Community Water System Accountability Rule

Act 98 of 2021 Legislative Session (R.S. 40:5.9 and 5.9.1)

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LOUISIANA DEPARTMENT OF HEALTH

Extra Credit Guidance

Helpful Website Links for Developing an Asset Management Program

- https://swefcamswitchboard.unm.edu/am/
- http://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P1000LTZ.txt
- http://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P1000LP0.txt
- https://www.epa.gov/dwcapacity/reference-guide-asset-management-tools
- https://www.epa.gov/sites/default/files/2020-06/documents/reference_guide_for_asset_management_tools_2020.pdf

Asset Management Program

- Practice of managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the service level customers desire.
- Framework widely adopted by the water sector as a means to pursue and achieve sustainable infrastructure.
- Opens communications between drinking water system staff and decision makers.
- Helps move systems from crisis management to informed decision making.
- Facilitates more efficient and focused system operations and improve financial management to make the best use of systems' limited resources.
- A tool to record all of a system's asset management practices and strategies.

Components of an Asset Management Plan- Introduction

- Provide the reader the necessary context for the asset management plan (e.g., system overview) and help explain the system's goals.
- Identify the purpose of the plan.
- Present the system's strategic plan and mission statement, which define the goals of the system and frame the level of service discussion.
- Provide a general overview of the system and its facilities, including general system design, water usage, population served (current and projected), water sources, etc.
- Broadly explain how the system approaches asset management, such as a brief description of tools used for implementation of specific practices.

Component – Staff Information

- Describes the system's staffing structure and asset management team.
- Helps the system evaluate whether staff roles and responsibilities are appropriate and adequate.
- Addresses the system's approach to stakeholder education and outreach.
- Clearly defining staff responsibilities helps team members understand their individual roles in the proper implementation of an asset management plan and helps outside stakeholders understand how the system is managing its asset management program.

Component – Staff Information

- Identify the asset management team, including system staff and any non-system members such as technical assistance providers, state or EPA staff or outside consultants.
- Provide the names, titles and responsibilities of the:
  - System's management.
  - Owner(s)
  - Decision-making body (such as board members)
  - Operators (including level of certification)
  - Other system staff (such as engineers or planners)
- Provide an organizational chart that shows the system's chain of command or reference another document in which an organizational chart can be found.
- Reference any internal coordination efforts, such as standing committees comprising board members and system staff.
- Describe knowledge management techniques employed at the system.
- Describe education and outreach efforts, such as methods for communicating with system stakeholders and decision makers.
- Include a discussion of succession planning and any activities to ensure the retention of institutional knowledge at the system.

Component – Level of Service (LOS)

- How a system operates and manages its assets to meet customer expectations
- Determines the amount of funding and time required to maintain, renew and upgrade water system infrastructure.
- Changes to the LOS will have an impact on funding requirements and staffing.
- Measurable internal goals, which define system operations and performance.
- Measurable external goals, which directly impact customers.
- How the system's performance toward its LOS goals is communicated to the customers, including the methods and frequency of communication.
- How the system receives information from customers regarding the satisfaction with the LOS and the LOS goals.
- Any goals the system and customers decide are relevant and important, as long as all regulatory requirements are met.

Component – Asset Inventory

- Inventoried list or survey of all system assets (e.g., source, treatment, transmission and distribution infrastructure)
- Provide service area and facility maps.
- Include each asset's:

  - Age - Location - Condition - Criticality - Probability of failure - Consequence of failure - Remaining useful life.
- Group assets related to source, treatment or distribution
- Review service area and facility maps
- Geographic Information System (GIS) databases and other databases (if available),
- Sanitary surveys and facility plans and manuals
- Perform visual inspections of the system facilities and service area
- Conduct discussions with system management and staff with current or historical knowledge of system assets.
- Determine the criticality of each asset.
- The system may want to use a risk matrix to plot the probability of failure versus the consequence of failure.
- Systems may also find it useful to include photographs of their assets to further document location and condition data.
- Documenting latitude and longitude data of each asset will aid in creating GIS maps; GIS maps can serve as a useful tool to inventory system assets.

Component – Operation and Maintenance

- Proper use and service of assets are important to the long-term viability of a water system.
- Maintain a record of each asset's maintenance history, needs and costs.
- Discuss the system's operational activities (i.e., the basic activities necessary to keep a water system running) and maintenance activities (i.e., activities that help keep an asset in good working order).
  - Standard operating procedures.
  - Alternate operating procedures.
  - Emergency operating procedures.
  - Routine maintenance.
  - Preventive maintenance.
  - Emergency/reactive maintenance.
  - Deferred maintenance.
- The plan does not need to include all of the information contained within the system's O&M manual, but should reference specific aspects as needed.

