



Asset Management Programs for New Public Water Systems

Enhance operations and ensure your water system has the technical, managerial and financial resources to meet state and federal regulations and provide safe drinking water consistently, reliably and cost-effectively.

Three Types of Capability

For a system to have long-term viability, adequate capability is required in the following three distinct but interrelated areas.

Technical — the physical and operational ability of a water system to meet state and federal requirements, including: the adequacy of physical infrastructure; technical knowledge and capability of personnel; and adequate source water.

Managerial — the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements, including: institutional and administrative capabilities; ownership accountability; staffing; and organization.

Financial — the ability of a water system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with state and federal requirements, including: revenue sufficiency; credit worthiness; and fiscal management.

Asset Management Programs for New Public Water Systems

Elements of Managerial Capability

Ownership accountability — Documentation to provide proof of the water system owner.

Certified operator — Information regarding the certified operator, such as documentation of continued training and staying in compliance with licensure by keeping accurate records, staffing the water system(s) they serve as required, etc.

Non-technical description of the water system — Information about the water system such as the number of connections and customers, source type, etc.

Operating plan — Include a table of organization, description of job duties and daily operating procedures.

Written procedures — Include procedures related to security, use of system equipment, billing practices, revenue collections and purchasing authority. Written procedures create consistency in similar situations and during hiring and retirement.

Inventory of external contacts — Include contacts such as police, fire, electrician, chemical supplier, etc.

Internal contracting and purchasing procedures (routine and emergency) — Include written procedures for making regular purchases and making purchases during emergency situations.

Why asset management?

Proper implementation of an asset management program can lead to greater sustainability of the water system and allow it to maintain and improve capability.

The Ohio Revised Code Chapter 6109.24 required that all public water systems have an asset management program in place by Oct. 1, 2018.

The Ohio Administrative Code 3745-87 outlines the requirements of what should be included in a system's asset management program.

For More Information

For more information about asset management program requirements, please contact Susan Schell or Emily Pohlmeier at (614) 644-2752 or visit the asset management website at epa.ohio.gov/ddagw/pws#113435168-asset-management.

Asset Management Programs for New Public Water Systems

[Elements of Technical Capability](#)

Map — Include line sizes, valves and hydrants.

Inventory of assets — Certain assets will be required. The water system can determine the depth of the inventory – for instance, larger systems may account only for higher-cost items while smaller systems may include any item that requires expenditure or approval. Include information regarding status, location and age for each asset.

Evaluation of assets — For each asset on the inventory, conduct a condition assessment to determine when it may need to be repaired or has reached the end of its useful life. Risk will need to be addressed as well.

Metrics — Pre-determined metrics, defined by the state and specific to the system type, are tracked and reported annually. Some examples of these metrics include: operating ratio; operating cost to provide water per service connection; non-revenue water; maintenance tasks per year (planned vs. unplanned) on vertical assets; breaks per 10 mile of distribution line; and one additional customer service metric to be determined by the water system.

Operation and maintenance programs — Written programs including testing and maintenance protocols and schedules. Written in enough detail that an operator unfamiliar with the system would be able to run it.

Approved capacity projections — Include documentation that the system is running within the approved capacity. The documentation should also show trends of usage over several years.

Criteria and timeline for rehabilitation and replacement — Develop and document the criteria used to determine when assets need to be rehabilitated or replaced. Create a timeline of rehabilitated and replacement of assets using that criteria.

Capital improvement plan — Include a capital improvement plan which incorporates information from the timeline of rehabilitation and replacements. It should include project descriptions, why they are needed, how much they cost, and how they will be funded.

[Elements of Financial Capability](#)

Pro-forma statements (five years previous and five years projected).

Income statement.

Balance sheet.

Statement of cash flow.

Amortization schedule for outstanding debt.

Capitalization terms of debt.

Current water rate ordinance and triennial water rate evaluation — Used to evaluate when and by how much rates should be raised.

Documentation of all customers billed per metered water usage — Used to determine if any customers are not being billed and help determine non-revenue water.

Information demonstrating bond or credit rating — Include documentation of a bond or credit rating assessing the likelihood to pay back debt.