



## Job Description

*Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job.*

<b>Job title</b>	Scientist III
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### **GENERAL PURPOSE**

Under direction, performs a variety of complex tests and analyses on water, wastewater, and biosolids to determine the presence of, bacteria, trace metals, organic and inorganic substances in compliance with federal, state, and local requirements; performs trace metal analyses using complex instrumentation and lab procedures; conducts non-routine investigations and analyses as directed; and performs related duties as assigned.

### **DISTINGUISHING CHARACTERISTICS**

This is the advanced level non-lead classification in the Scientist series responsible for performing the most complex analyses within the District's laboratory operations including trace metals analysis. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions in the classification rely on experience and judgment to perform and ensure efficient and effective services in the assigned program area. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines and methods to deliver services. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements. This class is distinguished from the Scientist II in that the latter does not perform analyzes on trace metals, and requires a lower level CWEA certification. This classification is distinguished from the Senior Scientist in that the latter performs in a lead capacity and requires a higher level of CWEA certification.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direction from assigned supervisory or management staff. Exercises no direct supervision over staff.

### **TYPICAL 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 this position.*

- Receives and logs samples into Laboratory Information Management System (LIMS) from field staff; splits, preserves, and prepares samples as required for laboratory analyses to include work sent to contract laboratories; prepares materials for sampling events; schedules pickup of sample bottles; enters and retrieves operational field data and analytical information into LIMS.
- Sets up samples for microbiological analyses (presence/absence, Quanti-tray and Multiple Tube fermentation) within holding times; reads results of fermentation/enzymatic methods; counts heterotrophic plates and reports into LIMS; reports failed analyses according to mandated public health protocols as soon as possible after reading results,
- Prepares and mixes standard reagents, titrants, and solutions used in chemical testing and microbiological media for use in bacteriological testing/analysis; ensures that all reagents and media react according to specifications; maintains quality control over cultures.
- Performs a variety of standard laboratory tests, using basic to sophisticated equipment on water samples collected from various areas within the District's water distribution and wastewater treatment systems; tests include biological, chemical, trace metals, microbiological, and other physical analyses of water, wastewater, and biosolids; calculates and interprets test results; conducts special tests and analyses as directed.
- Operates, calibrates, maintains and repairs complex laboratory equipment to include flow, discrete, organic carbon, and mercury analyzers, spectrophotometers, and ICP-ES, ICP-MS, and chromatographs.
- Summarizes data and checks for completeness of analysis; performs chemical balance and checks correctness of analysis; re-assigns testing as necessary; checks backlog to meet hold-time and turn-around time requirements; ensures quality control on all work performed.
- Performs quality assurance tasks; ensures all media used in the laboratory, whether prepared inhouse or by outside vendor, react according to expectations; maintains quality control on cultures; assures the quality of all disposable products upon receipt into the laboratory and before use; maintains all quality assurance records.
- Conducts method development and comparison studies; researches different approved methods; prepares media and performs parallel studies in order to keep laboratory operating efficiently with the best available methods.
- Maintains a diverse range of documentation including, but not limited to, written records of lab results and activities; quality assurance records; equipment maintenance logs; prepares technical reports; and updates reference materials.

- Assists in investigating, developing, perfecting and recommending new water and wastewater test methods and procedures to improve the laboratory's versatility and efficiency.
- Participates in the Laboratory Quality Assurance Program to ensure the methods, techniques and equipment used to analyze samples produce accurate, reliable results; participates in Environmental Laboratory Accreditation Program (ELAP) audits.
- Ensures safe lab environment by performing lab safety checks; participates in the Safety Team; implements and closely adheres to rules, regulations, policies, and procedures governing laboratory safety.
- Utilizes standard protocols in cleaning glassware and laboratory appurtenances, and aseptic techniques to decrease risk of contamination and maintain a sterile work environment.
- Observes and complies with all District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

#### **REQUIRED QUALIFICATIONS**

Knowledge of:

- Theory, principles, practices, methods, chemicals and agents used in trace metals, chemical, and physical and biological analyses of environmental samples.
- Water sampling methods and techniques.
- Laboratory procedures for water and wastewater testing and analysis.
- Methods and techniques of preparing quality media used in microbiological/biological analyses.
- Analytical chemistry and environmental microbiology theory.
- Methods and processes used in water and wastewater treatment.
- Principles and practices of researching and conducting method development and comparison studies.
- The operation, maintenance and use of standard chemistry glassware and laboratory equipment.
- Methods and techniques of operating and calibrating complex laboratory instruments.
- Safe laboratory practices and procedures.
- Principles and practices of quality assurance and control.
- Mathematical principles.
- Federal, state and local laws and regulations applicable to assigned areas of responsibility.
- Methods and techniques of conducting research and analysis.

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- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Perform the full range of complex tests and analyses on water, wastewater, and biosolids to determine the presence of bacteria, trace metals, organic and inorganic substances.
- Prepare quality media for use in microbiological/biological analyses.
- Operate computer and automated laboratory equipment in the analysis of water and wastewater samples.
- Calibrate, maintain and perform minor repairs on complex laboratory equipment.
- Understand and carry out standard operating procedures.
- Troubleshoot and repair complex laboratory instrumentation and procedures.
- Prepare accurate reports and records of test results and special statistical analyses.
- Present scientific data clearly and concisely, both orally and in writing.
- Make mathematical calculations.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner.
- Prepare clear, concise and comprehensive correspondence, reports, studies, and other written materials.
- Use tact, initiative, prudence and independent judgment within general policy and procedural guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Experience:

*Any combination of experience and education that provides the required knowledge and abilities is qualifying, along with the specific licenses/certifications as outlined below:*

Three (3) years of progressively responsible professional experience in an environmental laboratory, or three (3) years as a Scientist II with the District.

Education:

- Equivalent to a bachelor's degree from an accredited college or university with major coursework in chemistry, biology, microbiology or a related field.

Licenses/Certifications:

- A valid California driver's license and the ability to maintain insurability under the District's Vehicle Insurance Policy.
- Possession of a CWEA Laboratory Analyst Grade III certificate.
- Possession of a CWEA Laboratory Analyst Grade IV certificate is desirable.

**PHYSICAL DEMANDS**

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

Must possess mobility to work in a laboratory and standard office setting and use standard office equipment, including a computer, as well as a diverse range of laboratory equipment; vision to read printed materials and a computer screen, and to operate a motor vehicle and visit various District sites; smell to perform odor tests on water samples and to detect chemicals, and hearing and speech to communicate in person and over the telephone. This is primarily laboratory focused classification with frequent standing, sitting and walking between work areas. Finger dexterity is needed to open and close sample bottles, pipette, and to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification bend, stoop, climb to access materials, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects with an average weight of up to 30 pounds, or heavier weights, in all cases with the use of proper equipment and/or assistance from staff.

**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 work primarily in a laboratory environment with moderate to excessive noise levels, controlled temperature conditions, and exposure to dust, fumes and/or allergens; biologic/infectious agents; and unpleasant odors.

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Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

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This job description has been reviewed and approved by all levels of management in cooperation with the union (if applicable):

<b>Approved by:</b>	<i>Board of Directors</i>
<b>Date adopted:</b>	<i>March 29, 2020</i>
<b>Date modified:</b>	
<b>FLSA determination:</b>	<i>Non-Exempt</i>

**Job Description Acknowledgment**

*I have received, reviewed and fully understand the job description for Scientist II. I further understand that I am responsible for the satisfactory execution of the essential functions described therein, under any and all conditions as described.*

*Employee Name (print):* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Employee Number:* \_\_\_\_\_

*Employee Signature:* \_\_\_\_\_