

# CITY OF CHATTANOOGA

## Classification Specification Title: Laboratory Analyst 2 (Wastewater)

**Department: Wastewater**

**Pay Grade: WWFG.11E**

**Supervision Received From: Manager Laboratory Services**

**FLSA Status: Non-Exempt**

**Supervisory Responsibility For: None**

**Established: 6/29/07**

**Revision Dates: 4/2/25;**

**12/11/23; 10/20/23; 10/3/22**

### CLASSIFICATION SUMMARY:

Incumbents in this classification are responsible for performing qualitative and quantitative analysis on a variety of wastewater, industrial and plant samples, including more complex analysis requiring knowledge and experience in operating the atomic absorption spectrophotometer, mercury analyzer, and inductively-coupled plasma spectrophotometer (ICP).

Duties include collecting and analyzing samples, preparing samples for analysis, assisting with managing laboratory databases, preparing and maintaining a variety of records, preparing reports, calibrating laboratory equipment and monitoring laboratory supplies and inventory. Works under limited supervision. May supervise laboratory staff and perform other managerial duties in the absence of the Manager of Laboratory Services.

**SERIES LEVEL:** Laboratory Analyst 2 is the fourth level of a five-level laboratory series.

### 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.)*

Analyzes wastewater samples by performing a variety of standard chemical, bacteriological and physical examinations requiring knowledge of and experience with EPA-approved test methods. Routine analysis may include total organic carbon and metals analysis.

Analyzes prescribed quality control samples and evaluates the results to ensure they are within required control limits. Investigates out-of-control data to determine, if possible, the cause. Takes corrective action to reduce or eliminate future occurrences of aberrant quality control data.

May operate, calibrate, and maintain complex equipment and instruments, including the atomic absorption spectrophotometer, mercury analyzer, and inductively-coupled plasma spectrophotometer (ICP-OES and ICP-MS).

Operation and maintenance of these instruments requires basic laboratory knowledge supplemented by advanced knowledge and experience that may include special training classes

on or off site conducted by the instrument manufacturer concerning, among other topics, how to choose the most appropriate analysis techniques/variations for each sample type.

May maintain the laboratory water purification systems.

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

May supervise laboratory staff and perform other managerial duties in the absence of the Manager of Laboratory Services or at his/her direction, including, but not limited to: oversees all aspects of laboratory testing, including QA/QC; makes work assignments to ensure required testing is completed in a timely fashion; approves final laboratory reports; approves personal leave requests and time clock records; represents the laboratory in applicable meetings, as needed; maintains laboratory inventory; communicates with other City organizations concerning laboratory services, as needed.

Collects and/or receives wastewater samples, industrial waste samples, stormwater samples, landfill samples, and chemical samples; verifies and maintains chain-of-custody for samples in a way that maintains the legal defensibility of the records.

On-call, as needed, to initiate water quality testing after normal business hours.

May be required to work even during trying times such as epidemics or pandemics and during times of emergency declarations, since much of the data generated is essential to regulatory requirements and for operational purposes.

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

Primarily responsible for generating data used to determine compliance with State and Federal regulations and applicable environmental permits issued to the City.

Signs an affidavit each month attesting to the truth, accuracy, and completeness of data produced with penalty of discipline up to and including termination.

Primarily responsible for generating data used to determine efficient operation of the City's wastewater treatment plant.

Data produced are used to make adjustments to wastewater operations, as needed.

This includes testing of chemicals used in treating wastewater to ensure they meet the specifications required by City contracts.

Required to pass an EPA-mandated proficiency study of blind samples annually; document any issues; make corrections and retest any parameters that are not within study acceptance limits.

Signs documents and keeps records in such a way that these may be used in a court of law, if necessary.

Immediately notifies interested parties of permit violations or other aberrant results requiring attention, reporting to regulatory authorities, or correction.

Enters testing results directly into the laboratory database; or enters raw data into spreadsheets and imports calculated values into the laboratory database for review.

Exports data to operational databases, as necessary, for use by other groups within the City.

Reviews for completeness and accuracy data entered by other employees.

May prepare and review reports of laboratory results, using the laboratory database, to be sent to end users for use in monitoring and permit compliance.

Assists with sample log-in and managing laboratory databases, which may include correcting problems, routine maintenance, set-up functions and communicating with outside vendors to resolve technical issues.

These roles require basic database training, supplemented by additional knowledge of database functions and procedures.

May assist in preparing the monthly EPA Discharge Monitoring Reports required by the City's National Pollutant Discharge Elimination System permit, which requires additional training in, experience with, and knowledge of the City's Operations database and the USEPA's NetDMR national data reporting system.

Prepares standard solutions and reagent solutions for use in daily analytical testing in accordance with quality control procedures and standard operating procedures.

Reviews for accuracy and updates standard operating procedures required for laboratory analysis.

Records quantities of lab supplies and chemicals taken from the stockroom to assist in maintaining an adequate supply at all times.

Checks in laboratory supplies as they are received and places them in the appropriate location in the stockroom or chemical cabinet.

Assists senior staff with assignments, as needed.

Must meet regular attendance requirements.

Must be able to maintain good interpersonal relationships with staff, co-workers, managers and citizens.

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

Performs other duties as assigned.

This position is deemed essential during inclement weather situations, and must report to or remain at work, even when administrative closings are announced, as determined by the Department Head.

DEPARTMENT SPECIFIC DUTIES (if any):

MINIMUM QUALIFICATIONS:

Bachelor's Degree with coursework in Chemistry, Biology, or Environmental Science and five (5) years progressively responsible laboratory analysis experience. Experience with atomic absorption and inductively-coupled plasma analysis or other complex instrument analysis is desired; or any combination of equivalent experience and education. Must have some experience using spreadsheet software and databases to compile and process numerical or statistical data. Prior supervisory or managerial experience is preferred.

LICENSING AND CERTIFICATIONS: Valid Driver's License.

SUPPLEMENTAL INFORMATION:

KNOWLEDGE AND SKILLS: Knowledge of chemistry and biology theory and concepts; basic and advanced laboratory equipment, machinery, tools, and materials; data analysis techniques; database management and advanced spreadsheet concepts; total organic carbon, atomic absorption, and inductively-coupled plasma (ICP) analysis techniques; mathematical concepts and chain-of-custody principles.

Skill in performing total organic carbon, atomic absorption and ICP analysis; operating, maneuvering and controlling the actions of advanced and complex laboratory equipment, tools and materials; evaluating, auditing, deducing and assessing data utilizing established guidelines; performing mathematical calculations, including linear regression; interpreting diagrams; managing databases, programming spreadsheets and 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.

Knowledge of managerial principles; laboratory quality assurance and control practices and procedures; skill in prioritizing and assigning work; preparing a variety of reports; maintaining inventory.

PHYSICAL DEMANDS: Positions in this class typically require reaching, fingering, grasping, talking, hearing seeing and repetitive motions.

WORK ENVIRONMENT: 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, gasses, poor ventilation, chemicals, and infectious diseases.

SPECIAL REQUIREMENTS:

Safety Sensitive: N

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.