



## Chemist II

### **DEFINITION**

Under general supervision, responsible for and may perform a variety of chemical, bacteriological, and physical analyses of water to ensure that results are as accurate and precise as possible to maintain the District's compliance with Safe Drinking Water Act and California regulations related to drinking water; and performs related work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the full journey-level class. Incumbents are responsible for ensuring high quality laboratory data to promote continued compliance, integrity, and reporting of quality analytical data and may perform difficult analyses on water and recycled water samples using a wide variety of laboratory instruments with a minimum of supervision. Under the direction of the Water Quality Manager incumbents may perform water quality studies, field work to collect water samples and assist in preparation of compliance reports for the State Water Resources Control Board. The work may include directing and training of other personnel on specific assignments.

### **EXAMPLES OF DUTIES**

- Develops, administers, and monitors contracts for professional services; supports field staff by ensuring supplies are available for timely sample collection and analysis by external lab;
- May perform analyses including bacteriological, microbiological, chemical, and physical examination of water and recycled water;
- Performs water quality field work, including assisting with reservoir treatments;
- May set up, calibrate, and operate a variety of laboratory instrumentation such as flame atomic absorption spectrophotometer, gas chromatograph, gas chromatograph mass spectrometer, total organic carbon analyzer, ion chromatograph, specific ion analyzer and inductively coupled plasma spectrophotometer mass spectrometer;
- Interprets and evaluates test results; recognizes and investigates problems, and recommends solutions;
- Follows laboratory procedures and SOPs and maintains quality control checks in conjunction with analytical work;
- Recognizes potential or actual problems that may occur in analytical procedures, takes proper corrective action;
- Assists in conducting water quality research and special projects;
- Makes mathematical calculations; maintains records of work performed;
- Prepares reports and correspondence as required;
- Enters and reviews data in a laboratory information management system (LIMS) and prepares spreadsheet analysis;
- May monitor and review the work of other personnel on assigned projects;
- Applies and follows safety rules and regulations to work assignments;
- Interprets water quality data;
- Prepares standard chemical solutions, and bacteriological medias;
- Uses computer software for purchasing equipment and chemicals and monitors budget as

necessary;

- May collect water samples at lake sources, in the distribution system, at a consumer's residence, or on construction sites on an as needed basis;
- Receives consumer water quality complaints and inquiries; and provides information regarding water quality and related regulations.

### **QUALIFICATIONS FOR EMPLOYMENT**

Knowledge of:

- Principles, methods, calculations, and materials used in the chemical and microbiological testing and analysis of water;
- Operation of complex laboratory equipment such as a spectrophotometer, ion chromatograph, total organic carbon analyzer, nephelometer, specific ion analyzer, analytical balance, flame atomic absorption spectrophotometer, gas chromatograph, gas chromatograph mass spectrometer and an inductively coupled plasma spectrophotometer mass spectrometer;
- Quality control of analytical procedures;
- Laboratory practices pertaining to safety, care and maintenance of equipment and materials;
- Standard practices for water sampling, chain of custody, and water treatment techniques;
- Proper spelling, grammar, punctuation, and writing practices;
- Computer spreadsheet and LIMS software; and
- Technical report writing.

Ability to:

- Review and perform laboratory analyses in a precise and reliable manner;
- Use laboratory equipment and materials safely and effectively;
- Make timely, accurate observations and decisions;
- Understand and comply with District operation, facilities, applicable regulations; State and Federal Health codes and standards;
- Learn new methods of analysis;
- Use mathematics involved in laboratory work;
- Understand and carry out written or oral instructions;
- Respond accurately and tactfully to inquiries from the general public;
- Deal effectively with those contacted in the course of work;
- Use a computer for the entry and retrieval of data; and
- Prepare clear and concise records, reports, and correspondence.
- Communicate clearly and effectively with people encountered in daily work

Training and Experience:

- Graduation from college with a 4-year degree in chemistry, biology, or closely related field; and two years experience as an analyst in a commercial or industrial lab, one year of which must have included performing water or wastewater analysis, or a graduate degree in chemistry, biology or closely related field, and one year of experience as a professional chemist performing water or wastewater analysis.

### **OTHER REQUIREMENTS**

Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 “all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law.” (Ref: California Government Code, Title 1, Division 4, Chapter 8, Sections 3100-3109)

### **LICENSES AND/OR CERTIFICATIONS**

- Possession of a valid California driver’s license issued by the State Department of Motor Vehicles and satisfactory driving record.
- Possession of a Water Quality Laboratory Analyst Grade II certification issued by the American Water Works Association (AWWA) is highly desirable.

### **PHYSICAL REQUIREMENTS AND WORK ENVIRONMENT**

The physical demands and work environment of this position:

- The employee is frequently required to stand for extended periods of time, reach, twist, turn, kneel, bend, squat, and stoop in the performance of daily activities both in the office and in the field.
- The position requires grasping, repetitive hand movement and fine coordination to handle tools and using a computer. The employee operates a personal computer and a variety of computer software, office equipment and tools and requires near vision in reading plans, correspondence, reports and/or statistical data.
- Acute hearing is required when providing phone and personal service.
- The employee is required to work outside in inclement weather as needed.
- The employee must occasionally lift and/or move up to 50 pounds and be able to work in the field in various types of terrain such as construction sites, hills, and uneven terrain.
- Work is performed in the field, at various businesses, residential buildings, active construction sites, and correctional facilities and in a normal office setting with moderate noise levels.
- Employees are required to operate a motor vehicle and work overtime as necessary.
- Sits to enter and retrieve data from personal computers and terminals via keyboards, and is often performed while sitting up to three hours a day.
- Frequently operates office equipment requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously.
- Possess specific vision abilities required by this job include close vision, color vision, and ability to adjust focus; possess a sense of taste and smell.
- Possess the ability to sort, separate, and arrange material in a prescribed manner and may also require the ability to differentiate between colors when using color-coded materials or files.

### **Work Environment**

- The noise level in the work environment is usually quiet however loud equipment such as generators, heavy equipment and machinery may be encountered working outside
- Exposure to potentially hazardous laboratory chemicals, solvents, microbiological pathogens, odors and fumes.

**Established:** November 1995  
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**Approved by:** Human Resources