



January 2021  
FLSA: NON-EXEMPT

## LAB ANALYST I/ENVIRONMENTAL COMPLIANCE INSPECTOR I

### DEFINITION

Under general supervision, performs a variety of routine standardized chemical, biological, and bacteriological analysis on wastewater, reclaimed water, biosolids, and soil samples; performs a variety of tasks relative to conducting and interpreting standard laboratory analysis; performs sample collection activities; sets up testing procedures, records data, and analyzes results; assists with field investigations to determine and mitigate wastewater problems; performs the inspection of commercial discharge to the collection system; assists in implementing source control program; ensures that discharge is in compliance with local regulations and ordinances; and performs related work as required.

### SUPERVISION RECEIVED

Receives general supervision from the Laboratory Supervisor. No supervision of staff is exercised.

### CLASS CHARACTERISTICS

This is the entry level in this classification series. Under supervision, analysts in this class perform routine analytical tasks, maintenance, and field work. As experience and proficiency are gained, assignments become progressively more diversified and difficult with less supervision. Analysts in this class normally advance to the Lab Analyst II position after gaining experience and achieving proficiency.

### EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative only)

*Management reserves the rights to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.*

- Performs routine physical, chemical, biological, and microbiological analysis of wastewater, industrial waste, biosolids, and related materials following standard procedures and guidelines.

## **EXAMPLES OF ESSENTIAL FUNCTIONS (continued)**

- Sets up, calibrates, operates, and performs minor maintenance on a variety of laboratory equipment and instruments of a less technical nature.
- Recognizes problems which occur in an analytical procedure; applies known procedures or confers with others to find solutions; recommends changes to known procedures or confers with others to find solutions; recommends changes to procedures and forms.
- Collects and preserves a variety of samples; prepares field documentation and submits/receives samples for analysis; assists in planning sample collection programs; prepares samples for transport, storage, and laboratory testing.
- Prepares standard chemical solutions, reagents, stains, and bacteriological media; keep laboratory facilities in a clean or orderly condition.
- Analyze and interpret laboratory results, recognizing problems that may be occurring during the treatment process.
- Cleans and prepares glassware for sample collection; sterilizes bacteriological supplies; prepares sample kits for distribution.
- Complies and records data onto worksheets; enters reviewed data and results of analyses into the laboratory information management system (LIMS).
- Observes standard safety precautions related to the work; maintains proper quality assurance techniques in performing analytical work.
- Maintains proper QA/QC records and documentation.
- Assists in the preparation of periodic and special reports for submission to appropriate regulatory agencies in a timely manner; develops methods and assembles data to ensure that laboratory certification follows regulatory requirements.
- Monitors the grease inspection program; tracks and schedules weekly grease inspections.
- Assists laboratory co-workers on specific analytical projects.
- Prepares accurate records and correspondence, including writing, updating, negotiating and maintain wastewater discharge permits.
- May collect wastewater samples from commercial users and District sanitary sewers and performs defined chemical and biological tests in the field.
- Responds to public inquiries on wastewater services, and other problem areas as related to compliance program.
- Reads, interprets, applies, and explains regulations and standards to customers.
- Operates standard office equipment, including job-related computer hardware and software applications, facsimile equipment, and multi-line telephones; may operate other department-specific equipment.
- Research and maintains awareness of current and proposed state and local regulations, ordinances, and legislation as it relates to District programs, services, and customer and community relations.
- Builds and maintains positive working relationships with co-workers, other District employees, and the public.
- Routinely adheres to and maintains a positive attitude toward CAWD department foals and performs other duties as required.

## **QUALIFICATIONS**

### **Knowledge of:**

- Chemical, biological, and physical characteristics of wastewater.
- Principles, practices, equipment, and materials required for the chemical, biochemical, biological, bacteriological, and physical analysis of samples of wastewater.
- Principles, practices, and programs for the District's wastewater pretreatment program, the waste inspection function, and related programs and projects.
- Use of laboratory analytical equipment (IC, and Gallery).
- Principles, practices, and terminology of commercial wastewater source control.
- Sampling techniques and related statistical analysis techniques.
- Laboratory and wastewater plant safety procedures and equipment.
- Principles of operation of District treatment and collection systems.
- Applicable Federal and State laws; District, Department, and Division regulations, codes, policies, and procedures.
- Record keeping principles and procedures.
- Operating systems including SCADA, LIMS, and other computer applications related to the work.
- Knowledge of computers.
- Skills in communication, interpersonal skills as applied to interaction with co-workers, supervisor, general public, etc. sufficient to exchange or convey information and to provide and/or receive work direction.

