

SCOPE OF SERVICES

For

**Energy Audits at a Public Water System
in Each of the Two Pilot Areas**

By

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1. Purpose

The purpose of the energy audits is to assess the energy consumption status of each of the water systems and develop recommendations for energy conservation, energy efficiency, and uses of alternative or renewable sources of energy.

2. Methodology

a. Benchmark energy efficiency information

(1) Collect baseline data

Establish a baseline so you can accurately measure how the utility's energy management and consumption change over time due to seasonal and other variations. We plan to obtain monthly data for one to three years for consumption of electricity, natural gas, and other fuels.

(2) Track monthly and annual energy use

Determine the energy demand per gallon of water treated and see if this has changed over the baseline period. If several years of energy data are available, we will analyze the data for trends as well.

b. Conduct an energy assessment or baseline evaluation

(1) Conduct a field investigation

The field investigation is the heart of an energy audit. It will include obtaining information for an equipment inventory, discussing process operations with the individuals responsible for each operation, discussing the impacts of specific energy conservation ideas, soliciting ideas from an Energy Team, and identifying the energy profiles of individual system components.

(2) Create equipment inventory and distribution of demand and energy

We will work with each of the two utilities to determine equipment, equipment names, nameplate horsepower (if applicable), hours of operation per year, measured power consumption, and total kilowatt-hours (kWh) of electrical consumption per year.

c. Make recommendations for energy conservation, energy efficiency, and uses of alternative or renewable sources of energy