

Comprehensive Water System Audit Program Tariff – BMP 4.3a

PURPOSE

A program for the Company to perform a systematic audit of its water system(s) and water records to identify and quantify water losses (Modified Non-Per Capita Conservation Program Best Management Practice Category 4: Physical System Evaluation and Improvement 4.3 Comprehensive Water System Audit Program).

REQUIREMENTS

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission and were adapted from the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. The Company shall perform a comprehensive audit of its water distribution system(s), systems control equipment, production and treatment facilities and water records to identify and quantify water losses.
2. The audit must include an analysis of results that includes plans for corrective measures and can be a precursor to a leak detection and/or meter repair/replacement program to attain and maintain a less than 10 percent unaccounted for water loss in its system(s).
3. The Company shall conduct a water audit which includes the following steps to determine how efficient each water system is operating and where the losses might be.
 - a. Use coordinated monthly source and service meter readings to calculate how much water enters and leaves the system during the 12 month review period.
 - b. Track and estimate any unmetered authorized uses.
 - c. Calculate the total amount of leakage using the following formula:

$$\text{Unaccounted for water (\%)} = \frac{[(\text{Production and/or purchased water minus metered use \& estimated authorized un-metered use}) / (\text{Production and/or purchased water})] \times 100}{}$$
 - d. Authorized un-metered uses may include firefighting, main flushing, process water for water treatment plants, etc. Water losses include all water that is not identified as authorized metered water use or authorized un-metered use.
 - e. Determine possible reasons for leakage, including physical leaks and unauthorized uses.
 - f. Analyze results to determine the improvements needed, such as, better accounting practices, leak survey or replacing old distribution pipes.
4. The Company shall take appropriate steps to ensure that its water system is operating at optimal efficiency.
5. The Company shall keep accurate and detailed records concerning its annual water audit results and the associated costs. These records shall be made available to the Commission upon request.