

Asset Management For You

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Overview

- Background
- Senate Bill 2
- Roadmap to the Future
- Funding



Image courtesy of the Capitol Square
Review and Advisory Board

How We Got Here

- Series of catastrophic events where recovery was slow and/or complicated
- Toledo
- Gallipolis

Governor wanted better responses from water systems

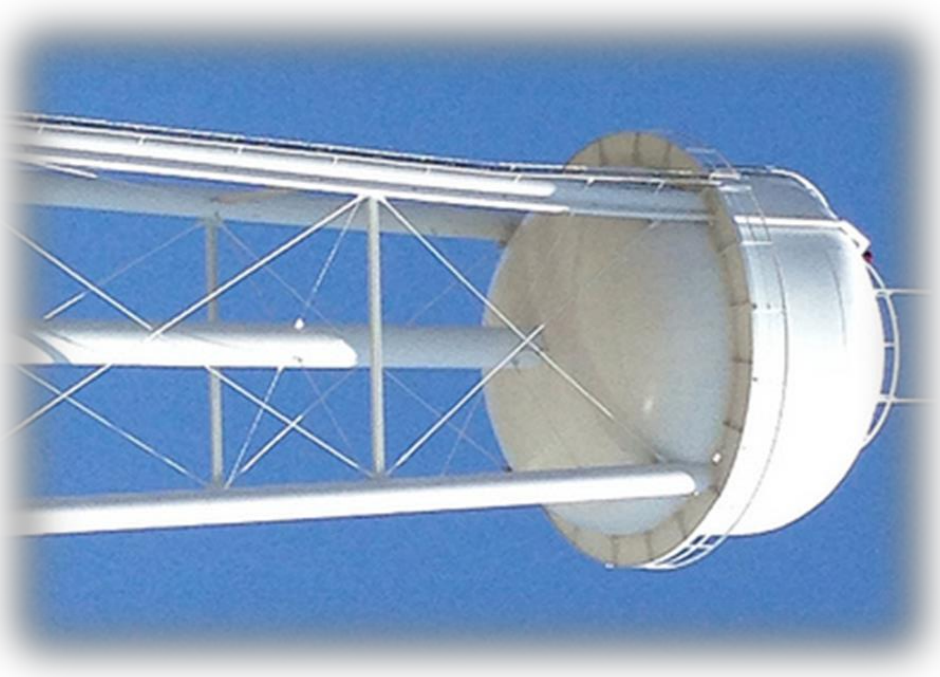
Solution

Require documented asset management for all public water systems

- Business plan for water systems
- Capital improvement planning process becomes transparent and defensible to customers
- Identifies the true cost of producing drinking water

What is Asset Management?¹

- “...maintaining a desired level of service for what you want your assets to provide at the lowest life-cycle cost.”
- Getting the most out of your assets at the lowest cost to you.



SB2 Asset Management Provisions (ORC 6109.24)

Components:

- Inventory and evaluation of all assets
- Operation and maintenance programs
- Emergency preparedness and contingency planning program
- Criteria and timelines for infrastructure rehabilitation and replacement
- Approved capacity projections and capital improvement planning
- Long-term funding strategy to support asset management program implementation

Asset Management Rules (OAC 3745-87)

Asset management is broken down into three components:

- Managerial capability
- Technical capability
- Financial Capability

These three components outline your roadmap to the future of your water system

Managerial Capability

- Ownership Accountability - The owner is the person or entity with the legal rights to make decisions on the construction, operation and maintenance of the system.
- Ownership and Proper Operation and Maintenance - The owner will need to demonstrate they have committed to the proper operation and maintenance of the water system.

Succession Planning

Systems will need to have documentation that they are taking steps to ensure they will have the critical personnel needed to properly operate the water system. Key components include:

- Identify key roles for succession or replacement.
- Define the competencies required to undertake those roles.
- Assess people against these criteria.
- Identify pools of talent that could potentially fill and perform highly in key roles.
- Develop employees to be ready for advancement into key roles.

Managerial Elements

- Clearly defined organizational structure
- Comprehensive job descriptions, including duties and responsibilities of the positions
- Properly certified operators and required minimum staffing
- Ability to address violations
- Written procedures for:
 - a. Contracting and purchasing
 - b. Security
 - c. Use of system equipment
 - d. Billing practices and revenue collection
 - e. Purchasing authority

Technical Capability Elements

- Treatment and Distribution Schematic – map of the water source, treatment, storage and distribution system
- Asset Inventory – wells, reservoir(s), intake(s); treatment works; storage (tank/tower); distribution piping; valves; hydrants; pump stations; meters; auxiliary power

Asset Inventory Attributes

- Name of asset
- The known purchase date, installation date, or estimated age of the asset, if different,
- The status of the asset (e.g. in use, available for use, etc.),
- Location,
- Condition (e.g. excellent, good, etc.),
- Remaining useful life,
- Criticality
- History of maintenance/repair, and cost of repair/replacement.
- Size and material of asset.

Condition Assessment

- The condition of each asset on the inventory (e.g. excellent, good, fair, poor, needs replacement) will need to be determined.
- Condition rankings should give an idea of the state of an asset in regard to the wear and tear it has received.

Criticality and Prioritization

- To determine the criticality of an asset, systems will want to use information such as maintenance history, how likely the asset is to fail, and importance to system functions.
- After the criticality of an asset has been determined, assets should be prioritized based on their criticality and condition in comparison to the other assets.
- This prioritization will help a system determine which assets are most in need of funding for future rehabilitations and replacements.

