

































# Asset Inventory



- **Step 4: Critical Assets** prioritizes distinctive assets within the system. This concise overview of the state of each of the system's critical assets includes condition of the asset, the asset's consequence of failure, the risk associated with the asset and the asset's targeted replacement date. The **Critical Asset Inventory Table** lists assets critical to the sustained performance of the system, based on the information entered in the **My Inventory Module**. These assets are ranked using the probability and consequence of failure.

- **Visit:**

- <http://www.epa.gov/cupss>
- <http://water.epa.gov/infrastructure/drinkingwater/pws/cupss/training.cfm>



## EPA Region 1, Asset Management and Debt Capacity Tool

- The **Asset Management Worksheet** can help systems to develop an asset inventory including determining asset age, condition and importance. This information can help a system to prioritize asset repair and maintenance.
- The **Debt Capacity Worksheet** is used to track general financial data for assets.
- **Contact:** Carolyn Hayek, EPA Region 1 ([Hayek.Carolyn@epamail.epa.gov](mailto:Hayek.Carolyn@epamail.epa.gov), 617-918-1596)



## EPA, Taking Stock of Your Water System: A Simple Asset Inventory for Very Small Drinking Water Systems

- The **How Long Will It Last? Using the Typical Life Expectancies Table Section** provides systems with typical life expectancy of various assets. Associated worksheets help systems to calculate the remaining useful life of each asset based on its adjusted useful life and estimated age. Both completed examples and template worksheets are available for drinking water sources, intake structures, treatment systems, tanks, distribution systems, valves, electrical systems, buildings, service lines and hydrants.
- The **Prioritization Table** helps systems to use the information on the asset worksheets to determine the criticality of their assets. The **Prioritizing Your Assets Worksheet** can be used to prioritize assets. A completed example is provided.
- **Visit:** <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30006MBT.txt>



## Kansas, AM KAN Work! An Asset Management and Energy Efficiency Manual

- **Chapter 3: Current State of the Assets** discusses how to develop an asset inventory by determining asset location, conducting condition assessments, calculating asset value and remaining life and evaluating asset energy use. This chapter also includes information on the importance of updating and maintaining the asset inventory and the use of work order systems.
- **Chapter 5: Critical Assets** explains how to determine asset criticality using a risk-based process (i.e., consequence of failure versus the probability of failure) and discusses criticality related to energy use (i.e., feasibility of addressing energy usage versus energy usage ranking). This chapter also discusses performing criticality analyses over time.
- **Cost:** \$65, which includes a hardcopy of the manual, two DVDs containing an interactive version of the manual and additional resource materials, as well as shipping costs.
- **Contact:** Cathy Tucker-Vogel, Kansas Department of Health and Environment ([CTuckerv@kdheks.gov](mailto:CTuckerv@kdheks.gov), 785-368-7130)































# Preparedness



## Washington, Small Water System Management Program Guide

- **Chapter 1.6, Emergency Response Plan**, helps systems identify and document responses to routine and uncommon emergencies that may affect system operations, and establish procedures to notify customers.
- **Visit:** <http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/WaterSystemDesignandPlanning/SmallWaterSystemMgmt.aspx>

*For a full description of tools, see Appendix A.*

## *Corresponding Effective Utility Management Attributes*

### **Operational Resiliency Attribute:**

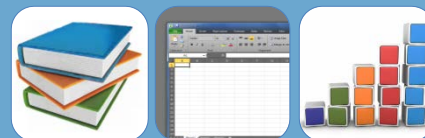
- Toolbox resources include: guidance on developing an operations manual, a security threats handbook and a health and safety guide.

*For more information, visit:* <http://www.watereum.org/resources/resource-toolbox/>

## SECTION 2: ADDITIONAL COMPONENTS OF AN ASSET MANAGEMENT PLAN

Based on input from the EPA/State Asset Management Workgroup, EPA has identified the following additional components of an asset management plan to help increase the plan’s value and effectiveness:

### Other Sustainable Practices: Energy Management



#### Component Description

Systems should ensure that all assets—not just those connected to a power source—are evaluated for energy efficiency. Employing *energy management* strategies, such as conducting an energy assessment and/or audit, will allow the system to understand the energy requirements of its assets.

This component of the asset management plan should reflect any energy management initiatives that the system has undertaken or plans to undertake in the future.

The energy management component should describe:

- ✓ Any energy assessments undertaken to determine areas in need of energy efficiency.
- ✓ Any energy audits performed and the system’s progress in implementing energy management recommendations such as installing energy efficient infrastructure and/or making operational changes to increase energy efficiency at the system.

Underperforming assets with a negative impact on the system’s energy usage should be flagged for rehabilitation or replacement.

#### Implementation Tools



##### EPA, Check Up Program for Small Systems (CUPSS)

- The **My CUPSS Plan Wizard** in the **My CUPSS Plan Module** includes template language that systems can include for this component, based on system-specific information inputted into CUPSS.
  - **Step 6: Water Quality & Energy Efficiency** discusses the purpose of energy efficiency measures and steps to implement these measures.
- **Visit:**
  - <http://www.epa.gov/cupss>
  - <http://water.epa.gov/infrastructure/drinkingwater/pws/cupss/training.cfm>



##### EPA, Energy Star Portfolio Manager

- The **Benchmarking Starter Kit** assists systems with the first key step in understanding and reducing their energy consumption and carbon footprint. Portfolio Manager is used to assess all buildings’ energy performance, water efficiency and carbon emissions.
- **Visit:** [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager)



##### EPA, Energy Use Assessment Tool

- Systems can enter data and track energy usage for each building’s lighting and heating, ventilation and air conditioning (HVAC)/non-process energy using the **Building 1 Data Worksheet**, and for numerous assets, including source water, treatment and distribution using the **WTP Energy Usage Worksheet**.























































