

Asset Management

Susan Schell

Environmental Manager, Engineering &
Infrastructure

Ohio EPA, Division of Drinking and Ground
Waters

Overview

- Benefits of Asset Management
- Senate Bill 2
- Rule Making
- Implementation Plan
- Funding



Image courtesy of the Capitol Square
Review and Advisory Board



What Can Asset Management Do for You?

- Can help raise capital to improve infrastructure
- Extends asset life and helps makes better decisions about asset maintenance, repair and replacement
- Better response to emergencies (contingency plan)
- Sets aside reserves to replace critical infrastructure in emergencies

What Can Asset Management Do for You?

- Allows a system to plan ahead for future improvements and adjust rates gradually to meet future financial needs. Rate setting is based on real operational data and financial planning
- Allows system to meet service demand of customers by system sustainability

What Can Asset Management Do for You?

- Makes staying in compliance easier
- Incorporates future growth planning
- Reduces overall costs with proactive maintenance to save the system money
- Establishes real costs of infrastructure if replacement needed, adequate insured \$\$\$
- Our rules line up well with ISO 55000

Ohio Senate Bill 2

- Requiring Ongoing Asset Management Efforts by Public Water Systems
- Strengthening Efforts to Protect Lake Erie
- Encouraging Better Use of Dredge Materials
- Requiring Financial Assurance for Privately Owned Water Systems
- Ensuring Responsible Disposal of Construction and Demolition Debris
- Strengthening the State's Ability to Clean Up Abandoned Landfills

Drinking Water Issues In Senate Bill 2

- Asset Management required at all public water systems
- Expanded escrow and added financial assurance flexibility
- Set up receivership process

Asset Management Provisions

- 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
- SB 2 became effective October 6, 2017

Draft Asset Management Rules

- To mesh with the proposed statutory change and our existing capability rules, we have drafted rules to address the managerial, technical and financial capability of all water systems
- We are following our typical rulemaking process, including stakeholder outreach and public comment
 - Public comment period ended February 16th
- Written asset management programs required by October 1, 2018

Managerial Capability

- Documentation of ownership
- Documentation of a certified operator
- Brief non-technical description of the water system

Managerial Capability

- Operating plan
- Written procedures
- Inventory of external contacts
- Internal contracting and purchasing procedures (routine and emergency)

Technical Capability

- Map
- Inventory of assets
- Evaluation of assets
- Level of service goals
- Metrics

Technical Capability

- Operation and maintenance programs
- Approved capacity projections
- Criteria and timeline for rehabilitation and replacement
- Capital improvement plan

Financial Capability

- Pro-forma statements (5 years previous and 5 years projected)
- Income statement
- Balance sheet
- Statement of cash flow

Financial Capability

- Amortization schedule for outstanding debt
- Capitalization terms of debt
- Current water rate ordinance and triennial water rate evaluation
- Documentation of all customers billed per metered water usage
- Information demonstrating bond or credit rating

Pulling It All Together

- Most systems have a lot of this information, they just need to write it down and gather it in one place
- Systems can do a lot of this without outside help, saving them money and helping them understand their program better
- An asset management program is more than just a tracking system
- They don't have to have a software system to track everything, but it helps for more complex systems

Implementation Plan

- Prioritizing systems requesting SRF loans, systems under enforcement and systems with obvious capability issues
- These systems will undergo a capability screening to identify areas of deficiency
- The systems' asset management program will need to address these areas

Purpose of Capability Screening

- We want to get all responsible parties for the water system in the same room so they all hear the same thing
- We also want them to understand where each of them fits into the overall operation of the water system and understand their respective responsibilities

Capability Screening Tool

- Tool has 12 categories of questions for community water systems: governing body, O&M/preventative maintenance, source water protection, water supply and demand, emergency preparedness, asset management, budgeting, rates, reserve accounts, water system policies, compliance and water loss

Capability Screening Tool

- **Governing Body:**
 - Does the governing body hold meetings that are open to the public and announced in advance?
 - Is there an organizational chart for the governing body with clearly defined job duties and assigned individuals?
 - Do operators, the governing body and other employees regularly attend training to enable them to maintain their skills?
 - Is the governing body informed and responsive to issues related to drinking water such as production, capacity, water loss, O&M, water quality or compliance?