Operation and Maintenance Program

Documented daily procedures employees use to ensure the delivery of adequate quantity and quality drinking water, including:

- a. Plant start-up
- b. Water treatment system operation
- c. Valve exercising
- d. Flushing
- e. Maintenance schedules for all components of the water system

Proactive maintenance is much cheaper than responding to emergencies

Emergency Preparedness and Contingency Plan

- Compliance with the contingency plan requirements in Chapter 3745-85 of the Administrative Code prepares the water system for possible situations affecting the delivery of clean water.
- Important to routinely hold exercises to practice using contingency plan

Source Water Assessment

- Your source water is one of your most important assets and must be appropriately protected.
- Documentation of the activities undertaken by the public water system and its partners to minimize the risk of contaminating the systems source water through source control strategies, information sharing, contingency planning and water quality monitoring.

Capacity Projections

- These types of projections allow the system adequate time to prepare to add more infrastructure or adjust rates if it is needed.
- Systems should be aware of their projected usage for upcoming years to have accurate plans in place regarding whether they expect the service area's population to grow or if the population is expected to decline and prepare to ensure adequate revenue to continue operation.
- This may mean adjusting rates, looking for growth opportunities, or establishing connections with another system to meet demand.

Criteria and Timeline for Infrastructure Rehabilitation and Replacement

- The system must include in their asset management program a timeline for the rehabilitation and replacement of its infrastructure.
- The costs and ability to raise funds for assets is also to be considered in the timeline.
- Prioritize the most critical needs first and also address any expansion of assets that may need to occur.

Capital Improvement Plan(CIP)

- Projections are to be included for a three to five-year timeframe.
- Water systems need to have a description and estimated cost of significant projects for the next five to twenty years. Projects on this list may change, but it is important the water system be planning for these larger projects.
- The CIP is to be reviewed and updated annually by the water system.
- The CIP should include planning and detailed expenditures to aid the water system in deciding the amount of money they should be saving and setting aside in a separate account each year.

Financial Planning

- Systems need to have a long-term funding strategy to ensure they are sustainable and maintained properly.
- Funding needs to be identified to cover the financing of repairs, rehabilitations, replacement and expansion of assets, along with the repayment of any debt.
- The rates set by a system should cover their operation and maintenance costs along with providing funds for a reserve account.

Financial Capability

- Documentation of the financial status of the water system specifically, including assets, liabilities, income, expenditures, and balances.
- The current water rate ordinance along with any planned periodic increases must be included.
- Water rates are to be reviewed at least triennially with documentation of the review included.
- Documentation of all customers being billed is to be included.

Water Meters

- These are your cash registers!
- By comparing how much water you produce to how much water you bill for, you can see how much water is not producing revenue (i.e. money down the drain).
- The less water you have to produce, the lower the cost of operating and maintaining the water system.

Short-term Implementation

- DO NOT submit written documentation of your asset management program to Ohio EPA unless requested. They should be kept onsite and available for review.
- Emergency preparedness and contingency plans and valve exercising programs will be early Ohio EPA priorities. Systems should prioritize efforts to revise and implement these programs, specifically;
 - Contingency plans are to be reviewed and plans for required exercises in place;
 - A written valve exercising program is to be in place and Ohio EPA has developed guidance to clarify expectations and requirements.
 - Failure to have a contingency plan and written valve exercising program will be cited as a significant deficiency.

Short-term Implementation

- Ohio EPA will prioritize review of Asset Management programs and conduct screening for the following systems:
 - Systems under enforcement
 - Systems applying for a WSLRA loan
 - Systems with obvious capability issues.

Short-term Implementation

- For all systems, Ohio EPA's sanitary surveys will include new questions about current status of system's asset management programs. If response to those questions indicates potential deficiencies, additional follow up in the form of a capability screening will occur.

Capability Screening

- Capability screenings will be used to determine compliance with the Asset Management Rules.
- A compliance schedule will be sent to the system to address any rule violations identified during the screening.

Long-term Implementation

- The asset management program will need to be reviewed annually and updated as needed by the water system.
- These will be kept onsite and available for review at the discretion of the director.
- Metrics will be used to gauge the improvement of a water system over time.

Asset Management Is Never Done!

- An effective asset management program requires continual revision and refinement and Ohio EPA recognizes it will take time for implementation

Key Resources and Guidance for Small Systems

- Asset management templates for small community and non-community systems is available online at:
<http://epa.ohio.gov/ddagw/pws#1790210210-templates-and-fact-sheets>
- Valve exercising program guidance is available online at:
<https://epa.ohio.gov/ddagw/pws#1790210209-resources>

Funding for Asset Management

- Planning loans are available
- Terms of 5 years at 0% interest
- Potential for \$10,000 in principal forgiveness

Pulling It All Together

- Most systems have a lot of this information. They just need to write it down and keep it organized.
- A lot of this can be done without outside help, saving you money and helping you understand your program better.
- An asset management program is more than just a tracking system.
- You don't have to have a software system to track everything.

What Asset Management Does for a Water System

- Puts a plan in place to raise capital to improve infrastructure
- Replaces assets when condition warrants it (not just because they're old)
- Helps prioritize projects
- Sets aside reserves to replace critical infrastructure in emergencies

What Asset Management Does for a Water System

- Allows a system to plan ahead for future improvements and adjust rates gradually to meet future financial needs
- Establishes real costs of infrastructure if replacement needed, ensures adequate funding
- Allows system to be ready for economic development
- In the long run it saves the system money

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<http://epa.ohio.gov/ddagw/pws.aspx#11343>

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