Component – Capital Improvements

- Capital improvement planning determines a system's short- and long-term asset rehabilitation and replacement projections, based on the asset inventory and O&M data.
- Describes the following:
  - Future capital projects (and anticipated associated expenditures) for plans to add new assets to the system that upgrade or improve existing capacity.
  - Renewal projects (and associated expenditures) for plans to restore an existing asset to its original capacity, without increasing an asset's design capacity.
- The asset management plan should include all projects within a minimum 5-year timeframe.
  - A 20- year timeframe is preferred to accurately assess and plan for improvements.
  - Reference to capital improvements beyond 20 years also should be included with a discussion of long-term financial planning.
- If a system has already developed a Capital Improvement Plan (CIP), the asset management plan can reference it, specifically the timing and cost of the rehabilitations and replacements.
- Because the expected needs of the system will change, the CIP projects listed in the asset management plan should be updated as necessary to reflect those changes.

Component – Financial Strategy

- Ensure that the system has adequate sources of funding for current and future O&M and capital needs, and is able to meet its established LOS goals.
  - Water rate methodologies, including the system's current rate structure and plans for future rate modifications.
  - The system's annual operating budget and capital budget, which should be updated frequently. The types of reserve accounts that the system has (e.g., operating cash reserve, emergency reserve, short-lived asset reserve, capital reserve).
  - System loans and bonds.
  - Financial history.
  - Financial forecasts.
- When developing this component, the system should review annual financial statements, budgets, audits and the system's master plan.
- The system's financial projections should show predicted revenue and expenses over the next 5 to 10 years.
- Determine financial health using financial ratios, including:
  - Operating Ratio—the relationship between revenues and operating expenses (Operating Revenue / Operating Expense).
  - Debt Ratio—how much debt the system is using to operate (Total Liabilities / Total Assets).
  - Sales Ratio—how much of the system's revenue is generated from service fees (Sales / Total Revenue).
  - Expense Ratio—amount of operating expenses compared to total expenses (Operating Expense / Total Expense).

Component – Compliance

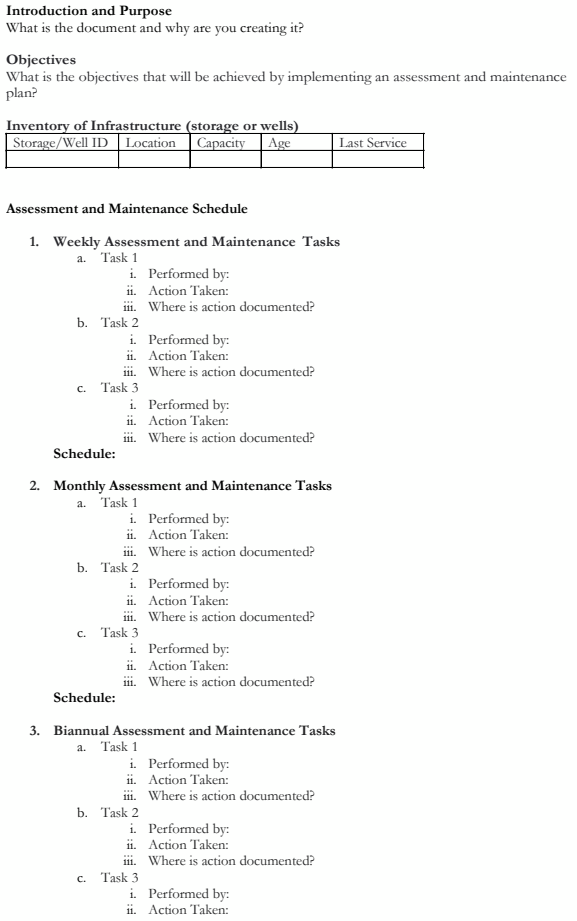
- Ensure compliance with state and federal drinking water regulations, while allowing the system to reliably and continuously deliver safe drinking water.
- The system's compliance history with state and federal drinking water regulations, along with plans for meeting future requirements.
  - Significant deficiencies, as determined by the state, including the system's responses and action plans. Systems may summarize significant deficiencies and follow-up actions in a summary table. The system should use the following to inform the discussion: Sanitary surveys.
  - Monitoring schedules.
  - Wellhead protection plans.
  - Source water protection plans.
  - Operator certifications.
  - Enforcement orders (as applicable)

Component – Preparedness

- Measures that the system will take to ensure that assets are sustained, in the event of an emergency or other unexpected situation.
- Security measures used to ensure safe, continuous operations, (e.g., locks, fences, supervisory control and data acquisition (SCADA) systems and backup generators).
- Mutual aid agreements through the national Water/Wastewater Agency Response Network (WARN) or otherwise, into which the system has entered, or any plans to establish such agreements.
- Contingency plans used to ensure continuity of service. Certain assets may only be needed on a contingent basis (e.g., backup generators, surplus treatment chemicals or an alternative water source).

