

Resources for Water Conservation Coordinator Training

Background

Currently, 640 Texas utilities are required to submit a water conservation plan, the majority of those also must designate a conservation coordinator. Training materials are currently being developed for general requirements. This workgroup recommends that the Texas Water Development Board (TWDB) coordinate and provide this training, including special topics such as landscape irrigation efficiency and commercial and institutional (CI) water conservation. While the TWDB has training programs for utilities for system water loss, they do not have training for water use and water loss on the customer side of the meter. Also, TWDB does not have a program to trace water conservation progress by industrial water users and develop information for small manufacturers.

The landscape, CI and industrial efforts require specialization and help from experts in these areas to train the TWDB staff and develop educational materials.

Need

There are several landscape water use experts that can address proper landscape design, incorporation of storm water control, and other best management practices, such as proper soil preparation, plant selection and landscape irrigation design, including equipment and practices. The TWDB will need to be able to tap these resources and ensure that a member of the TWDB staff become proficient in these areas. Currently TWDB conservation staff is full deployed to cover their current functions so additional staff will be required. In addition, the advent of Advanced Metering Infrastructure (AMI) metering and other technologies makes detection of customer side leaks possible, and this training should also include leak detection procedures for the customer side of the meter.

As for CI and industrial conservation, there are but a handful of experts in Texas capable of performing this function. This area requires a person with technical training in engineering or other technical background and degrees with a knowledge of water chemistry, thermodynamics, and the operation and code requirement for equipment ranging from food service equipment to cooling towers (over 25 percent of commercial floor space in Texas uses cooling towers for air conditioning), medical and laboratory equipment, and other processes unique to the CI sector. This also applies to industrial operations.

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Proposed Legislation

It is proposed that a new position be established in the TWDB water conservation program to act as coordinator for the above activities and that this person have the proper background and training to perform these functions. There should also be professional fees available to contract with experts as described above to facilitate special training and the development of guides and training material. It is therefore proposed that one new FTE be funded for the TWDB, and additional contract funds be made available in the amount of \$250,000 the first year and that the FTE position be fully funded in subsequent years.

It is also proposed that all water conservation coordinators be required to obtain a certification of completion for water loss, landscape and commercial and institutional water conservation practices and technologies.

Potential for a Commercial and Institutional Auditor Training and Certification Program

Background

The Association of Energy Engineers (AEE) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have been training and certifying energy conservation auditors for commercial buildings for several decades. Texas is privileged to have a number of such auditors operating in our State. The following is an overview of the ASHRAE program:

ASHRAE has developed Standard 211-2018, Standard for Commercial Building Energy Audits, as well as the ASHRAE publication Procedures for Commercial Building Energy Audits that details the procedures for the various energy audit level procedures:

- a. Level 1 – Walk-Through Survey
- b. Level 2 – Energy Survey and Analysis,
- c. Level 3 – Detailed Analysis of Capital-Intensive Modifications
- d. Targeted Audits

The AED tests and certifies these auditors, based on the ASHRAE standards and procedures. Energy Auditors then can undertake energy efficiency assessments of large buildings and industrial facilities. Their audits cover building systems, occupancy, operations, maintenance, and code compliance.

These auditors must have the technical knowledge to perform these audits. The State Energy Conservation Office, although they do not perform such training, does require that energy audits be performed for financial assistance where applicable.

Need

Currently, Texas has no requirements or certification for commercial and institutional (CI) water auditors. And although there are a handful of engineering firms that offer these services and have staff capable of performing these audits, many more will need to be trained as commercial and institutional water conservation activities increase in the future. Texas needs those technically proficient individuals available to perform these audits. Several cities throughout the United States are beginning to require such audits in conjunction with energy audits of larger commercial and institutional facilities, but often the water conservation component is hampered by lack of certified water auditors whereas certified energy auditors are readily available. To date, the City of Santa Fe, New Mexico is the only entity that has developed a Level One CI audit training and certification program in the United States.

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To date, a Procedures for Commercial Building Water Audits manual has been developed, and the City of Santa Fe's training material can be used as a starting place for a program in Texas, but Texas specific material, and the establishment of training, testing and certification will need to be developed.

Proposed Legislation

It is proposed that funds in the amount of \$30,000 be made available to the TWDB to contract with experts to research and develop a framework for such a training and certification program in Texas, to include development of a program using the AEE – ASHRAE procedures as a guide.

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