10 – Planning and Program Implementation

Responsibility for the Wastewater Utility was assigned to Public Works Water Resources in 2005, with the intention of developing a more comprehensive, integrated management approach.

Currently, the Wastewater Utility has two core services:

- ***Planning, Policy and Program Management***. Planning, policy development and program management; capital facilities planning, funding and construction monitoring; and administrative support services. Storm and Surface Water Utility staff has been temporarily shifted to the Wastewater Utility to support development review, technical assistance and code enforcement, monitoring and public involvement services.
- ***Operation and Maintenance***. Maintaining pipes, pump stations, Septic Tank Effluent Pump (STEP systems) and community onsite systems.

This chapter illustrates how the Wastewater Utility fits within the Public Works organizational structure, then describes current practices and staffing, challenges and issues related to Planning, Policy and Program Management and Operation and Maintenance. Planned improvements are presented in Chapter 16 and summarized in Chapter 17.

ORGANIZATIONAL RELATIONSHIPS

The Public Works Department is organized into four lines of business (Water Resources, Waste Management, Transportation and Technical Services). The three water-related Utilities (Drinking Water, Wastewater and Storm and Surface Water) are managed under the leadership of Water Resources.

Technical Services supports the other lines of business by providing capital facilities engineering, design and construction management. The Public Works director's office provides accounting, strategic communications and gateway services.

The Wastewater Utility is also supported by three other City departments:

- ***General Government.*** Oversight of City policies and legal issues as well as coordination of emerging issues.

- ***Administrative Services.*** Billing, payroll, financial planning and cash management.
- ***Community Planning and Development***. Implementation of regulations during private development.

Figure 10.1 illustrates the relationship among these programs and support services.

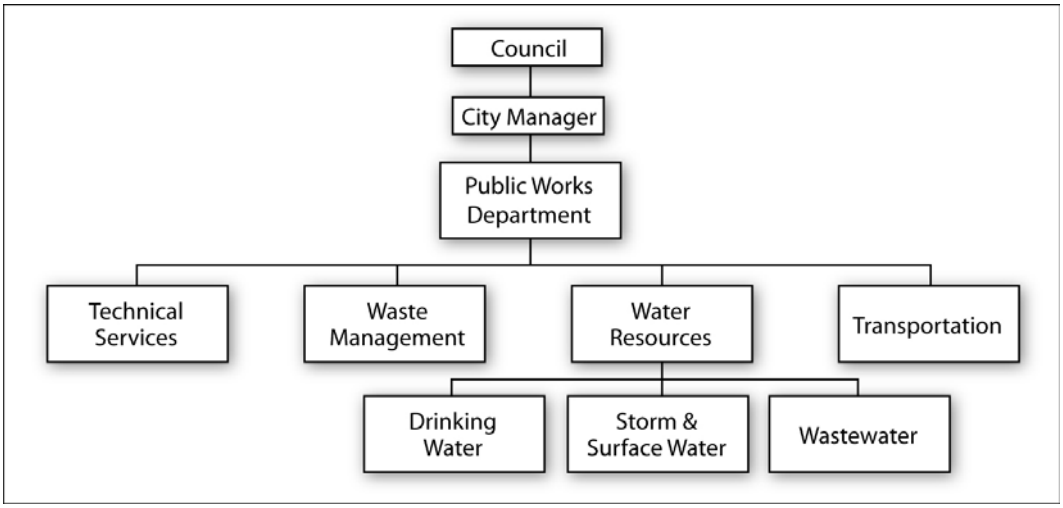

Figure 10.1. Organizational Relationships

PLANNING, POLICY AND PROGRAM MANAGEMENT

Responsibility for Wastewater Utility planning and program development was assigned to Water Resources in 2005. This section outlines current practices, staffing levels and challenges.

Current Practices

Planning, Policy and Program Management provides overall direction and management of the Wastewater Utility. Responsibilities include long-term planning, policy, technical and financial support to the Wastewater Utility. Primary activities are capital facility planning, master plan development and implementation, program management, monitoring, evaluation, technical assistance to developers and property owners, development review and public education.

