

CITY OF MADERA

WASTEWATER TREATMENT LAB ANALYST/ENVIRONMENTAL COMPLIANCE INSPECTOR I

*Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications **may not include** all duties performed by individuals within a classification. In addition, specifications are intended to outline the **minimum** qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.*

DEFINITION:

Under general supervision, plans, organizes and conducts a variety of water pollution laboratory tests and analyses necessary for the waste water treatment plant to remain in compliance with state and federal mandates; operates and inspects the laboratory and maintains a quality level which is within EPA guidelines; performs other related duties as required.

DISTINGUISHING CHARACTERISTICS:

The Wastewater Treatment Lab Analyst/Inspector I is an entry level class responsible for a wide variety of preventative maintenance and waste water analytical testing. Inspects industrial and commercial businesses for compliance with City pretreatment and waste water discharge permits. Incumbents in this class must work independently in the performance of assigned duties. This classification is distinguished from the Wastewater Treatment Lab Analyst/Inspector II in that the latter occasionally assists in the training of lower level Wastewater Treatment Lab Analyst/Inspector I positions.

SUPERVISION RECEIVED/EXERCISED:

Receives general supervision from the Wastewater Treatment Plant Operations Manager. Incumbents of this class do not routinely exercise supervision.

ESSENTIAL FUNCTIONS: *(include but are not limited to the following)*

- Performs routine laboratory analysis which may; include chloride, conductivity, alkalinity, pH, temperature, total hardness, turbidity, chlorine residual (free and combined), dissolved oxygen, biochemical oxygen demand, chemical oxygen demand, solids (total, dissolved, suspended, volatile, nonvolatile), settleable solids; and microbiological analyses, including sterile techniques, total and fecal coliform (MPN), confirmed test, media preparation, and total plate count
- Maintains routine documentation, including worksheet/log sheet entries, sample documentation, and chain-of-custody forms. Records data precisely and accurately and prepares data for reports to regulatory agencies
- Inspecting a variety of pretreatment systems, facilities, and processes of industrial, commercial, residential, and institutional establishments for compliance with federal, state, and local regulations and permit conditions related to pretreatment of industrial wastewater, fats, oils, grease, storm runoff, and pollution prevention requirements
- Operates and maintains test equipment such as UV/visible spectrophotometer, dissolved oxygen meters, pH meters and turbidimeter. Performs routine calibration
- Collects samples of wastewater, sludge, receiving water and industrial waste in accordance with established lab procedures
- Prepares, sorts, washes, decontaminates, sterilizes and stores lab glassware
- Prepares chemical reagents and bacteriological culture media

- Performs routine quality control checks for all reagents, media and data generated specific to subject matter
- Use of appropriate sampling locations and procedures; collection of representative samples in accordance with the agency's quality assurance program of wastewater and water from industrial, commercial, residential, and institutional sources, various clarifiers or sumps, and storm sewers; completion of appropriate documentation, including chain of custody documentation; and performance of field tests or laboratory tests on samples collected
- Observation and recording of field conditions, flow meter readings, pH, ORP, selective ion, explosivity, and other field test results
- Use, clean, inspect, maintain and repair sampling equipment, meters, and test equipment
- Inspection of pretreatment facilities and processes of industrial and commercial establishments for compliance with wastewater discharge ordinance and permit conditions
- Performs plan checks for proposed new industrial and commercial establishments to insure that construction improvement plans comply with all City, State, and federal waste water regulations
- Inspection of industrial and commercial businesses for compliance with storm runoff, fats, oils, grease, and pollution prevention requirements
- Assist in call-outs and the investigation and tracing of the sources of illegal or nuisance waste discharges entering the storm water or wastewater collection system
- Collecting information for assessing fees for industrial and commercial establishments
- Inspecting grease traps, interceptors, and clarifiers
- Initiating appropriate enforcement action after identifying noncompliance with local, state or federal requirements; preparing and issuing written notices of requirement and violations of regulations; researching compliance history of facilities; participating in enforcement hearings; and monitoring follow-up action
- Recording data and observations
- Providing input and assistance in the preparation of a variety of manual and computerized written, oral, tabular, and graphic reports; updating filed inspection records; and tabulating, calculating and preparing data for sewer service charges
- Supporting customer service activities; responding to questions of a limited variety and scope after receiving specific instruction; refer inquiries to appropriate level; interacting cooperatively with internal and external customers and providing feedback to appropriate staff
- Learning pertinent information and functional areas; assisting in the implementation of state, federal, or local requirements to support appropriate programs
- Learning and observing proper safety precautions, rules, regulations, and practices; maintaining equipment, materials, and worksite in proper and safe condition in accordance with policies and procedures
- Learning how wastewater is treated and how it can be impacted by industrial waste

