

TAHOE-TRUCKEE SANITATION AGENCY
Class Specification

Job Title: Chemist I/II/III

Department: Operations

FLSA Status: NON EXEMPT

Revised as of: 12/2019

DEFINITION

Performs technical and professional laboratory duties including testing, analysis, examination, collection and processing of water, wastewater and other environmental samples; and provides support to the Laboratory Director.

DISTINGUISHING CHARACTERISTICS

Chemist I - This is the entry level class in the Chemist series. Positions in this class typically require little directly related work experience. The Chemist I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under close supervision while learning job tasks, progressing to relatively less direction as procedures and processes of assigned area of responsibility are learned.

Chemist II - This is the second level class in the Chemist series and is distinguished from the I level by the assignment of the full range of duties. Employees at this level receive relatively less instruction or assistance and are fully aware of the operating procedures and policies within the work unit. Positions in this class are flexibly staffed and are normally filled by advancement from the I level once the incumbent meets the qualification standards of the II level, demonstrates an ability to perform the full scope of the work, and otherwise meets performance standards.

Chemist III - This is the full journey level in the Chemist series. It is distinguished from the Chemist II by the ability to perform the full range of duties assigned as well as possession of a Laboratory Analyst III certification. Positions in this class are flexibly staffed and are normally filled by advancement from the II level once the incumbent meets the qualification standards of the III level, demonstrates an ability to perform the full scope of the work, and otherwise meets performance standards.

SUPERVISION RECEIVED AND EXERCISED

Chemist I

Reports directly to, and receives general supervision from the Laboratory Director.

Chemist II

Reports directly to, and receives direction from the Laboratory Director.

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Chemist III

Reports directly to, and receives direction from the Laboratory Director.

EXAMPLES OF DUTIES (for Chemist I/II/III): *the duties specified below are representative of the range of duties assigned to this class and are not intended to be an inclusive list.*

- Collects field and composite samples and data and transports according to prescribed protocols; performs field sampling at off-site locations.
- Performs a variety of routine and special project laboratory tests to assist related to the plant control and environmental monitoring programs for the wastewater treatment plant and contracted services to other agencies and clients.
- Follows Environmental Laboratory Accreditation Program (ELAP) requirements to produce verifiable data to be reported to the Laboratory Director and the Water Quality Control Board and other entities, as required.
- Collects and processes various samples, following prescribed procedures; prepares media and processes in incubator.
- Performs various chemical and biological tests and maintains records of results and performs quality control processes.
- Receives samples from clients and other local agencies; verifies and maintains chain of custody; documents and logs samples; prepares invoices; and processes samples.
- Adheres to safety program regarding hazardous waste handling and follows all other safety requirements and protocols.
- Maintains accurate detailed records and files; produces graphs; enters and reviews data; assures results meets or exceed quality assurance criteria; prepares and enters various data into documents, reports and logs.
- Sets up, calibrates and operates a variety of laboratory equipment and instrumentation; performs troubleshooting and maintenance of laboratory equipment and instruments.
- Recognizes problems that may occur in analytical procedures and troubleshoots known problems or confers with other to identify possible problems affecting results.
- Maintains and cleans laboratory equipment; sanitizes laboratory tools and equipment; washes glassware and other items following prescribed protocols.
- Assists in the development of Standard Operating Procedures.
- Performs river sampling and biological organism identification for compliance with agency monitoring and reporting programs.
- Works on special projects, as assigned.
- Represents the Agency with dignity, integrity, and the spirit of cooperation in all relations with staff and the public.
- Builds and maintains positive working relationships with co-workers, other Agency employees and the public using principles of good customer service.
- At the Chemist III level, incumbents may serve in absence of Laboratory Director for regulatory reporting purposes.

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- Performs related duties as assigned.

QUALIFICATIONS

Chemist I

Knowledge of:

- Basic methods and procedures related to the preparation and standardization of chemical solutions, laboratory instrumentation and analytical quality control, and biology and chemistry.
- Basic principles of chemistry, biology and microbiology as pertains to laboratory testing and analysis.
- Basic principles and practices of research, analysis, and laboratory processes and equipment used.
- Modern office practices, methods, and computer equipment including relevant software programs.
- Operation of office equipment including personal computers, fax machines, copiers, printers, telephones, voicemail and e-mail systems, etc.
- Oral and written communication skills; business English including vocabulary, spelling, and correct grammatical usage and punctuation.
- Safe work practices.
- Principles and practices of customer service.

Ability to:

- Learn to collect field and composite samples and data and transport according to prescribed protocols.
- Learn to perform a variety of routine and special project laboratory tests related to plant control and environmental monitoring programs for the wastewater treatment plant and contracted services to other agencies and clients.
- Learn to safely operate a snowmobile, ATV, or vehicle with chains installed, in inclement weather conditions.
- Learn all requirements and essential aspects of the job including laws, regulations, rules and codes related to area of assignment; learn safety rules and how to identify hazards; intermittently locate, analyze, detect and diagnose problem equipment; learn to problem solve related to area of assignment; remember various processes and requirements and how to operate equipment; intermittently access, review and interpret and adjust or enter data on various documents and records and interpret and communicate technical and numerical information.
- Learn to perform standard laboratory tasks including using instrumentation, running calibrations, weighing, measuring, making standards, analyzing and interpreting reports and results.
- Perform standard mathematical, statistical, geometric and algebraic calculations.
- Understand and carry out oral and written instructions, and prioritize workload to meet deadlines.