Current Staffing

In 2006, the Wastewater Utility funded 2.25 employees (FTEs) through a utility rate increase for Wastewater Utility planning, policy development and management. This staff has been provided on a temporary basis by Storm and

Surface Water program employees (1.25 FTE) and one new employee. These employees are responsible for day-to-day management of the Wastewater Utility as well as developing this Wastewater Management Plan.

The Wastewater Utility draws on Public Works Technical Services staff for project-specific design and construction services, and for day-to-day support of operation and maintenance. The Utility relies on Public Works Administrative Services staff for customer billing and data management. These costs are funded as part of project budgets and overhead charges.

Challenges and Issues

Because of the many challenges detailed in preceding chapters, the Wastewater Utility is faced with increasing needs for managing the gravity system, STEP and onsite systems. Rapid development compounds the problems arising from the historical lack of regional sewage planning and development. Planning and program management services are necessary prerequisites for an effective capital facility program. The biggest challenges are related to developing the capacity for program planning and implementation (including development review, technical assistance and code enforcement; monitoring, research and evaluation; and public involvement and education).

Proactive decision-making. New responsibilities for wastewater planning and program implementation have been absorbed by existing Storm and Surface Water program staff on a limited basis. Historically, lack of resources meant that Wastewater Utility decisions were often reactive, and opportunities for improved service and efficiency were missed.

Managing the existing infrastructure. Capital facility needs in Olympia are increasing as outlying areas develop, existing infrastructure exceeds its service expectancy, and construction costs escalate (Chapter 5). Capital facilities management relies upon understanding the current condition of the extensive infrastructure, forecasting future needs and responding to unanticipated problems.

STEP systems have proliferated and are causing additional stress on an already aging infrastructure; managing these systems and planning for eventual replacement will be a long-term issue (Chapter 6).

Planning for new development. As Olympia grows, especially in outlying areas distant from the LOTT Alliance treatment facility, wastewater system designs are increasingly complex and costly, and require careful review and planning to integrate them with the existing system. Financial concerns alone justify adequate review of new development proposals.

Managing onsite sewage systems. Much of the City's wastewater management is provided by privately owned and maintained onsite sewage systems, which are regulated by the Thurston County Board of Health. The City's role in managing this important component of the system has been limited to reviewing applications for new systems and providing educational information and workshops in cooperation with Thurston County. The public and environmental health risks of onsite systems in rapidly urbanizing areas like Olympia warrant additional management (Chapter 7).

Technical and customer support. Resolving various concerns from the development community and residents requires detailed knowledge about the wastewater infrastructures. Decisions about gravity sewer availability and potential extensions, onsite system permitting, and problem troubleshooting are financially important to those affected by wastewater policies. Code enforcement, environmental monitoring and public education on specific issues are also important.

OPERATION & MAINTENANCE

Wastewater operations staff are responsible for operating and maintaining approximately 166 miles of sanitary sewer pipe ranging from 6–42 inches in diameter, approximately 4,700 manholes, 27 sewer pump stations, over 1,500 residential and 12 commercial STEP systems, and three community onsite sewage systems. This section outlines current practices, staffing levels and challenges.

Current Practices

Specialized maintenance is required for the various components of the wastewater infrastructure: gravity sewer pipes, pump stations, STEP systems and community onsite systems. Other maintenance activities support the LOTT Alliance. For details, see Appendix C-3.

Gravity Sewer Pipes

Operation and maintenance of the gravity sewer pipes ensures efficient and unobstructed sewer flows, since neglect can lead to overflows. Major activities include:

- Television inspection and condition rating to evaluate structural integrity.
- Pipe cleaning to remove sludge, soil and debris.
- Root control to minimize obstructions and cracks in the pipe.
- Small-scale projects to repair or replace pipes and manholes.

Wastewater Pump Stations

Pump stations and force (pressure) mains are used to convey the wastewater to a higher elevation from which it can continue flowing by gravity. The City currently owns and operates 27 pump stations and operates three additional privately owned pump stations through contractual arrangements. Failure of any of the critical pump station components may lead to significant, ongoing wastewater overflows. (For details, see Chapter 5 and Appendix C-2.)

