included below are some of the questions we have received regarding asset management programs (AMP) and their respective responses.

Question 1: What are the intentions of the Michigan Department of Environmental Quality (MDEQ) with regards to requiring a capital improvement plan (CIP) in a community's General Plan by January 1, 2016, and an AMP in a community's General Plan by January 1, 2018? Are these the dates the plans need to be started or completed? Does the AMP have to be complete or is it a plan to implement a program (similar to the National Pollutant Discharge Elimination System)?

Answer 1: The CIPs were due in January 2016, and as supplies are identified as lacking those plans, they will be instructed to complete them. A letter was sent in May 2016 to the supplies still lacking a CIP to remind them to complete and submit it to the MDEQ. It is expected that the entire structure of the AMP will be in place by January 1, 2018, and implementation of the program will begin at or prior to that point. There is no expectation to submit a "plan" prior to the development of the program.

Question 2: Rule 1606 of the Administrative Rules of Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), states the CIP/AMP shall be included in the General Plan starting on the dates mentioned above. Can it then be assumed the MDEQ will be looking for the AMP as part of the community's next regularly scheduled sanitary survey or water reliability study, or may they do something sooner?

Answer 2: The MDEQ's routine visit and sanitary survey processes will identify the lack of a CIP as a deficiency and will be considered in the compliance strategy for that supply.

Question 3: We understand that Rule 1606 states there will be self-certification for completion of the AMP. Are there any AMP items that need to be reported, summarized and/or submitted directly to the MDEQ? Are any specific formats required?

Answer 3: Rule 1606 does not mention self-certification, and the expectation is that the programs would be submitted to the appropriate district office for review and then filed. Vulnerable assets should be considered for this reason – please refer to Question 6 for more information on that. As the AMPs are likely to look quite different from one water system to the next, one particular format would not be practical. As long as the AMP satisfies the items identified in Question 4, they should be sufficient. The asset management workbook provides an option for some supplies, but will not be a practical option for supplies that want to include

hundreds or thousands of assets, generate work orders, or already utilize O&M or asset management software.

Question 4: What is MDEQ's definition of and AMP? What is specifically required in an AMP? Does this follow the guidance document issued for wastewater? What level of detail is required?

Answer 4: Act 399 defines an AMP as follows: "Asset management program" means a program that identifies the desired level of service at the lowest life cycle cost for rehabilitating, repairing, or replacing the assets associated with the waterworks system.'

Rule 1606 outlines the requirements for the AMP as follows:

- A summary detailing the system used to maintain an inventory of assets.
- A summary describing the method used to assess the criticality of assets considering the likelihood and consequence of failure.
- A statement of level of service goals.
- A capital improvements plan that identifies waterworks system needs for 5-year and 20-year planning periods.
- A summary detailing the funding structure and rate methodology that provides sufficient resources to implement the AMP.

Rule 1606 also states:

A community water supply may include additional information with the general plan, including the current reliability study, annual pumpage report, sample siting plan, source water protection plan, water conservation/efficiency program, waterworks operation and maintenance programs, regional planning documents, and relevant zoning and land use plans for the service area.

The MDEQ guidance document "Asset Management Guidance for Wastewater and Stormwater Systems" would also serve as a good guide for drinking water systems. Some of the individual requirements appear to be different between the two, but the overall concepts are the same. Rule 1606 refers to the United States Environmental Protection Agency guidance manual titled "Reference Guide for Asset Management Tools", which is another good reference.

The level of detail required will depend on the needs of each system. The part of the rule that speaks to the asset inventory also states, "Priority shall be given to an inventory of source, treatment, pumping, and distribution system assets." Some systems will choose to include only those elements, while others will try to capture all of the costs associated with operating a water system and include vehicles, tools, computer systems, etc.

Question 5: How often does the AMP need to be updated? Every five years to coincide with General Plan and/or water reliability reviews? Will there be any effort to coordinate sanitary survey, general plan, water reliability, asset management, and CIP reviews into the same schedule?

Answer 5: The AMP should be updated continually to reflect the addition of new assets, changes in condition to existing assets (such as repairs, replacement, or degradation), changes to project schedules, and changes to funding resources. Systems should update their AMP at least annually to account for budget cycles and rate changes, and to inform and update “rolling” or annual CIPs. While an effective AMP will receive frequent updates by the water supply, the document submitted to the MDEQ should be updated whenever the general plan is updated, at a minimum. This is usually no less frequent than every five years (to coincide with the reliability study update), but an update can be requested when deemed necessary by the MDEQ – see Rule 1603 of the Administrative Rules of Act 399.

