



## Chemist I

### **DEFINITION**

Under general supervision, performs a variety of microbiological, chemical, and physical analyses of water using a variety of laboratory instruments and equipment; and performs related work as required.

### **DISTINGUISHING CHARACTERISTICS**

Chemist I is the first level class in the Chemist classification series. Incumbents perform water and recycled wastewater analyses using a wide variety of laboratory instruments, perform water quality studies under the direction of the Laboratory Manager, Chemist II and/or Senior Chemist, and handle customer inquiries. This class is distinguished from the Chemist II and the Senior Chemist in that the former is the journey level, and the latter is the advanced journey level in the classification series.

Positions in the Chemist class series are flexibly staffed; positions at the Chemist II level are normally filled by advancement from the Chemist I level; progression to the Chemist II level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; (iv) the incumbent satisfactorily meeting the internal promotional criteria; and (v) management approval for progression to the Chemist II level.

### **EXAMPLES OF DUTIES**

Typical duties may include but are not limited to the following:

- Performs microbiological, chemical, and physical examination of water and recycled wastewater;
- sets up, calibrates, and operates a variety of instrumentation including a photometer, flame atomic absorption spectrophotometer, gas chromatograph, total organic carbon analyzer, ion chromatograph, and specific ion analyzer;
- maintains quality control checks in conjunction with analytical work;
- prepares standard solutions and bacteriological medias;
- interprets water quality data;
- interprets and applies safety rules and regulations to work assignments;
- recognizes potential or actual problems which may occur in analytical procedures, takes proper corrective action;
- makes mathematical calculations, maintains records of work performed;
- operates computer to enter and retrieve data, and performs spreadsheet analysis;
- may collect water samples at lake sources, in the distribution system, at consumer's residence, or at construction sites;
- receives consumer water quality complaints and inquiries, provides information regarding water quality and related regulations;
- prepares reports and memos for special projects; and

- uses Laboratory Information Management System (LIMS) for sample receipt and the entry and retrieval of data.

### **QUALIFICATIONS FOR EMPLOYMENT**

Knowledge of:

- General chemical and microbiological quantitative and qualitative analyses;
- standard laboratory equipment and their uses;
- chemical, microbiological, and physical characteristics of water, including state and federal health standards;
- standard practices for water sampling and treatment techniques;
- laboratory practices pertaining to safety, care and maintenance of equipment and materials;
- quality control and quality assurance principles;
- technical report writing; and
- computer spreadsheet software.

Ability to:

- Perform laboratory analyses in a precise and reliable manner;
- use mathematics involved in laboratory work;
- make accurate observations and decisions;
- understand and carry out written or oral instructions;
- respond accurately and tactfully to inquiries from the general public and those contacted in the course of work;
- use a computer and applicable software such as MS Office Suite;
- prepare clear and concise records, reports, and correspondence;
- depending upon assignment, drive a vehicle; and
- travel to alternative work locations and offsite meetings.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

- Education: Graduation from college, with a four year degree in chemistry, microbiology, or closely related field; and
- Experience: One year of experience as a professional chemist or laboratory technician.

### **INTERNAL PROMOTIONAL CRITERIA:**

- For non-competitive internal promotional criteria, please refer to the Flex Criteria Matrix for the applicable classification series.

### **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."

- Must possess sensory keenness in perception of colors, sense of taste, and sense of smell.

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

- Depending on job assignment, possession of an appropriate California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.
- Possession of a Water Quality Laboratory Analyst Grade I certification issued by the American Water Works Association (AWWA) is highly desirable.

### **PHYSICAL DEMANDS AND WORKING CONDITIONS**

During the course of performing job duties the employee will need the mobility to work in a standard office setting, operate equipment, which may include office and/or field equipment, or specialized instruments or tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously; enter and retrieve data from personal computers and terminals via keyboards which is often performed while sitting for extended periods of time. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. While working in the field the employee may walk on uneven or un-level ground surfaces such as hills, slopes, ditches or trenches, on or in tanks, and may work at heights up to ten to twelve feet climbing ladders or stairs. The employee is occasionally required to lift and carry short distances objects such as reams of copier paper, office supplies, files, books, printed materials and other packages or equipment weighing up to 50 pounds. This position requires that the employee demonstrate adequate hearing and speech to converse in person and over the telephone, and vision to read printed materials and use a computer screen.

The noise level in the work environment is quiet to moderate noise. The employee is exposed to outdoor temperature, humidity, wetness and dust. The position may require the ability to work overtime and weekends as needed.

Employees who drive on District business to carry out job-related duties must possess a California driver's license for the class of vehicle driven and meet automobile insurability requirements of the District including review of a recent DMV history. In order to drive, individuals must be physically capable of operating the vehicles and equipment safely.

### **OTHER PHYSICAL DEMANDS**

Exposure to potentially hazardous materials, laboratory chemicals, solvents, microbiological pathogens, odors and fumes.

*To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.*

Established: May 1978

Revised: January 2014, November 2021

Approved by: Human Resources Manager