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- Read, write and comprehend the English language at a level necessary for effective job performance exercising correct English usage, vocabulary, spelling, grammar and punctuation.
- Communicate effectively, tactfully and positively in both oral and written form.
- Operate and use modern office equipment and technology, including computers and applicable software.
- Maintain regular attendance and adhere to prescribed work schedule to conduct job responsibilities.
- Utilize appropriate safety procedures and practices for assigned duties.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Contribute effectively to the accomplishment of Agency goals, objectives and activities.

Experience and Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

One year of laboratory experience desirable.

Education:

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

SPECIAL QUALIFICATIONS

License and Certificate:

Possession of a valid California or Nevada Class C Driver License is required at the time of appointment.

Possession of a CWEA Grade I Laboratory Analyst Certificate is required within three qualifying test cycles of appointment (approximately 18 months).

Chemist II

In addition to the qualifications for the Chemist I:

Knowledge of:

- Methods and procedures related to wastewater treatment.
- Methods for the preparation and standardization of chemical solutions, laboratory instrumentation and analytical quality control, and aquatic biology and chemistry.
- Principles of chemistry, biology and microbiology as pertains to laboratory testing and analysis.

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- Principles and practices of biological and physical testing and analyses of water and wastewater including proper sampling procedures and EPA approved methods as dictated in Standard Methods.
- Principles and practices of research, analysis and laboratory functions and laboratory equipment used for a public utility water and wastewater quality control agency.

Ability to:

- Collect field and composite samples and data and transports according to prescribed protocols.
- On an ongoing basis know and understand all requirements and essential aspects of the job including laws, regulations, rules and codes related to area of assignment; know and observe safety rules and identify hazards; intermittently locate, analyze, detect and diagnose problem equipment and determine solutions; problem solve issues related to area of assignment; remember various processes and requirements and how to operate equipment; intermittently access, review, and interpret and adjust or enter data on work orders, reports and other documents; identify, interpret and communicate technical and numerical information.
- Perform a variety of routine and special project laboratory tests related to plant control and environmental monitoring programs for the wastewater treatment plant and contracted services to other agencies and clients.
- Safely operate a snowmobile, ATV, or vehicle with chains installed, in inclement weather conditions.
- Perform analysis of laboratory tests including using instrumentation, running calibrations, weighing, measuring, making standards and to analyze and interpret reports and results.
- Perform mathematical, statistical, geometric and algebraic calculations common to water quality control laboratory analysis.

Experience and Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Two years of responsible experience similar to Chemist I with T-TSA.

Education:

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

SPECIAL QUALIFICATIONS

License and Certificate:

Possession of a valid California or Nevada Class C Driver License is required at the time of appointment.

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Possession of a CWEA Grade II Laboratory Analyst Certificate is required within three qualifying test cycles of appointment (approximately 18 months).

Chemist III

In addition to the qualifications for the Chemist II:

Knowledge of:

- Advanced methods and procedures related to wastewater treatment, of the preparation and standardization of chemical solutions, laboratory instrumentation and analytical quality control, and aquatic biology and chemistry.
- Advanced principles and practices of research, analysis and laboratory functions and laboratory equipment used for a public utility water and wastewater quality control agency.
- Advanced methods and procedures related to biological organism identification.
- ELAP certification process for environmental laboratories and other regulatory requirements.
- Methods of instrument troubleshooting, calibration and maintenance of laboratory equipment.

Ability to:

- Perform the most complex duties related to the performance and analysis of laboratory tests related to the plant control and environmental monitoring programs for the wastewater treatment plant and contracted services to other agencies and clients.
- Perform troubleshooting, calibration and maintenance of laboratory instruments.
- Serve as acting Laboratory Director in Director's temporary absence to comply with regulatory reporting purposes.
- Assist with the training of new staff.

Experience and Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Two years of responsible experience similar to Chemist II with T-TSA.

Education:

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

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SPECIAL QUALIFICATIONS

License and Certificate:

Possession of a valid California or Nevada Class C Driver License is required at the time of appointment.

Possession of a CWEA Grade III Laboratory Analyst Certificate is required within three qualifying test cycles of appointment (approximately 18 months).

PHYSICAL REQUIREMENTS (for Chemist I/II/III)

Work effectively at desk, laboratory station, and in meetings for long periods of time; intermittently move, traverse and position self while performing duties in the field, laboratory or office; access equipment surrounding desk or in laboratory; activate, use and operate a computer and other office equipment and laboratory equipment; discern color-based test results and organisms through a microscope; use telephone; communicate through written means; and move or transport weight of 25 pounds or less.

WORKING/ENVIRONMENTAL CONDITIONS (for Chemist I/II/III)

Work is performed in a typical temperature controlled office environment subject to typical office noise and environment. In addition, this position also works outside with exposure to all weather conditions during, e.g., sampling. Laboratory is open 7 days per week requiring weekend work.