### **Ability to:**

- Perform chemical, biochemical, biological, bacteriological, and physical analyses of wastewater and reclaimed water.
- Analyze the results of such test and make appropriate recommendations for plant operations.
- Research, analyze, and summarize data, and prepare and present accurate and reliable reports containing findings and recommendations.
- Read and interpret a variety of meters, gauges, and recording charts.
- General knowledge of laboratory terminology, equipment, and procedures; arithmetic, including proportions, percentages and decimals, and college algebra. Make basic to complex arithmetic computations.
- Ability to follow oral, written, and graphic instructions. Understand, interpret, follow, and successfully communicate both orally and in writing, pertinent department policies and procedures.
- Learn to perform routine laboratory work, set up, adjust, clean, and perform minor maintenance and calibration on laboratory equipment.
- Maintain attention to detail and accuracy while meeting critical deadlines.
- Work with or without minimal available supervision.

- Maintain manual and automated logs, records, reports, and charts.
- Follow department policies and procedures related to assigned duties.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Effectively communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work, both employees and the public.
- Perform work in confined spaces, following required confined space entry procedures.
- Plan, direct, and coordinate the work of staff in water/wastewater operations.
- Interpret and apply industry practices.
- Keep a variety of accurate records and reports and knowledge of LIMS (Computerized Maintenance Management Software).
- Work shifts, weekends, evenings, and holidays when required, mandatory weekend rotation.

**EDUCATION AND EXPERIENCE:**

*Any combination of training and experience which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:*

Equivalent to a bachelor's degree from an accredited college with courses in chemistry, biology, environmental sciences, or a related field.

**Required Qualifications:**

- Possession of a Class C driver's license required by the State of California, Department of Motor Vehicles, to perform the duties of the position. Continued maintenance of said driver's license in compliance with established District vehicle operation standards, and the ability to be insured for the operation of a vehicle/District vehicle in accordance with the terms and conditions of the District's insurance program are conditions of continuing employment. The California Sanitation Risk Management Authority (CSRMA) driving standards.
- Possession of, or ability to obtain within 18 months of date of hire, a California Water Environment Association (CWEA) – Laboratory Analyst Grade I certificate.
- Possession of, or ability to obtain within 18 months of date of hire, a California Water Environment Association (CWEA) – Environmental Compliance Inspector Grade I certificate.
- 40-hour HAZWOPER certificate within one (1) year of employment.
- Any licenses and certifications must be maintained during employment.

### **Additional Requirements:**

Employee must pass a respiratory fit test within 2 months of employment and adhere to District respiratory policy which specifies facial hair restrictions.

All Carmel Area Wastewater District employees are, by State and Federal law, **Disaster Service Workers**. The roles and responsibilities for Disaster Service Workers are authorized by the California Emergency Services Act and are defined in the California Labor Code. In the event of a declaration of emergency, any employee of the District may be assigned to perform activities which promote the protection of public health and safety or the preservation of lives and property. Such assignments may require service at locations, times, and under conditions that are significantly different than the normal work assignments and may continue into the recovery phase of the emergency.

If a "Local Emergency" is declared during the employee's shift, employees will be expected to remain at work to respond to the emergency needs of the community. If a "Local Emergency" is declared outside of the employee's shift, employees must make every effort to contact their direct supervisor or department head to obtain reporting instructions as Disaster Service Workers.

### **PHYSICAL DEMANDS**

*The physical demands and work environment described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:*

#### **Standing:**

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Office - carpet, tile; field – concrete, asphalt, dirt, gravel, mud, metal grating, grass, sloped and uneven terrain
- Description: Performs while performing in-depth inspections of industrial and commercial users, setting samplers and collecting wastewater samples, investigating and tracing sources of lethal and industrial waste, removing or replacing manhole covers, inspecting grease traps.

#### **Walking:**

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day

- Maximum Duration: Long (2 to 8 hours)
- Surfaces: Office - carpet, tile; field – concrete, asphalt, dirt, gravel, mud, metal grating, grass, sloped and uneven terrain
- Description: Performs while walking within the office, building, walking to and from commercial or industrial sites, transporting tools, ice chests, samplers, etc.