Electronic telemetry equipment in each pump station monitors its operation continuously and signals any malfunction. A telemetry failure prompts an immediate response by O&M personnel. The pump station crew checks each station monthly to verify proper operation.

STEP System Maintenance

The City currently owns and operates more than 1,500 STEP systems located on privately owned parcels (for details see Chapter 6). Maintenance of these systems is labor intensive. All systems are inspected every one or two years. Residential STEP systems are scheduled for maintenance once every five years and commercial STEPS every two years. Regular maintenance includes pumping the tank and removal and cleaning of screens, pumps and level controls.

STEP systems generate approximately 90 percent of the total wastewater system service calls requiring response by O&M personnel. Currently, STEP system maintenance is performed by one full-time employee, who is supported by other staff as needed.

Community Onsite Sewage System Maintenance

Olympia currently owns and operates the three community onsite sewage systems installed since 1990 (for details see Chapter 7). Regular maintenance, similar to that of commercial STEP systems, is conducted once every two years.

Services Provided to LOTT

Under the 2000 intergovernmental contract establishing the LOTT Alliance, Olympia provides certain services to maintain the regional LOTT wastewater management facilities. These services include cleaning the dump basin used by onsite system service firms and the centrate line at the Budd Inlet treatment plant and assisting with emergency response when needed.

Emergency Response

The Sanitary Sewer Overflow Emergency Response Plan (Appendix C-4) describes the roles and responsibilities for managing various types of

emergencies, and details general procedures that are followed during and after an emergency situation. The plan parallels the LOTT Alliance emergency response plan, and includes cooperative arrangements with LOTT and neighboring cities. Yet to be developed is a comprehensive risk assessment and specific plans for a sewer overflow at each critical facility.

Current Staffing

Wastewater system operating and maintenance staff are drawn from three sections in the Public Works Department. The Wastewater/Stormwater Operations staff operates and maintains both collection systems (including stormwater and gravity sewers, force mains, catch basins and manholes, STEPS and community onsite systems). A pump crew supervised by Water Operations maintains all wastewater, stormwater and water supply pumps. Allocating staff time based on similar kinds of work and required skills has proven effective in making the most of limited resources.

The Wastewater Utility funds 8.83 employees for the following operation and maintenance activities. Some employees are shared with other public works programs.

- Wastewater/Stormwater Operations Supervisor (0.5 employee).
- Wastewater /Stormwater Lead Worker (0.5 employee).
- Data Control Specialist (0.5 employee).
- Maintenance Worker II (4 employees); 3 employees are assigned to work on pipe cleaning and TV inspection and 1 employee on STEP systems.
- Pipe Locator (0.33 employee).
- Maintenance Technician (2 employees), assigned to wastewater pump station O&M.
- Remote Systems Technician (1 employee), assigned to operation and maintenance of the wastewater telemetry system, as well as controls and electrical equipment.

Challenges and Issues

Operations and maintenance issues facing the Wastewater Utility are described below.

Rapid growth. Over the next six years, the wastewater system is projected to experience rapid expansion, with 30 miles of new sewer pipe and five additional pump stations serving over 4,000 new customers. This growth, layered onto an

already aging system, will require increased levels of operation and maintenance to keep the system functioning properly.

Increasing number of STEPS. Prior to the STEP moratorium in early 2005, STEP systems had become the preferred method of sanitary sewer service in the northeast and southeast urban growth areas. As a result, the number of STEP systems has risen dramatically to over 1,500. An additional 700 systems will be added as vested developments are constructed during the next five years.

Small scale system repairs. Small-scale wastewater systems repairs and upgrades can be efficiently completed by City O&M crews, rather than contractors. Current capacity to perform the work is limited by both labor resources and equipment. The need for small repairs is expected to increase dramatically in future years as pipe systems continue to deteriorate and problems are identified through the condition rating program.