



Asset Management Plans

Information for Drinking Water State Revolving Fund Principal Forgiveness Loan Recipients



IN THIS DOCUMENT

You'll learn what the Office of Financial Assistance (OFA) requires for an Asset Management Plan (AMP).

Background

Nevada periodically updates its Capacity Development Strategy to reflect changes in federal requirements. One such update was made to align with revisions to the Safe Drinking Water Act, which now direct states to promote the use of AMPs.

What is an Asset Management Plan?

Asset Management is a planned and organized way to keep track of all the important physical parts of a mechanical system and to make sure they provide the level of service a community needs. It is not the same as a capital improvement plan, but it can help create one. For Public Water Systems (PWSs), major parts of the system include:

- Pumping equipment
- Water distribution and storage systems
- Protection and treatment systems
- Backflow prevention
- Cross-contamination control systems
- Computers, software, and similar tools

An Asset Management Plans helps identify a system's equipment and determines how important each piece is, what risks are involved, and how reliable it is. Managing these assets helps a system plan for repairs, maintenance, and replacements. This reduces the chance of sudden breakdowns that can interrupt service.

Asset Management Plans can also include natural or “green” assets. This more complete approach can help PWSs get the best financial, environmental, and social benefits from their water systems. Adding green assets can also help reduce or prevent future cleanup or treatment costs.

A PWS that uses an AMP can make capital improvements, keep its service at a good level, protect its infrastructure, and secure long-term funding and important assets.

The AMPs purpose

- All systems are responsible for protecting public health, reducing water loss, preventing pollution, and supporting the economic well-being of their communities.
- Systems must show that they have the technical, managerial, and financial ability to meet these responsibilities.
- Asset Management Plans should be “living documents,” meaning they are reviewed, updated, expanded, and used regularly as part of daily system operations.
- The goal of an AMP is to help the loan recipient keep the desired level of service at the lowest long-term cost.

AMP requirements under the Nevada intended use plan

1. An AMP is required for the following loans:

All Drinking Water State Revolving Fund (DWSRF) loan applicants who want principal forgiveness for a construction project.

2. The AMP must:

- a. Evaluate the level of service the system needs
- b. Include a list of all assets in the system
- c. Evaluate the condition and performance of those assets
- d. Identify each asset’s useful life
- e. Include a plan for maintaining, repairing, and, when needed, replacing assets

- f. Include a plan for funding maintenance, repair, and replacement
- g. Evaluate and carry out water and energy conservation efforts

3. System assets should be grouped into logical sections based on best professional judgment.

4. If a loan recipient already has an AMP:

- They must certify to Office of Financial Assistance (OFA) that the AMP has been developed and is being used before the loan closes (Attachment A).

- The AMP must have been reviewed or updated by the governing board within five years before the loan application date.
 - OFA may review the AMP as part of the loan application process and may complete an evaluation checklist for the staff report (Attachment B).
- 5. If a loan recipient does not yet have an AMP:**
- They must certify to OFA that an AMP will be completed and maintained before the final loan draw.
 - The loan agreement will include a requirement to complete the AMP.

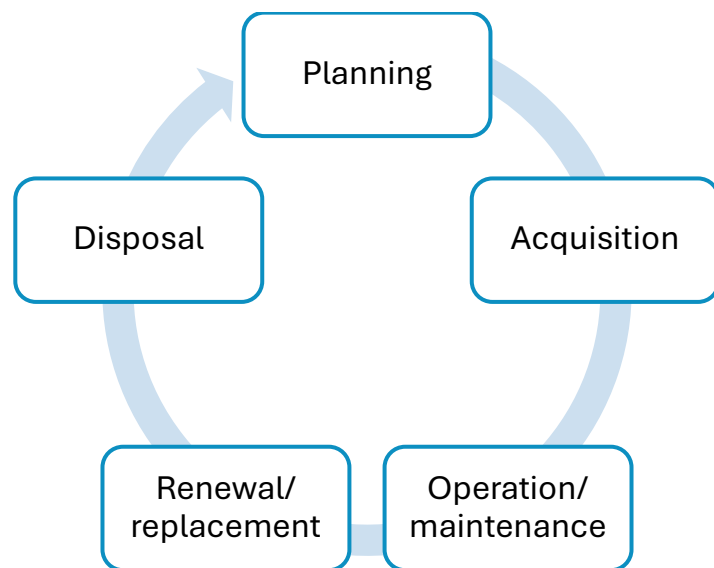
AMP Illustrations

This section provides example visuals that demonstrate key concepts used in AMPs. These illustrations are designed to help systems understand how to document assets, evaluate risk, and plan for maintenance and replacement activities.

Asset lifecycle

An assets useful life is the estimated period during which it is expected to be economically viable and contribute to business operations. The useful life can vary based on factors such as physical wear and tear, technological obsolescence, legal limits, and maintenance policies.

AMPs help to organize the concept of long-term planning.



Asset inventory table

An asset inventory table helps organizations maintain a comprehensive overview of all assets, enabling better decision making for purchasing, maintenance, replacement, and financial reporting. It ensures accountability, supports compliance, and reduces errors by centralizing asset information on one organized record.