Capability Screening Tool

- O&M/Preventative Maintenance
 - Does the system have an up-to-date and written O&M plan?
 - Does the system implement an adequate preventative maintenance plan, including exercising valves, flushing water mains, and inspecting/cleaning storage tanks (as applicable)?
 - Does the system routinely maintain, repair or replace equipment prior to failure?
 - Does the system experience routine failures (e.g., chlorinator, leaks, low pressure or main breaks)?

Capability Screening

- Source Water Protection
 - Does the system actively utilize an up-to-date source water protection plan/protective strategies checklist?

Capability Screening

- Water Supply and Demand
 - Does the system regularly monitor water supply and demand and update projections on a regular basis?
 - Is the system's approved capacity/contract adequate to meet demand over the next five years?
 - If long term (>5 years) projections or other available information shows that the system will exceed approved capacity, is the system planning for this shortfall?
 - If the system loses its primary water source, will the combined capacity of all remaining water sources meet demand under normal demand conditions?

Capability Screening

- Emergency Preparedness
 - Does the system have an adequate, up-to-date contingency plan that is regularly practiced and implemented when necessary?
 - Does the water system have an operational emergency or standby electrical power source sufficient to run critical system components?
 - Does the water system have accurate maps of the distribution system?
 - Does the water system have an established emergency or supplemental water supply available, such as an interconnection with a neighboring system, or a second source?

Capability Screening

- Asset Management
 - Does the system have a comprehensive Asset Management Plan, updated within the last five years, that includes:
 - asset inventory;
 - criticality analysis;
 - condition assessment protocols;
 - criteria and timeline for replacement; and,
 - O&M and funding source(s)?

Capability Screening

- Budgeting
 - Does the system have an annual budget that includes necessary reserve funds?
 - Does the system have a capital improvements plan and a multi-year projection that addresses future expenses?

Capability Screening

- Rates
 - Are all customers billed per metered water usage?
 - Are rates and rate structures evaluated on a routine basis (i.e., at least every 3 years) and adjusted as necessary?
 - Does the water system's current rate structure produce enough income to cover current expenses (i.e., operations and maintenance), future costs and all necessary reserves?

Capability Screening

- Reserve Accounts
 - Does the water system have funding available to cover the system's most expensive or critical component if it should fail?

Capability Screening

- Water System Policies
 - Has the system adopted written policies on:
 - security;
 - use of system equipment;
 - routine billing, including a backup billing system;
 - customer deposits and payments;
 - collections, customer service disconnection and shutoff notices;
 - connection charges;
 - customer complaints; and,
 - purchasing authority?

Capability Screening

- Compliance

- If the system has/had a significant deficiency, has it been addressed or is it on an acceptable schedule to be addressed?
- Have all requirements cited in previous survey letter(s) or other correspondence been addressed?
- Is the system in compliance with the certified operator requirements of Chapter 3745-7 of the Administrative Code?
- Is the system in compliance with the backflow prevention requirements of Chapter 3745-95 of the Administrative Code?
- Has the system received MOR violations or deficiency letters in the previous twelve months?
- Is the system in compliance with the plan approval requirements of Chapter 3745-91 of the Administrative Code?
- Has the system obtained a license to operate in each of the last 5 years?
- Is the system in compliance with all monitoring requirements?

Capability Screening

- Water Loss
 - Does a recent water audit show less than 15% unaccounted-for water loss?
 - Are steps being taken to detect and address leaks?

Implementation Plan

- At the time of sanitary surveys, inspectors will initially be asking to see some basic components, such as asset inventory, maps, valve exercising program, level of service goals, metrics, etc.
- Standard set of asset management questions will be included in sanitary survey
- Submission of the written asset management program will only be upon the Director's request.

Sanitary Survey Questions - Community

1. Are the distribution system maps complete and up to date, including line sizes, valves and hydrants?
2. Is the asset inventory up to date and condition assessments complete?
3. Has the rate structure been re-evaluated in the last three years?
4. Has the system established a criteria and timeline for rehabilitation/replacement of water system components?
5. Does the water system have an operating plan, including a table of organization, description of job duties and daily operating procedures?
6. Does the system monitor their demand trends with regards to their approved capacity?

Implementation

- We are developing guidance for systems, expectations will vary based on system type and complexity
- We have developed templates for very small systems
- Asset Management Webpage:
<http://epa.ohio.gov/ddagw/pws.aspx#113435168-asset-management>

Funding for Asset Management

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

Questions?

Susan Schell

Environmental Manager
Ohio EPA Division of Drinking and
Ground Waters

(614) 644-2755

Susan.schell@epa.ohio.gov

