City of Spring Hill
Effective Utility System Operation

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I. Introduction

Many municipal utilities begin as a small operation with a small customer base and minimal service capacities. As utility departments grow and increase the number of customers, operating and capital budgets and service capacities have to be increased in order to provide adequate utility service. Ultimately decisions have to be made about the adequacy of the service including its staffing, planning, operation and management. Since the city and its utility systems have experienced tremendous growth, the city may want to review the adequacy of its utility management.

II. Present Municipal Utilities Organization, Staffing and Operation.

a. The city's utility system currently staffs and operates a water treatment plant, water distribution system, wastewater treatment plant, wastewater collection system. Each of these utility systems requires certified operators responsible for operating the utility in accordance with State Department of Environment and Conservation regulations. The city's management is responsible for providing resources and facilities, including operating support.

b. The city's utility billing division is housed in the finance department.

c. The city utility systems operate under a $6,027,000 budget (2008-2009) employing a staff of 35 employees with a customer base of approximately 10,000 customers. The billing office maintains and bills for approximately 30,000 utility accounts, including approximately 10,000 solid waste accounts. The billing is processed monthly. The city utilities employ:

- Water treatment plant operators 9
- Water distribution operators 14
- Wastewater treatment plant operators 7
- Wastewater collection operators 3
- Utility billing clerks 2

With 35 utility employees, not including indirect administrative support, chief operators are designated for each utility and they report to the city administrator.

d. The city's utility operating budgets are as follows:

- Water treatment plant $1,866,400 including salaries of $283,600
- Water distribution $1,547,700 including salaries of $427,400
- Wastewater treatment plant $1,682,400 including salaries of $222,900
- Wastewater collection $398,700 including salaries of $93,200
- Billing and collection $531,800 including salaries of $326,000
  - Total $6,027,000 including salaries of $1,353,100

The utility budgets in comparison to the city's general fund, including solid waste, are approximately 48 percent of the general fund budget.

e. General fund budgets include:

- Police Department $3,107,000
- Fire Department $2,814,300
- Streets and Highways $1,840,300
- Sanitation $1,450,800
- Parks and Recreation $412,900
- Library $531,000

Each of these departments is supervised by a director reporting to the city administrator.

f. The following utility and general fund personnel report directly to the city administrator:

1. Chief water treatment plant operator
2. Chief water distribution operator
3. Chief wastewater treatment plant operator
4. Chief wastewater collection operator
5. City finance director
6. City recorder
7. Assistant city administrator
8. Chief of police
9. Fire Chief
10. Public works director
11. Library director
12. Parks and recreation director
13. Solid waste director
14. City engineer
15. Planning director

The city may want to review its management span of control since most effective managers have approximately 8 subordinates reporting directly to the chief executive. The city's span of management control appears to be about 15 reporting directly to the chief executive. Effective options for addressing this problem are to appoint a utility director or reassigning a qualified staff member with utility director knowledge and experience with utility director responsibilities.

g. The city's engineer provides project administrative services and engineering consulting services to the city. He monitors and provides utility studies necessary for an effective operation of utilities. He coordinates activities with the city administrator.

h. Utility operators are required to meet state certification requirements. It is recommended that the operator certifications be maintained by the personnel officer to ensure that proper certification and training requirements are met.

III. Coordination of utility services- There is the need for the coordination of utility services:

a. Utility revenues and expenditures need to be graphed over a period of time to alert management of sever variations from budget. Such variations alert management that there may be a problem and provides an opportunity for investigation and corrective action.

b. The sufficiency of rates and service connection fees should be monitored and adjusted to reflect operating costs.

c. The sharing of utility staff and resources need to be coordinated to reduce operating costs.

d. While the city engineer provides project administration services, utility projects need to be carefully monitored to ensure that standards are being met and that they are in compliance with contracts and agreements.

e. Engineering services need to be monitored to ensure that they are in compliance with the engineering service agreement.

f. Utility budgeting and budget control and responsibility need to be more centralized.

g. Utility billing needs to be carefully monitored by utility personnel and coordinated with the billing office.

h. Operator training needs to be monitored and provided as required for effective utility operation.

Adequate coordination may not be currently provided where each utility operates and reports independently to the city administrator.