Question 6: How will vulnerable assets be protected from public reporting requirements?

Answer 6: It is recommended that assets deemed as vulnerabilities should be listed generically in the AMP so the water system would be comfortable sharing the document publicly. For example, if a supply is concerned about divulging details about their security efforts, those items may be lumped into a single asset listed as “Security System” or something similar.

Question 7: What is the expectation of the rate methodology? Are short-term (0-5 year) projects required to have more detail than long-term (5-20 year) projects? Will communities be able to make adjustments to the long-term projects as needs change and/or equipment useful life is extended?

Answer 7: The rate methodology will identify system expenses for operation, maintenance, replacement, capital improvement projects, and debt costs. The rate methodology will then use billing units to calculate rates and charges that will provide sufficient revenues to cover system expenses. The current rate resolution or rate ordinance will be reviewed to insure the rates and charges identified in the rate methodology are being implemented and sufficient revenues are being generated. If sufficient revenues are not being generated, then the system has a “gap” and the community will need to implement rate increases to close the gap.

The short-term projects will have more detail than long-term projects because the design parameters and costs can be more accurately estimated. It is expected that the scope and costs of some of the project, as well as the funding mechanisms of the water supply, will change over time. That is part of the reason for the frequent updates described in Question 5.

There have been some concerns expressed about the CIP creating an enforceable schedule for water system improvements. That is not the case. The intention of the CIP and AMP is to act as a tool for water supplies to properly plan for maintenance and improvement costs. These documents should be used to inform budgetary decisions such as identifying revenue shortfalls and establishing rate increases. This process may also help strengthen the Michigan drinking water industry’s ability to capture future federal funding if it were to become available, as the 5-year and 20-year planning periods align with those for the needs survey and revolving fund programs.

Question 8: How will the AMP requirements be enforced?

Answer 8: The AMP requirements are written in the Administrative Rules for Act 399 and will be enforced the same as any other rule that water systems are required to comply with.

Question 9: Who from the MDEQ is leading this effort? How will it be handled throughout the different districts? We would like to see similar expectations from district to district and for utilities of different sizes.

Answer 9: Mr. Luke Dehtiar, District Engineer, Office of Drinking Water and Municipal Assistance, Grand Rapids District Office, is currently working on implementation of the Asset Management requirements. He can be contacted at dehtiarl@michigan.gov or 616-307-0322. Part of our implementation effort is to provide adequate internal guidance and training to ensure consistency across the state.

Question 10: Does the MDEQ plan to provide templates or sample documents for utilities to use?

Answer 10: The document “Asset Management Plan Workbook for Water Utilities,” which is produced by our Revolving Loan Section staff, is currently being updated. Many supplies may find that they require more robust software to manage all of their assets and activities. There is no standard format for the submission to the MDEQ.

Question 11: What is the expectation on water main condition assessment? Is a methodology that prioritizes need based on age, material, historical breaks, and hydraulic capacity acceptable without actual field assessments?

Answer 11: Supplies have many options to assess the condition of mains, valves and hydrants. Supplies may already have data, or may choose to gather and assemble data in conjunction with their AMP development efforts. This data could be from a number of efforts including active integrity testing, hydraulic modeling, break records, coupon analyses, valve and hydrant maintenance records and inspection reports, or simply by material and age. Assessing condition purely on material and age can be a mistake, as a system can contain good, old pipe as well as bad, new pipe. Using material and age as the only qualifiers for condition assessment can result in replacement of the “wrong” pipe; however, each supply must decide how to manage that issue. It really circles back to the level of service goals that the supply adopts. For some supplies, it might consist of both. For example, it may be reasonable to use the passive indicators (material, age, breaks, capacity, and complaints) to drive the condition assessment for lower priority mains, while active condition assessment tools are utilized for higher priority pipes such as large transmission mains where the consequences of failure are much higher.

Question 12: How should the AMPs be submitted for separate communities within a combined distribution system?

Answer 12: Each water system is responsible for meeting the asset management requirements. The individual systems that serve less than 1,000 people are not required to complete an AMP. However, they may wish to, depending on their situation and relationship to the other water supplies. In many water systems the responsibilities for operation, maintenance, managerial oversight, and fiscal responsibility are assigned to different public or private entities. The entity that completes the AMP should be the one bearing fiscal responsibility for the infrastructure, as the AMP is a tool for a water system to remain financially sustainable. If an entity serves in this capacity for more than one water system, the AMPs could be bundled together.