Helpful Guide for Developing Assessment and Maintenance Programs for Wells and Storage

Double click image to open documents



Introduction and Purpose
What is the document and why are you creating it?

Objectives
What is the objectives that will be achieved by implementing an assessment and maintenance plan?

Inventory of Infrastructure (storage or wells)

Storage/Well ID	Location	Capacity	Age	Last Service

Assessment and Maintenance Schedule

1. **Weekly Assessment and Maintenance Tasks**
   a. Task 1
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   b. Task 2
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   c. Task 3
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?

   Schedule:

2. **Monthly Assessment and Maintenance Tasks**
   a. Task 1
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   b. Task 2
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   c. Task 3
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?

   Schedule:

3. **Biannual Assessment and Maintenance Tasks**
   a. Task 1
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   b. Task 2
      i. Performed by:
      ii. Action Taken:
      iii. Where is action documented?
   c. Task 3
      i. Performed by:
      ii. Action Taken:

Assessment and Maintenance Program

- Written program that includes the tasks the system (operator) and any service contractors will perform and the frequency each task is performed.
- Checklists, or other forms of documentation to show the program is implemented.

Components of Storage/Well Assessment and Maintenance Program - Introduction

- Provide the reader the necessary context for the program and help explain the system's goals.
- Identify the purpose of the plan.
- Present the system's strategic plan and mission statement, which define the goals of the system.
- Provide a general overview of the system and its storage and/or well facilities, including general design.
- Broadly explain how the system approaches the program, such as a brief description of tools used for implementation of specific practices.

Component - Objectives

- What are the objectives that will be achieved by implementing an assessment and maintenance program?
  - Increased life of the infrastructure
  - Safety
  - Planning for upgrades

Component – Inventory of Storage and/or Wells

- Identification information of the tank or well
- Location
- Capacity
- Age
- Last Serviced Date
- Last Serviced By

Component – Assessment and Maintenance Schedule

- Schedule of tasks to be performed:
  - Daily
  - Weekly
  - Quarterly
  - Biannually
  - Annually
  - Additional Frequencies
- State the task
- Who will perform the task? System operator, service contractor, etc.
- What is needed to complete the task?
- Where will the task completion be documented?
- Specify the schedule. Example: Twice a year in May and November

Component – Budgeting and Resources

- Annual Budget for the program
- Resources such as maintenance fund, contingency fund, etc.
- Staff training and development

Component – Monitoring and Reporting

- How will you document implementation of the program?
- Quarterly reporting
- Annual reporting
- Maintenance management system
- Track in an Excel Spreadsheet
- Submit reports to the board
- Frequency of updating the program documents

Component – Appendix

- Service Contracts
- Daily/weekly/monthly/yearly blank reports
- Inspection Reports from outside contracts

Management Training

- Who must attend for the system to receive extra credit?
  - **All decision makers** for a PWS must attend one 4-hour LDH approved management training session to receive extra credit.
  - Decision makers are primarily the governing body of the PWS – Mayor/Council, President/Board, etc.
  - Such personnel would include, but is not limited to:
    - mayors, board presidents, superintendents, public works directors, city clerks, council members, aldermen, board members, designated operator in charge, chief financial officers, owners, etc.
  - The training is designed for decision makers, including but not limited to those individuals who make decisions on budget, funding, policies, staffing, etc.
  - We encourage all involved in the decision making process for the public water system to attend to better understand the rules, regulations, and requirements for public water systems.

Management Training

- If **all members** of the PWS governing body attended management training after April 20, 2019, but prior to January 1, 2025, AND the certificates are uploaded to the Management Training section of the Grade Rule Portal, then the system will receive extra credit for 2024.
  - If there is a change in the person holding a decision maker position, the new person must attend Management Training to continue receiving extra credit.
- If all members of the PWS governing body, have not attended management training or the time period for the management training has expired, then those who have not attended must attend to continue to receive extra credit for 2024.