

# **CITY OF CHATTANOOGA**

## **Classification Specification Title: Process Engineer (Wastewater)**

**Department: Wastewater**

**Pay Grade: WWFG.11E**

**Supervision Received From: Engineering Manager**

**FLSA Status: Exempt**

**Wastewater Engineering**

**Established: 10/23/24**

**Supervisory Responsibility For: None**

**Revision Date: 4/3/25**

### **CLASSIFICATION SUMMARY:**

Incumbent is responsible for modeling of the Regional Wastewater System and Treatment Plant, operating the engineering laboratory, and performing a variety of tasks related to permitting and planning. Duties include managing resources; managing and evaluating daily operations and providing technical assistance to other Departments in the Wastewater Division. Work is performed under administrative review, working with the maximum degree of initiative and judgment.

### **SERIES LEVEL:**

The Process Engineer is a stand-alone position.

### **ESSENTIAL FUNCTIONS:**

*(The following duties ARE NOT intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.)*

Modeling of various plant processes using advanced modeling software such as BioWin and BioWin Controller. Simulating the treatment trains at the Wastewater Treatment Plant to investigate potential outcomes to various treatment changes, and to evaluate operation and control strategies.

Use of Microsoft Word, Microsoft Excel and Visual Basic for Applications for advanced analysis of utilities usage data, preparation of reports, and graphs.

May supervise lower level wastewater utility staff to include prioritizing and assigning work; ensuring staff are trained; ensuring that employees follow policies and procedures; and maintaining a healthy and safe working environment.

Assists in managing the day-to-day operations of the Regional Wastewater System which includes advising on development, planning, coordinating, administering and evaluating

programs, projects, processes, procedures, systems, standards, long and short-term strategic planning and/or service offerings; ensures compliance with federal, state, and local laws, regulations, codes, and/or standards.

Assists in forecasting, preparing and administering the utility budgets; prepares cost estimates for budget recommendations; submits justifications for budget items; monitors and controls expenditures.

Prepares and evaluates specifications, scopes of work and requests for proposals for new processes, equipment and services; negotiates related contracts and change orders.

Communicates and collaborates with internal departments, external consultants, vendors, external agencies, regulatory officials and/or other interested parties to coordinate work activities, exchange information, and resolve problems.

Compiles and monitors operational, administrative and statistical data related to wastewater and regulatory requirements; prepares related reports, procedures and documentation.

Provides technical expertise and guidance to contractors, ensuring compliance with applicable contract terms and conditions and authorizing contractor payments.

Represents the City and/or the Regional Wastewater System at a variety of internal and/or external meetings, public events, training sessions, on committees and/or other related events in order to receive and/or convey information.

Uses, carries and answers their cell phone for business purposes as determined by the assigned job duties and the department head.

Performs other duties as assigned.

#### DEPARTMENT SPECIFIC DUTIES (if any):

Preparation of Raw Wastewater samples for external analysis of genetic material of selected viruses causing diseases, such as COVID, and/or investigating genomes of potentially pathogenic emerging viruses.

Operating the Engineering Laboratory to assist the Operations group in producing particular measured data or investigating issues like nitrification toxicity or anaerobic digestion performance. May analyze wastewater samples by performing a variety of standard chemical and physical examinations requiring knowledge of and experience with EPA-approved test methods or HACH methods.

May design and/or assist in the operation of laboratory and/or pilot-scale experimental units.

Is responsible for contacting the manufacturer for technical support and maintenance, as needed, for complex problems and keeping instrument maintenance logs up-to-date.

Investigates atypical out-of-expected test data to determine, if possible, the cause.

Advises on corrective action to reduce or eliminate future occurrences of aberrant quality control data.

May work with and around hazardous chemicals and wastewater, which may impose a risk of personal injury or contracting of infectious disease.

May be a participant for generating data used to determine efficient operation of the City's wastewater treatment plant. Data produced are used to make suggestions for adjustment to wastewater operations, as needed.

May immediately notify interested parties of potential permit violations or other aberrant results requiring attention or corrective action to wastewater processes.

Assist Engineering and Operations in developing and obtaining quotes for analytical services like Anaerobic Digestion analyses, Digester Gas analysis, and investigating the presence in our WW of potential toxic chemicals via analytical tools like GC-MS and/or HPLC-MS analyses.

Must accomplish the essential functions of the job, with or without reasonable accommodations, in a timely manner.

May assist senior staff with assignments, as needed.

#### MINIMUM QUALIFICATIONS:

Bachelor's Degree from an accredited college or university in chemistry, biology, environmental process engineering, environmental science, or a related field and six (6) years of progressively responsible process modeling experience in a large wastewater system or any combination of equivalent experience and education.

Or

Class 4 Wastewater Operators Certification and a minimum of eight (8) years of progressively responsible process modeling experience in a large wastewater system.

#### LICENSING AND CERTIFICATIONS:

A valid Driver's License.

Tennessee Class IV Wastewater Operators Certification.

Professional Engineer License preferred; must be issued in the State of Tennessee

#### KNOWLEDGE AND SKILLS:

Knowledge of management principles and practices; applicable federal, state and local laws, ordinances, codes, rules, regulations, policies and procedures; wastewater treatment plant operations; environmental engineering principles; project management principles and practices; contract management principles; water resource program management principles; advanced mathematical concepts; public administration principles; chemistry principles; long-range capital planning principles and practices; process controls associated with wastewater treatment and biosolids disposal and budgeting principles.

Skill in monitoring and evaluating the work of subordinate staff; prioritizing and assigning work; developing and administering budgets; developing long-range capital plans; managing multiple water resource programs; interpreting and applying applicable laws, ordinances, codes, rules, regulations, policies and procedures; coordinating activities with other internal departments and/or external organizations; using a computer and related software applications; developing and implementing policies, procedures and operating strategies; preparing and analyzing statistical data; managing the work of external vendors and contractors; applying independent judgment, personal discretion and resourcefulness in interpreting and applying guidelines; communication and interpersonal skills as applied to interaction with coworkers, supervisor, and the general public, sufficient to exchange or convey information and to receive work direction.

#### PHYSICAL DEMANDS:

Positions in this class typically require reaching, standing, walking, fingering, grasping, talking, hearing, seeing, and repetitive motions.

#### WORK ENVIRONMENT:

Medium Work: Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently and/or up to 10 pounds of force constantly to move objects. Incumbents may be subjected to fumes, odors, dusts, gasses, and infectious diseases.

#### SPECIAL REQUIREMENTS:

Safety Sensitive: Y

Department of Transportation - CDL: N

Child Sensitive: N

The City of Chattanooga, Tennessee is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the City will provide reasonable accommodations to qualified individuals with disabilities and encourage both prospective and current employees to discuss potential accommodations with the employer.