

What every operator should know about utility management

Mike Kyle



Knowledge	Principle	Practical considerations
Definition	Utility management is the overseeing and managing of the operations, maintenance, and administration of a utility such as a wastewater collection and treatment system and its related infrastructure.	Wastewater infrastructure includes all the physical and mechanical structures and equipment used to convey and treat wastewater. They can be underground or aboveground.
Importance	Utility managers are key in providing efficient operation and maintenance of wastewater systems, and in maintaining infrastructure.	Properly managed and reliable infrastructure is critical in meeting permit requirements, preventing pollution, and protecting public health.
Elements of utility management	Elements of utility management include facilities management, finance and administration, capital improvement planning and delivery, strategic organizational practices, and workforce development and sustainability.	A general manager usually oversees all of these elements but may specialize in one or more.
Functions – what do utility managers do?	Utility managers plan, oversee staff, and control operations.	<ol style="list-style-type: none"> 1. Planning – Sets goals, policies, procedures, and budgets – both operational and strategic. 2. Staffing – Recruits, selects, evaluates, and encourages growth of employees as well as guides, teaches, motivates, and supervises employees and the jobs they do. 3. Controlling – Ensures work is done completely and properly.
Planning	<p>There are two types of planning:</p> <ul style="list-style-type: none"> ■ Operational plans include specific steps and sequences to get jobs done in the most efficient and effective manner possible. ■ Strategic plans look both inside an organization (strengths and weaknesses) and outside (opportunities and threats) to develop a long-term strategy for success of the organization. 	Staff generally develop operational plans, while agency officials develop strategic plans. But it is usually up to the utility manager to see that both plans are carried out.
	<p>A budget is a financial plan. Budgets can be operating or capital. Operating budgets usually are created on an annual basis, while capital budgets are often created on a multiyear timeline (3 to 5 years).</p>	<p>Operating budgets include costs of operation and maintenance and other costs that vary from year to year.</p> <p>Items included in capital budgets are generally longer-lived than those in an operating budget.</p>

Knowledge	Principle	Practical considerations
Planning <i>(continued)</i>	Budgets include both expenditures and revenues. A large part of budgeting is for the utility manager to determine if sewer user rates can pay for all needed expenses – both operating and capital – plus leave excess funds for saving in reserve.	It is important to generate excess revenue (compared to expenditures) to place into reserves. Those reserves can be used for emergency unplanned expenditures. It is also important to budget for ongoing system replacement – this is often done by including a depreciation expense in the budget that reflects the expected useful life remaining in major pieces of equipment.
Staffing	Key elements of personnel management include <ul style="list-style-type: none"> ■ written personnel policies, ■ written job descriptions, ■ performance evaluations compared to job descriptions, ■ discipline and recognition based on performance, and ■ training and development. 	It is critical to document all personnel actions – including performance appraisals, discipline, and/or recognition. A general rule to follow: If it is not documented, it is not done.
Controlling	Utility managers must manage and control the work – making sure it is done safely – and manage public perceptions of the utility, keep accurate records, and manage assets.	Key elements in controlling are safety, recordkeeping and reporting, public relations, and asset management.
	It is often up to the utility manager to establish and enforce safety policies and procedures.	A written safety program along with regular safety meetings is recommended.
	Proper recordkeeping and recording is the basis for regulatory compliance.	Records are important in operations, but also in managing finance and personnel. (If it is not documented, it is not done.)
	Developing and maintaining good public relations and standing in the community is a team effort.	The utility manager often is the person authorized to communicate with the media. However, it is up to all utility staff – operators, maintenance mechanics, and laboratory technicians – to cultivate good public relations through customer contact, facility tours, and interaction with the community.
	Asset management is a system or process that inventories and evaluates assets, and then determines the most efficient and effective manner of rehabilitation or replacement of the assets to keep them operating and reliable.	There are software systems that link assets to geographic location, which is especially useful for linear assets (pipes). The software also can rank assets for rehabilitation based on risk and probability and consequence of failure.
Challenges	Utility managers face the demands of aging infrastructure and expanding populations; decreased grant monies and rate payer capacity constraints; new and more stringent regulatory requirements; increased public expectations for service, performance, and transparency; and workforce demographics.	It is during these periods when the efficiency of the manager, staff, and equipment are put to the test. Utility managers may need to coordinate with other officials and agencies.
Resources	The Water Environment Federation (WEF, Alexandria, Va.) Utility Management Committee (UMC) promotes the adoption of effective and sustainable management practices across all aspects of wastewater utility operations.	WEF UMC reviews, analyzes, and shares the latest techniques and strategies for the best management of organizations and the successful operation of effective utilities. It endeavors to develop appropriate and timely educational and outreach tools and techniques (workshops, presentations, webinars, white papers, technical sessions, and written manuals of practice) to educate and train utility managers at all levels.

Michael Kyle is a certified operator and executive director of the Lancaster Area Sewer Authority (Lancaster, Pa.).