**Sitting:**

- Average Frequency: 4 to 8 times per day
- Average Duration: Long (2 to 8 hours)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Long (2 to 8 hours)
- Surfaces: Cushioned vehicle seat, office chair
- Description: Performing various desk station activities including using a computer, reading and writing, driving a vehicle, during meetings and trainings, and performing other described job duties.

**Kneeling/Crouching/Squatting:**

- Average Frequency: 1 to 3 times per week
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per day
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Concrete, asphalt, gravel dirt
- Description: Performs while retrieving and pouring samples, inspecting grease traps, retrieving or setting items on and off lower shelves or ground.

**Crawling:**

Occasional crawling in tight locations.

**Laying on Back/Stomach:**

Not a job requirement.

**Climbing/Balancing:**

- Average Frequency: 1 to 3 times per month
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per month
- Maximum Duration: Medium (1 to 2 hours)
- Surfaces: Stair or ladder steps, vehicle floorboard

- Description: Performs while ascending or descending 1 to 2 stair flights to access multiple floors, entering, or exiting the vehicle cab, 1 step.

## **Reaching:**

### *Above Shoulder Level:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while accessing or placing files, paperwork or binders and related items on and off upper shelves. Unilateral or bilateral upper extremities from less than full-to-full extensions at each occurrence. A variable to reaching above shoulder level includes employee's height.

### *Between Waist and Shoulder Level:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Medium (1 to 2 hours)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while driving in conjunction with maneuvering a steering wheel, handling office supplies, paperwork, telephone, utilizing a hook to remove or replace a manhole cover or meter box lid, relocating tools, ice chests, samples, operating a computer keyboard/mouse to enter or retrieve data. Unilateral or bilateral upper extremities from a less than full-to-full extensions on each occurrence. Computer keyboarding duties include positioning his/her arms at the side and placing fingers on the computer keyboard.

### *Below Waist Level:*

- Average Frequency: 1 to 3 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while retrieving and pouring samples, inspecting grease traps, retrieving or setting items on and off lower shelves or ground. Unilateral or bilateral upper extremities from a less than full-to-full extensions on each occurrence.

## **Pushing/Pulling:**

- Average Frequency: 1 to 3 times per week
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per day
- Maximum Duration: Medium (1 to 2 hours)

- Description: Performs while utilizing a metal hook to remove or replace manhole covers or meter box lids – a combination of pushing, pulling lifting, relocating sampler, opening or closing file cabinet drawers, utilizing wrenches to assemble or disassemble a sampler, utilizing a hook to remove or replace grease traps, swinging a truck bed crane while loading or unloading a sampler. Unilateral or bilateral arm use.

### **Twisting/Rotating:**

#### *Waist:*

- Average Frequency: 1 to 3 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while driving, possibly during inspections. The motion is from center to right back to center or center to left back to center up to 20-degrees.

#### *Neck:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while driving, aiding visually, during normal body mechanics. The motion is from center to right back to center or center to left back to center up to 45-degrees.

#### *Wrists:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while utilizing a metal hook to remove or replace a manhole cover or lids, retrieving samples, as needed utilizing basic hand tools such as screwdrivers, wrenches to assemble or disassemble a sampler. Unilateral or bilateral hand use.

### **Bending:**

#### *Waist:*

- Average Frequency: 1 to 3 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per day
- Maximum Duration: Short (Less than 1 hour)



- Description: Performs while retrieving and pouring samples, inspecting grease traps, retrieving or setting items on and off lower shelves or the ground, assembling or disassembling samplers. The motion is in a forward direction up to 5 to 65-degrees.

*Head/Neck:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while aiding visually, reading, writing, performing in-depth inspections, inspecting grease traps, during normal body mechanics.

*Wrists:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while driving in conjunction with maneuvering a steering wheel, retrieving and relocating samples, utilizing a metal hook to remove or replace manhole covers, lids or grease traps, utilizing basic hand tools including wrenches, screwdrivers, scissors to assemble or disassemble samples, utilizing a sledgehammer to strike manhole covers if the cover is stuck, during normal body mechanics. Unilateral or bilateral hand use.