WORKING CONDITIONS:

Position requires sitting, standing, walking on level and slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting, crouching, grasping and making repetitive hand movement in the performance of daily duties. The position also requires both near and far vision when inspecting work and performing maintenance on assigned equipment. The need to lift, carry and push tools, equipment and supplies weighing 25

pounds or more is also required. Additionally, the incumbent in this position works in all conditions including wet, hot and cold. The incumbent may use a variety of chemicals which may expose the employee to fumes, dust and air contaminants. The nature of the work also requires the incumbent to climb ladders and work in confined spaces.

QUALIFICATIONS: *(The following are minimal qualifications necessary for entry into the classification.)*

Education and/or Experience:

Any combination of education and experience that has provided the knowledge, skills and abilities necessary for a Wastewater Treatment Technician/Environmental Compliance Inspector. A typical way of obtaining the required qualifications is to possess the equivalent of two years of experience in the operation and maintenance of a wastewater treatment laboratory or the performance of related work, and a high school diploma or equivalent supplemented with appropriate course work in laboratory testing and analysis.

License/Certificate:

Possession of, or the ability to obtain, a valid class C California driver's license.
Possession of, or the ability to obtain, a Grade I Laboratory Analyst Certificate within 12 months of hire.

Possession of, or the ability to obtain, Grade I Environmental Compliance Inspector certificate within 12 months of hire.

KNOWLEDGE/ABILITIES/SKILLS *(The following are a representative sample of the KAS's necessary to perform the essential duties of the position.)*

Knowledge of:

- Basic understanding of standard physical, chemical and microbiological properties of wastewater
- Methods and techniques used in quantitative laboratory analysis related to subject matter
- Laboratory equipment related to subject matter and its use and care
- Laboratory hazards and proper safety precautions and procedures, chemical hygiene, including personal protective equipment
- Methods for preparation of standardized reagents and media
- Methods of cleaning glassware used in laboratory analysis
- Basic wastewater mathematical calculations related to subject matter, including significant figures
- Basic scientific principles (chemistry, biology, physics), with special emphasis on wastewater chemistry and chemistry encountered in industrial processes
- Basic laboratory procedures, equipment and apparatus, with particular emphasis on analyses performed for industrial self-monitoring reports
- Basic principles of sample collection
- Basic principles of preservation and holding time
- Chain of custody procedures and documentation
- Basic arithmetic, including fractions, decimals, proportions, and metric measure
- Basic knowledge of pumps, mechanical equipment, flow meters, alarm systems, chemical feed systems, etc.

- Basic industrial processes (e.g. metal finishing, food processing, etc.)
- Basic safety equipment and procedures associated with conducting inspections
- Quality assurance terms, principles, and procedures
- Fundamentals of wastewater treatment processes
- Industrial wastewater treatment processes
- Effects of pollutants on sewage treatment processes
- Personal protective equipment required to conduct inspections
- Traffic control procedures for street work
- Basic Computer skills

Ability to:

- Perform standard physical, chemical and biological tests on treated and polluted water, potable water, industrial and domestic wastewater and related materials, including proper sampling and preservation techniques
- Analyze performance sample for Environmental Laboratory Approval Program (ELAP)
- Analyze and interpret standard laboratory test results
- Maintain accurate and complete laboratory records
- Follow established safe working practices
- Follow oral and written instructions
- Clean and prepare laboratory equipment/glassware and maintain laboratory in orderly fashion
- Read, understand and follow proper procedures in preparing standardized reagents and media
- Perform basic wastewater mathematical calculations
- Accurately observe situations and report observations
- Work with mechanical and electrical equipment
- Safely follow basic laboratory principles and procedures
- Learn rules, regulations and laws related to water and wastewater
- Read gauges, meters, flow meters, and other recording instruments
- Follow written and oral instructions
- Follow safety practices, precautions, and methods
- Collect representative samples
- Preserve samples and observe holding times
- Follow chain-of-custody procedures and documentation
- Use Microsoft Office software and other related computer programs

Skill to:

- Perform standard quantitative laboratory analysis
- Communicate clearly and concisely, both orally and in writing, in the English language
- Establish and maintain effective working relationships with those contacted in the course of the work.
- Communicate effectively with representatives of commercial, industrial, institutional users, co-workers, and persons from other agencies and the public, in the English language
- Maintain accurate and complete records