

JOB DESCRIPTION
Senior Laboratory Analyst
Code Number: 30004

GENERAL PURPOSE

Under direction, oversees the operation of a section of the laboratory within the water quality division that performs a variety of simple to complex routine and non-routine tests on water, wastewater, and biosolids samples to determine the presence of bacteria, trace metals and organic and inorganic substances in compliance with federal, state and local requirements; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

This is the lead/advanced-journey level in the professional Laboratory Analyst series. Incumbents provide technical supervision to lower level staff including assigning, directing, reviewing the work of staff, and serving as technical expert. Incumbents perform the more complex tasks and assignments. Positions at this level are distinguished from those in the lower level classification of Laboratory Analyst III by the independence with which they perform their duties of handling the most difficult or complex work and by performing lead work.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the class.

Directs and oversees a section of the District's water quality laboratory; directs, assigns and reviews the work of laboratory analysts, and others performing simple to complex analyses of water, wastewater, and biosolids.

Coordinates and guides the work of lower-level laboratory staff; trains laboratory analysts in performing analyses on environmental samples.

Directs, oversees, and monitors the performance of a variety of wet chemical, biochemical, microbiological and instrumental analyses of samples collected from various areas within the District's water and wastewater systems; ensures application of EPA and Standard Methods; develops, reviews and revises standard operating

procedures (SOPs); directs the preparation of standards, reagents and samples for analysis.

Reviews, interprets and approves results of laboratory tests for validity and accuracy; maintains accurate records and prepares reports of work performed by section; invalidates samples when quality control standards are not met; directs re-collection of samples and/or re-analyses.

Implements Laboratory Quality Assurance program; directs, monitors, and evaluates section quality assurance/control to ensure methods used will result in precise, accurate, and defensible data.

Ensures safe laboratory work environment by implementing the District's Cal-Star program, which includes Chemical Hygiene Plan, Job Safety Analyses (JSA), chemical inventory program, engineering controls, use of Personal Protective Equipment (PPE), and Material Safety Data Sheets (MSDS).

Investigates and develops analytical procedures and instrumentation; recommends purchases; implements approved methods; evaluates and revises existing chemical test procedures; acquires certification of new or modified instruments and/or methods; maintains expertise by tracking federal and state regulations pertaining to laboratory analysis or water and wastewater requiring complex analyses and use of advanced technology.

Participates in Environmental Laboratory Accreditation Program (ELAP) audits in conjunction with the California Department of Health Services to maintain laboratory certification.

Supports and works with District employees in other departments on matters pertaining to water quality and/or special projects.

Works with outside government entities; education/research institutions, other water and wastewater agencies, regulatory agencies, and District's customers regarding water quality.

Coordinates laboratory testing with contract laboratories.

Assists with preparing and monitoring the division budget; evaluates laboratory services and equipment; recommends purchase of equipment; makes recommendations to improve laboratory efficiency, as needed.

May design and/or perform research and experimentation on special projects assigned by the Manager of Laboratory and Water Quality Services, including the development of reports and data interpretation.

In the absence of qualified lower level staff, may perform routine and non-routine analyses; conducts the more difficult and complex sample preparation and analyses, both organic and inorganic; sets up laboratory equipment, which may include instruments such as gas chromatograph, inductively coupled plasma spectrometer, total organic carbon analyzer, ion chromatograph, atomic absorption spectrometer; maintains, calibrates, and repairs laboratory equipment; tracks lab inventory and orders needed supplies.

Performs related duties as assigned.

DESIRED MINIMUM QUALIFICATIONS

Knowledge of:

Theory, principles, practices, methods, chemicals and agents used in microbiological, chemical and physical analyses of water; water sampling techniques; laboratory procedures for water and wastewater analysis; processes used in water and wastewater treatment; federal and state regulations; the operation and maintenance of standard laboratory equipment such as Inductively Coupled Plasma (ICP and ICP-MS), Cold-Vapor Mercury Analyzer, Total Organic Carbon (TOC) analyzer, spectrophotometer and Ion Chromatograph (IC); the use of standard laboratory glassware; media and agents used in microbiological/biological analyses; safe laboratory practices and procedures; quality control techniques; District personnel rules, policies and labor provisions; principles and practices of technical supervision.

Ability to:

Provide technical supervision, guidance, and training to less-experienced professional and technical staff; operate and train others on the use of a computer and automated laboratory equipment in the analysis of raw and potable water and wastewater samples; calibrate, maintain, and perform minor repairs on laboratory equipment; understand, carry out, and develop testing protocols; prepares accurate reports and records of test results and special statistical analyses; conduct original research; present scientific data clearly and concisely, both orally and in writing;

establish and maintain effective working relationships with those contacted in the course of work; utilize Laboratory Information Management System (LIMS) database, Microsoft suite including Excel, Word, and Outlook, and other Laboratory and District specific software programs; exercise sound independent judgment within general policy guidelines; communicate effectively, orally and in writing.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from an accredited college or university with a bachelor's degree in microbiology, chemistry, biology or a closely related field; and four years of increasingly responsible chemical laboratory experience in the microbiological, chemical and physical analyses typically used in an environmental laboratory; or an equivalent combination of training and experience.

Licenses; Certificates; Special Requirements:

A valid California driver's license and the ability to maintain insurability under the District's Vehicle Insurance Policy.

CWEA Laboratory Analyst Certificate III.

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands

While performing the duties of this job, the employee is regularly required to walk; talk or hear by telephone and in person; climb or balance; smell; use hands to finger, handle, feel or operate objects, tools or controls; reach with hands or arms; and lift or move up to 40 pounds. Employees are frequently required to sit and stand for extended periods of time.

Specific vision abilities required by this job include close and distant vision, depth perception, and the ability to distinguish subtle colors and shades and adjust focus.

Mental Demands

While performing the duties of this class, employees are regularly required to use written and oral communication skills; read documents or instructions; analyze and solve problems; observe and interpret data or information; use math and mathematical reasoning; learn and apply new information or skills; perform highly detailed and precise work; and meet time-sensitive deadlines.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employees may be frequently exposed to biological hazards and toxic or caustic chemicals, fumes and airborne particles. Employees work near moving mechanical apparatus. The noise level in the laboratory work environment may frequently be loud.

FLSA DETERMINATION: Meets professional/administrative exemption from overtime.