

Asset Management

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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
- Operation and maintenance on a frequency that makes sense to get the maximum life of the assets
- 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
- Allows a system to adequately address the health, safety and welfare of their customers
- Establishes real costs of infrastructure if replacement needed, adequate insured \$\$\$

What Can Asset Management Do for You?

- Make staying in compliance easier
- Save the system money!

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 will follow our typical rulemaking process, including stakeholder outreach and public comment
 - Working with AWWA through some of the comments
- Written asset management programs required onsite by October 1, 2018

Managerial Capability

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

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, if available

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

Implementation Plan

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

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

- We are developing guidance for systems, expectations will vary based on system type and complexity
- We are developing templates for very small systems

Funding for Asset Management

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

Ohio Revisions to the Lead and Copper Rule

Ohio EPA

Division of Drinking and Ground Water



Overview of Changes

3745-81-01

- Defined lead threshold level

3745-81-04

- Updated penalties

3745-81-80

- Established lead threshold level (15 ppb)
- Clarified 90th percentile calculation and implementation

3745-81-81

- Revised requirements for corrosion control studies
- Added requirement for systems with an action level exceedance (ALE) to implement corrosion control steps
- Revised treatment step timeframes
- Added requirement for wholesale systems to notify consecutive systems of substantial changes

Overview of Changes

3745-81-84

- Established consumer notice, sampling, and record keeping requirements for lead service line (LSL) replacements
- Added a requirement for PWSs to provide filters to consumers affected by partial LSL replacements and main work in areas with LSLs

3745-81-85

- Established more stringent timelines for the delivery of consumer notice (CN), public notice (PN) and public education (PE) Added public health language

3745-81-86

- Added mapping requirements
- Established more stringent requirements for PWSs on reduced tap monitoring

3745-81-87

- Established more stringent requirements for PWSs on reduced WQP monitoring

Overview of Changes

3745-81-89

- Established 30 day requirement for completing LC laboratory analysis

3745-81-90

- Added requirement for PWSs to notify Ohio EPA prior to making a change that could affect corrosion control
- Established 5 day time frame for PWSs to certify CN/PN/PE to Ohio EPA

3745-89-08

- Established next day reporting requirement following laboratory analysis for lead, copper, total microcystins in raw water, and seasonal startup samples
- Added requirement to report results to Ohio EPA no later than 10 days following analysis for all analytes
- Added requirement that for all analytes a complete analysis must be performed within 30 days of receiving the sample (except radiologicals)

3745-96-02

- Required LC results to be reported in the PWSs consumer confidence report (CCR)



What are the monitoring requirements for lead and copper?

- 6 month, annual or triennial
- Number of samples based on population
 - Can range from 5-100
 - Can be reduced if on annual or triennial monitoring
- Sample sites are based on locations in the PWS with the highest risk for exposure
- SMP ID Spreadsheets
 - Tool for ensuring PWSs are sampling at qualifying locations and have information for required CN
 - HB 512 requires Ohio EPA to give CN to residents if PWS fails to
 - Good idea for PWSs to have more than required number of **unreduced** sample sites listed on SMP ID list
 - Send any SMP ID updates to your District Office



What are the new requirements for reduced triennial monitoring?

- PWSs need to demonstrate they meet one (or more) of the following:
 - 90th percentile for lead is less than 5 ug/L and 90th percentile for copper is less than 0.65 mg/L for 5 consecutive monitoring periods
 - Maintained water quality parameters within the director-approved ranges for 5 consecutive monitoring periods
 - PWS does not own service lines, fixtures, pipe, or solder that contain lead
- Applications are being reviewed
- Apply next year by October 31, 2018



What are the monitoring requirements for lead and copper?