IV. How Cities Respond to Utility Operation and Management-As the city grows the utility systems must grow to meet the increased demand for service. Cities respond to increased operations by:

a. Operating the utilities with operators and personnel reporting to designated city officials.

b. Operating the utilities with a department director or manager who is responsible for staffing, budgeting, planning, controlling and directing the utilities. The following cities operate utilities as a city department with a director reporting to the city administrator or city manager:

1. Brentwood
2. Franklin
3. Columbia (wastewater only)
4. Cleveland
5. Cookeville
6. Murfreesboro
7. Johnson City
8. Oak Ridge (under public works director)
9. Collierville
10. Gallatin
11. Mt. Juliet (under public works director)
12. La Vergne
13. Smyrna
14. Maryville
15. Shelbyville
16. Winchester
17. Manchester
18. Germantown
19. Paris
20. McMinnville
21. Sparta (under public works director)

c. Establish a separate utility board or transfer utilities to the city electric system or a public utility:

1. Tullahoma
2. Lawrenceburg
3. Pulaski
4. East Ridge
5. Red Bank

6. Signal Mountain

V. Summary-The agency that controls utilities controls growth and development of a city. Many times utilities are transferred to a separate board because of the city council's unwillingness to fund needed capital facilities and charge sufficient rates and fees to operate as an enterprise fund. Constituents are generally opposed to any increase in rates and fees and the council is responsive to their wishes. Upon the transfer, the operation of the utility is placed under the control of a utility director or manager and rates and fees are increased as needed. The city looses it ability to negotiate growth policies and plans with other governments and developers. MTAS recommends that the city retain the operation of city utilities as a city department with a manager or director and not transfer utilities to a separate board or utility system as some other cities have done in the past.

VI. Utility Director Job Description

A job description is presented for review.

Definition:

Employees in this class are under the general direction of the city administrator. Work is performed in planning, operating, controlling, organizing, staffing and directing the operations of municipal water and wastewater utilities.

Essential Job Function:

- Plans, assigns, and supervises the work, maintenance, installation, and repair of water and wastewater connections.
- Coordinates equipment and personnel with the specific needs of projects.
- Sees that adequate materials, equipment, and supplies are available at minimal cost.
- Establishes budgets and determines the cost of water and wastewater line extensions.
- Recommends service connection fees and installation charges.
- Supervises meter reading.
- Supervises utility billing and collection of revenue in cooperation with the finance department.
- Supervises the proper maintenance of the water treatment plant, water distribution system, wastewater treatment plant, and wastewater collection system.
- Responsible for personnel training and certification requirements.
- Responds to customer complaints.
- Coordinates all administrative activities of the division/department including records, payroll, and budget estimates.
- Responsible for guiding and training others and initiating disciplinary actions.

- Coordinates projects and operations with the consulting engineer.
- Coordinates utility operations with the State Department of Environment and Conservation.

Other Job Functions:

- Refines existing work methods and develops new techniques, procedures, concepts, or programs within established budget. Recommends and enforces utility policy.

Required Knowledge and Abilities:

- Knowledge of the principles and goals of water and wastewater administration.
- Knowledge of materials and equipment used in the maintenance and construction of water and wastewater systems.
- Knowledge of legal regulations regarding employee health and safety, workers' compensation and environmental regulations.
- Knowledge of the principles and practices of construction and maintenance supervision.
- Knowledge of the operation of heavy and light equipment used in water and wastewater line construction.
- Knowledge of methods and practices used in maintenance and construction of water and wastewater systems.
- Ability to plan, organize, assign, supervise, and inspect the work of subordinates.
- Ability to work with a variety of people from a variety of agencies.
- Ability to estimate materials and equipment requirements.
- Ability to keep operational records and make reports.
- Ability to interpret and work from blueprints and engineering data.
- Ability to establish and maintain an effective working relationship with the public and employees.

Recommended Qualifications:

Graduation from a four-year college of higher learning with a degree in business, or civil engineering, industrial technology or equivalent. Experience in water and wastewater system maintenance or construction. Must possess a valid Tennessee drivers license or be capable of obtaining one. Must be certified or obtain certification as a grade II water distribution and wastewater collection system operator within one year.

Note: While some recommend that an applicant possess a grade IV water treatment and grade IV wastewater treatment certification, the emphasis is on a manager of the system not treatment processes for which the chief operators are responsible. Requiring grade IV certifications significantly reduces the pool of applicants. The few who may be grade IV will probably lack the management skills required for operating a large utility with 10,000 customers.