

CHALLENGES TO DEVELOPMENT OF ASSET MANAGEMENT PLANS FOR SMALL WATER DISTRICTS

By

Lindsey Tracy, PE, AECOM

Michael Rolen, PE, AECOM

While there is need for Asset Management Plans (AMP) to be implemented in small water districts, these districts do not always have the finances, incentive and desire to develop and maintain a full AMP. Most districts use contract operator services to operate and maintain their facilities, utilizing the operations and maintenance plans of the contractor instead of a tailored plan. Implementation of a well-developed AMP can have a positive impact on the operational and financial stability of the district, especially in light of the costs of risking regulatory fines and/or equipment failures.

The key to assisting small districts is to develop a method for meeting the needs of the district that is flexible in its development and will allow expansion. AECOM developed a step-by-step method that could be used to help the districts begin development of an AMP. These steps involve the four major components of an AMP: the asset inventory; development of recommendations for maintenance and repair/replacement programs; development of a risk profile for assets; and a comprehensive management strategy that assists in the development of future maintenance and management practices. Each of these steps can be modified to meet the needs of the district and expand as the district allows. Examples of how an AMP was developed for a Harris County Municipal Utility District (MUD) that includes five water and wastewater facilities will be included in the presentation. The level of detail and deliverables were tailored to the MUD's specific needs and requests.

The inventory of assets is the most crucial phase of an AMP. Information on each asset is collected by means of site visits, maintenance records, record drawings, and manufacturers. Detailed information on condition, maintenance requirements, replacement cost, repair times, and expected service life among other parameters are all required in a full AMP. The amount of information obtained can be tailored based on the size of the district and their objectives.

The ability to develop recommendations for maintenance and repair/replacement programs and a risk profile for all assets is dependent on the level of information obtained in the inventory of assets. As more information is obtained, maintenance programs, repair/replacement programs and risk profiles and analysis become more detailed and effective. A review of the needs of the district helps to develop a recommendation for what level of an AMP the district should begin with. As the district uses the plan, more information can be included and the programs can become better defined. A comprehensive spreadsheet for tracking asset information and determining risk can be utilized to allow the district to easily update their inventory and AMP as changes are made to the system.

While a detailed AMP produces the best planning tool for the district, this step-by-step method allows a smaller district to begin the process and grow to a level that best meets their needs.