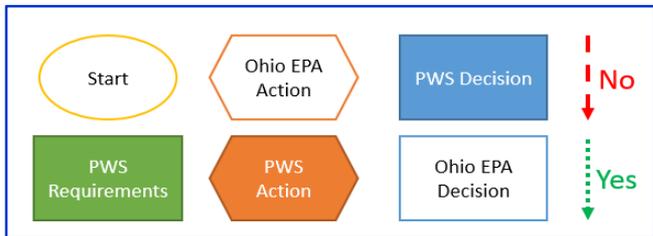
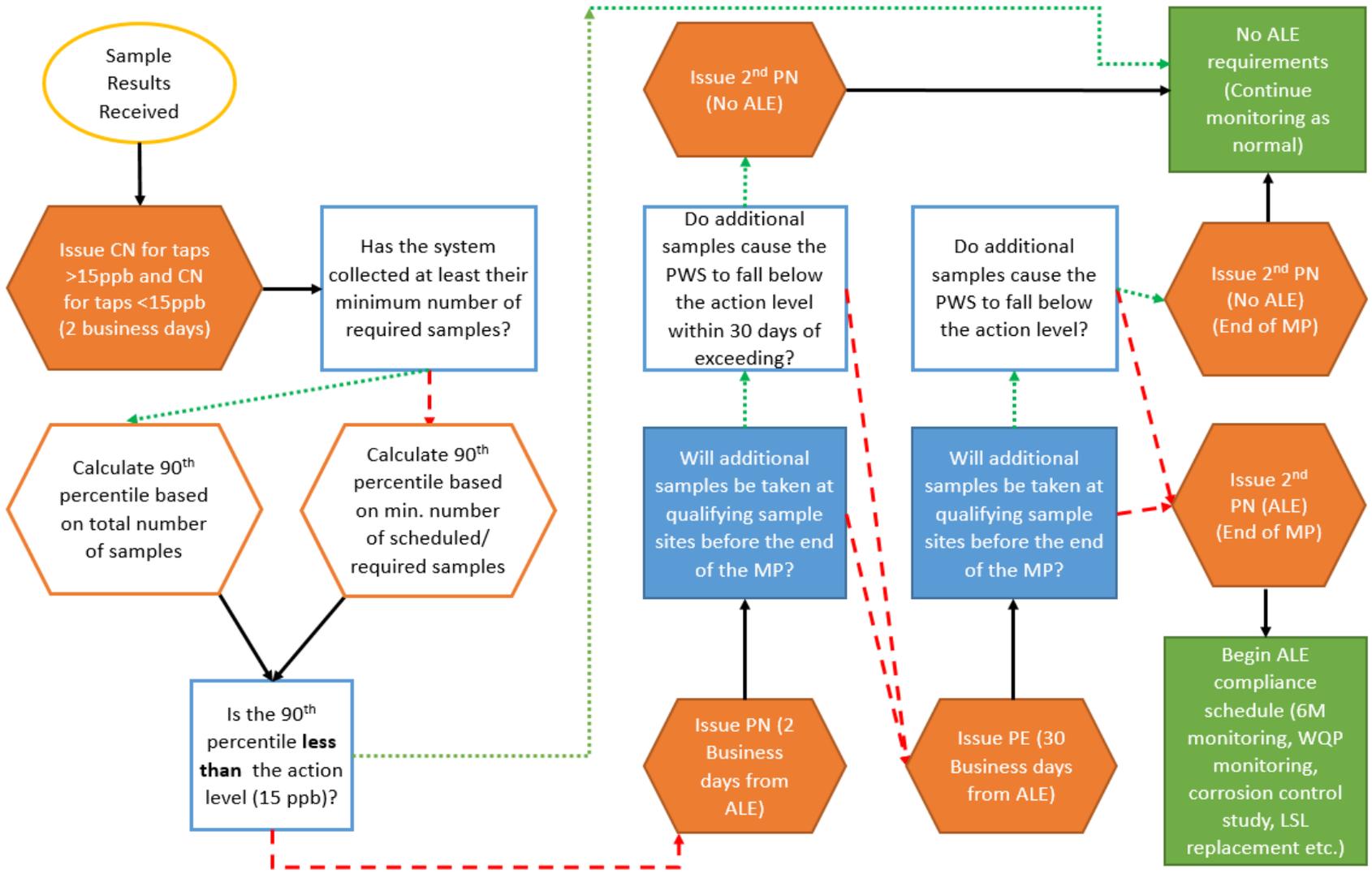
Tier Requirements

A PWS must take all samples from Tier 1 sites (if available, at least 50% from Tier 1-LSL sites). If not enough Tier 1 then the PWS must take samples from Tier 2 sites. If not enough Tier 2 sites, then PWS can use Tier 3 sites.

Community	Non Transient Non Community
Tier 1: single family structures <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line 	Tier 1: buildings <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line
Tier 2: multi-family structures <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line 	(Tier 2): buildings <ul style="list-style-type: none"> Containing copper pipes with lead solder installed before 1983
Tier 3: single family structures <ul style="list-style-type: none"> Containing copper pipes with lead solder installed before 1983 	Tier 3: not applicable for NTNC

Tier Other:
 Representative sites are used if a system does not have qualifying sample sites (e.g. a mobile home park with all PVC piping)





What are the differences between consumer notice, public notice, and public education?

Lead Consumer Notice (CN)

- Sample results and information about lead to consumer and owner of sample taps (including, if applicable, parents, guardians, or power of attorney)
- **Two** business days following receipt of sample results
 - Regardless of result, sample type, or sample size
 - Lead **or** copper
- If the lead result is above 15ug/L:
 - Additional info on health screening and blood lead level testing included in consumer notice
 - Send results to board of health
 - Remove fixtures with high lead levels from service (NTNC only)
- **All required information is included in Ohio EPA's CN templates**

What are the differences between consumer notice, public notice, and public education?

Lead Public Notice (PN)

- Initial announcement to all consumers about ALE (previously PSA in PE)
- **Two** business days following ALE determination
- Delivery methods: broadcast media, social media, hand-delivery, email, posting
- Content:
 1. Results of tap monitoring including number of samples and 90th percentile
 2. Explanation of health effects of lead
 3. Steps to reduce exposure to lead from drinking water
 4. Contact info for PWS
 5. Information on the availability of tap water testing (community PWSs only)
- Repeating the PN:
 - If the PWS decides to sample at additional qualifying sites before the end of the MP, an updated PN is required at the end of the MP
 - Twice yearly for as long as the system has an ALE (community PWSs only)

What are the differences between consumer notice, public notice, and public education?

Lead Public Education (PE)

- Additional information given to all customers following an ALE
- **Thirty** business days following ALE determination
- Community PE Requirements:
 - Deliver printed materials to all bill paying customers
 - Contact at-risk consumers (i.e schools, hospitals, pediatricians)
 - “High lead levels...” notice in all water bills
 - Perform 3 public outreach activities
 - Post information on PWS website (for population >100,000)
- NTNC PE Requirements:
 - Deliver printed materials to all persons served
 - Post informational posters
- **All required information is included in Ohio EPA’s PE templates**

What are the new requirements for laboratories?

- Established next day reporting requirement following laboratory analysis for:
 - Lead, copper, total microcystins detections in raw water, seasonal startup samples
- Added requirement to report results to Ohio EPA no later than 10 days following analysis (including QC) for all analytes
- Added requirement that for all analytes a complete analysis(including QC) must performed within 30 days of receiving the sample
 - Except radiologicals (60 days)
- October 1, 2018



Lead and Copper information available at:

<http://www.epa.state.oh.us/ddagw/pws/leadandcopper.aspx>

Consumer Notice templates, verification forms, public education, etc. available at:

<http://epa.ohio.gov/ddagw/reporting.aspx#130597507-lead-and-copper>

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