**Lifting/Carrying:**

*0 to 10 lbs.:*

- Objects: Lab containers (flasks, beakers, pipettes,) microscope, instruments, chemical containers, telephone handset, writing utensil, paperwork, manuals, computer tablet.
- Average Frequency: Ongoing - tasks performed throughout shift
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: Ongoing - tasks performed throughout shift
- Maximum Duration: Seconds to less than 15 minutes at a time
- Height: Ground to shoulder or above
- Description: Performs while handling samples, containers, flasks, pipette; handling paperwork, utilizing a writing utensil, telephone; handling instruments, supplies and lab tools; storing and retrieving these objects.

*11 to 25 lbs.:*

- Objects: Single carboys and sample containers up to 2.5 gallons, sample caddy with multiple sample containers, portable sampler lid
- Average Frequency: 4 times daily
- Average Duration: Seconds at a time

- Maximum Frequency: 4 times daily
- Maximum Duration: Up to a 1 minute at a time
- Distance: 0 to 50 feet including ascending and descending stairs
- Height: Ground to waist level
- Description: Performs while retrieving, transporting sample containers from sampler to cart. Includes shaking carboy containers to stir contents.

*26 to 50 lbs.:*

- Objects: Full sample bottle, buffer solvent, full solution container, Confined space equipment
- Average Frequency: 1 per day
- Average Duration: Seconds at a time
- Maximum Frequency: 4 times per day
- Maximum Duration: Seconds to less than 15 minutes at a time
- Distance: Less than 25 feet
- Height: Waist to ground and ground to waist
- Description: Performs while removing and replacing sampler lid and prying and lifting FOG hatches.

*50+ lbs.:*

Lifting objects over 50 lbs. is not a job requirement for this job classification.

**Grasping:**

*Simple:*

- Average Frequency: Ongoing - tasks performed throughout shift
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: Ongoing - tasks performed throughout shift
- Maximum Duration: Seconds to less than 15 minutes at a time
- Description: Handling samples, containers, flasks, pipette; handling paperwork, utilizing a writing utensil, telephone; handling instruments, supplies and lab tools; any grasping necessary to complete required lifts and carries below 50 lbs.

*Power:*

- Average Frequency: 4 times per day
- Average Duration: Seconds at a time
- Maximum Frequency: 4 times per day
- Maximum Duration: Less than 15 minutes at a time
- Description: Handling single carboys and sample containers up to 2.5 gallons, sample caddy with multiple sample containers, portable sampler lid, lifting grease trap lids.

**Fine Manipulation:**

- Average Frequency: 1 to 2 hours
- Average Duration: Seconds to less than 5 minutes at a time
- Maximum Frequency: 2 to 3 hours
- Maximum Duration: Seconds to less than 10 minutes at a time
- Description: Using pipettes, measuring small amounts of liquids, making equipment adjustments, using machine-user interfaces, utilizing a writing utensil; computer keyboards/tablets and/or computer mouse, cursor or touch screens; using telephone. Unilateral or bilateral hand use.

**Machines/Tools:**

*The machines and tools listed here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:*

- Ion chromatography (IC), Gallery unit
- Titrator
- Centrifuge
- Drying oven
- Steam and water bath
- Composite sampler
- Distillation unit
- Digital readout
- pH meter
- Analytical and top loading balances
- Dissolved oxygen meter
- Incubator
- Autoclave
- District vehicle
- Computer keyboard, mouse, monitor
- Writing utensil
- Copier
- Fax machine
- Pipettes
- Scales

**Weights and Measures:**

*The items listed here to be weighed or measured are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:*

**Items Weighed:**

- Buffer solvent container – 40 pounds
- 8-gallon solution container partially full – 40 pounds
- Source Control tool bag – 20 pounds

**PERSONAL PROTECTIVE EQUIPMENT**

Depending on the hazard, the employee is required to wear head, hearing, eye, foot, face, respiratory, body harness, and/or hand protection.

**ENVIRONMENTAL ELEMENTS**

- Employee is occasionally exposed to wet and/or humid conditions.
- Employee is exposed to moving parts.
- Employee is regularly exposed to toxic or caustic chemicals.
- Employee is occasionally exposed to fumes or airborne particles.
- Employee is exposed to outside weather conditions.
- The noise level in the work environment is usually moderate.
- Indoors, laboratory setting, climate controlled.

NOTICE: The examples of functions, responsibilities, work environment, physical demands etc. listed in this Job Analysis are representative only, and not exhaustive of the tasks that an employee may be required to perform.