Table 1. Asset inventory table

| | | | | |
|----------------------------|--------------|-----------------------------|---|--------------------|
| Asset name | Well pump #2 | 250,000-gallon storage tank | Chlorination system | SCADA Control Unit |
| Location | Well Site B | North Hill Tank Site | Main St. from 3 rd to 10 th | Operations Office |
| Condition | Fair | Good | Fair | Good |
| Performance rating | Medium | High | Medium | High |
| Useful life (years) | 8 remaining | 22 remaining | 30 remaining | 6 remaining |
| Replacement cost | \$45,000 | \$380,000 | \$610,000 | \$12,000 |
| Priority rating | High | Medium | Medium | Low |

Asset criticality matrix

An asset criticality matrix is a structured framework that evaluates the significance of assets within an organization by assessing the potential consequences of their failure and the likelihood of such failures. It helps maintenance teams identify which assets are most critical to operations, safety, and production continuity, allowing for informed decision-making regarding preventive measures, spare parts, and resource allocation.

Risk category (by score = Likelihood × Consequence):

Low (Green): 1–4

Moderate (Yellow): 5–12

High (Red): 13–25

Scale definitions:

Likelihood of failure (L):

- 1 = Rare (new or excellent condition)
- 2 = Unlikely (good condition; few issues)
- 3 = Possible (fair condition; noticeable wear)
- 4 = Likely (poor condition; recurring issues)
- 5 = Almost certain (end of life; frequent failures)

Consequence of failure (C):

- 1 = Negligible (little/no service impact; minimal cost)
- 2 = Minor (short service reduction; easy workaround)
- 3 = Moderate (service degradation; increased labor; limited compliance risk)
- 4 = Major (service outage in areas; fire flow or compliance risk; high cost)
- 5 = Severe (system-wide outage or major public health/compliance impact)

Table 2. Asset criticality matrix

| Consequence (Y) | | | | | |
|-----------------|---|--------------|---------------------|---|---|
| 5 | | | Chlorination system | | |
| 4 | | Storage tank | Well pump | | |
| 3 | | | SCADA | | |
| 2 | | | | | |
| 1 | | | | | |
| Likelihood (X) | 1 | 2 | 3 | 4 | 5 |

Rationale (likelihood x consequence = score):

- Well pump #2 (3 × 4 = 12): Condition **fair**; pump failure can reduce supply capacity and pressure. If redundancy exists, consequence may drop to 3; if it's a critical single source, consequence may rise to 5.
- 250,000-gallon storage tank (2 × 4 = 8): Condition **good** (low likelihood), but loss of storage affects peak demand, fire flow, and resilience; a major operational impact.
- Chlorination system (3 × 5 = 15): Condition **fair**; but for a drinking water system, loss of chlorination can quickly become a public health and compliance issue, so it typically ranks at the upper end of the consequence scale.
- SCADA control unit (2-3 × 3 = 6-9): Condition **good**, but electronics/communication failures do occur. Manual operations are usually possible, causing labor increase and slower response (moderate consequence).

System Name:

System Number:

Name of Authorized Representative:

Title of Authorized Representative:

Please select “**Yes**” or “**No**” for each requirement:

1. System has evaluated the level of service required for the system?
2. System maintains an inventory of assets of the system?
3. System maintains a technical plan for maintaining, repairing and replacing assets?
4. System maintains a financial plan for maintaining, repairing and replacing assets?
5. System has evaluated and implemented, if any, a plan for water and energy conservation?
6. Has the governing board reviewed the FSP within the last five (5) years from the date of the application?

Date of application to OFA:

Date of last board review (attach meeting minutes):

I hereby certify as the authorized representative that (check one):

The above named system meets the requirements of an Asset Management Plan and will continue to maintain the required components for at least the life of the loan.

The above named system will meet the requirements of an Asset Management Plan, including all of the components listed above, prior to the final disbursement of funds from the loan. The system will continue to maintain the required components for at least the life of the loan.

Signature of Authorized Representative

Date



Date:

System Name:

System ID:

Loan Recipients Present:

State OFA Staff Present:

AMP checklist items:

1. AMP has been developed at an appropriate depth and complexity including:
 - a. A complete and organized inventory of current **system assets**, location, age, life expectancy and cost.
 - b. An evaluation of the **condition** and **performance** of inventoried asset or asset groupings.
 - c. Determination of **criticality** of each asset and the **probability** and **consequence** of failure.
 - d. A plan for **maintaining, repairing**, and, as necessary, **replacing** the treatment works.
 - e. Five, 10-, and 20-year **capital improvement plans**.
 - f. Long-term **funding strategy** for activities in items *d* and *e*.
 - g. Certification of evaluation and implementation of water and energy **conservation** efforts.
2. AMP has been implemented.
3. The system understands the condition and cost associated with its critical infrastructure assets.
4. Incorporated, to the maximum extent practicable, water and efficient approaches into the funded project.



Comments:

1a.

1b.

1c.

1d.

1e.

1f.

1g.

2.

3.

4.