



## Senior Laboratory Analyst

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### Summary

Collect samples; perform laboratory chemical and biological analyses on water, wastewater, recycled water, biosolids, landfill leachate, stormwater, river water, and industrial wastes; perform complex field and laboratory investigations to diagnose and resolve both in-laboratory and field problems.

### Class Characteristics

This is a specialized professional level class for the technical laboratory function within the City's Water Resources and Conservation Department. An incumbent in this class performs a variety of advanced chemical and physical laboratory analyses of water, wastewater, stormwater, sludges, and soils at the City's water quality laboratory. An incumbent in this class works under direction of a higher-level supervisor or manager.

This class can be distinguished from the lower-level class of Laboratory Analyst in that the former class performs the most advanced testing procedures and has greater record keeping and reporting responsibilities, including quality assurance and quality control. This class can be distinguished from the higher-level class of Environmental Services Supervisor in that the incumbent in the latter class has full supervisory responsibilities over various regulatory programs.

### Essential Duties, Skills, and Demands of the Position

*The duties, skills, and demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with a disability to perform the essential duties, skills, and demands.*

#### Duties:

Perform and analyze standardized and non-standardized chemical, biological, and physical testing and analyses of water, wastewater, recycled water, biosolids, landfill leachate, stormwater, and river water.

Indirectly supervise and train all personnel in the laboratory regarding the collection of laboratory samples and analytical test methods in keeping with 40 CFR 136 and amendments thereto.

Develop and maintain the quality assurance/quality control programs as required by the regulations. Maintain and prepare a variety of technical reports.

Create laboratory tracking mechanisms that meet regulatory requirements.

Research and develop new tests to analyze water, domestic and industrial wastewater, gases, sludges and soils.

Research and solve chemical matrix problems.

Prepare and standardize chemical reagents and solutions.

Perform collection of wastewater samples from various sources within the wastewater treatment system.

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Assist in the collection of industrial samples that discharge to the wastewater treatment facility.

Analyze and trace the sources of undesirable industrial wastes entering the City's wastewater collection system.

Assemble and record test data, prepare draft charts and graphs.

Ensure compliance with all requirements of agencies that certify or otherwise permit the City's laboratory operations.

Conduct quality control inspections to maintain laboratory equipment including diagnosing issues, conducting preventive maintenance, troubleshooting erroneous readings, and repairing analytical instruments.

Manage the laboratory calendar and schedule of analysis for in-house testing.

Manage outside laboratory analysis program.

Assist in laboratory budget preparation.

Perform related duties as assigned.

Skills/Abilities:

Perform advanced standardized and non-standardized laboratory tests involving the chemical, biological, and physical analysis of water and wastewater, recycled water, biosolids, landfill leachable, stormwater, and river water.

Analyze and interpret routine test results and data.

Read and interpret a variety of meters, gauges, and recording charts.

Maintain and update routine records and logs.

Follow oral and written directions.

Operate office equipment including computers and supporting word processing, spreadsheet, and database applications.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of the work.

Physical Demands and Work Environment:

While performing the duties of this job, the employee is frequently required to sit, stand, walk, talk, hear, and reach with hands and arms. The employee is frequently required to use hands to finger, handle, or feel objects, tools, or controls, and will frequently be required to enter data into a terminal, personal computer or keyboard device and operate office equipment requiring repetitive arm/hand movement. The employee is often required to climb, balance, stoop, kneel, crouch, or crawl or use the ability to smell. The employee must be able to perform a moderate amount of physical labor, including having sufficient strength to lift, carry and/or move items up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. Must be able to hear alarms and respond to others without being able to see them performing the duties of this job, the employee is often exposed to outside weather and wet conditions. Other work conditions include exposure to unpleasant odors, mechanical parts, fumes, airborne particles and moderate noise levels. There is risk of exposure to hazardous fumes and substances.

**Special Physical Requirement:**

May be required to wear respiratory protection or other safety equipment, and may be required to wear foot, eye, and hearing protection.

**Qualifications**

**Knowledge of:**

Principles of chemistry, biology, and related sciences.

Principles and methods used in chemical, biological, and physical testing and analysis.

Practices and methods of chemical, biochemical, and bacteriological testing and analysis.

Chemicals and equipment used in water quality analysis.

Laboratory and field safety, equipment, material care, and maintenance.

General concepts in the operation and maintenance of water distribution and wastewater treatment equipment.

Laboratory and plant safety methods and procedures.

Laboratory quality assurance and quality control methods and procedures.

Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases.

**Education and Experience**

*Any combination equivalent to the education and experience likely to provide the required knowledge and abilities would be qualifying. A typical way to gain such knowledge and abilities would be:*

**Education:**

A Bachelor's degree from an accredited college or university with major course work in chemistry, biology, microbiology, environmental science, or a related field.

**Experience:**

Three years of experience performing duties as a laboratory analyst or equivalent, in an environmental laboratory, wastewater or water treatment plant laboratory, industrial waste inspection facility, and/or closely related experience.

**Certifications/Licenses:**

Possession of a valid California Class C driver's license.

Possession of a California Water Environment Association Laboratory (CWEA) Laboratory Analyst Grade I certification at the time of appointment is required.

Possession of a California Water Environment Association Laboratory (CWEA) Laboratory Analyst Grade II certification within twelve months of appointment is required.

**Additional Requirement:**

Must be willing to work outside normal working hours when necessary.

Established: 12/20/10

Resolution #: 2010-220 N.C.S.; 2021-123 N.C.S.

Revised: 08/02/21

Department: Public Works and Utilities

FLSA Status: Non-exempt