

Lead Water & Wastewater Treatment Plant Operator

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the classification. Class specifications are not intended to reflect all duties performed within the job

DEFINITION

Under the general direction of the Director of Public Works, to supervise and perform a variety of administrative, operational, control, and maintenance functions in the City's water and wastewater treatment systems; to supervise and perform laboratory testing and sample collection; to supervise and perform a variety of work at all levels in the maintenance, repair, and construction of water treatment, wastewater treatment, and collection systems; to provide oversight and implementation of regulatory compliance issues; to supervise the work of others, and to do related work as required.

DISTINGUISHING CHARACTERISTICS

- Lead Water & Wastewater Treatment Plant Operator is a full time, front line supervisor single-position class with responsibility to supervise Water & Wastewater treatment Plant Operators and participate in the functions performed by Water & Wastewater Treatment Plant Operators. Incumbents are expected to supervise and perform a wide variety of operations, laboratory, maintenance, repair, and construction assignments, including the most skilled and complex tasks. Work is performed under the general direction of the Director of Public Works and frequently job assignments may be performed with minimal guidance with the exception that incumbents have the ability to choose among alternatives in completing tasks. Considerable latitude is granted for the exercise of independent judgement and initiative including making process control and operational change recommendations. Work is typically performed in a treatment facility environment. Some tasks may involve moderate physical labor.

This classification is distinguished from classes in the Maintenance Worker Series, which work in areas including road maintenance, construction, and water and wastewater systems services and pipeline repair, but are assigned operator responsibility with respect to water or wastewater treatment plant operation.

- Level IV Lead Operator provides lead supervision for treatment plant operators. Monitors the operation of water and wastewater treatment plant(s).
- Level III is considered a journey level and may operate the wastewater facility without onsite direct supervision. Incumbents at this level are expected to perform their assigned tasks with limited supervision, assigned technically advanced duties and may be assigned responsibility for field direction of

assigned crews. Incumbents are expected to know the work functions, act independently, and advise supervisors of needed work and approximate time and materials needed to complete the work. Incumbents are expected to have proven skills in the operation of all assigned equipment and may also be assigned special projects on a regular, ongoing basis.

- Level II must work under supervision of a grade III or higher operator and may not operate the wastewater facility alone.
- Level I incumbents are expected to obtain the skills and knowledge necessary to advance to the next classification of Water & Wastewater Treatment Plant Operator.

EXAMPLES OF DUTIES

This classification specification is intended to present a descriptive list of the range of duties performed by employees in a classification. Class specifications are not intended to reflect all duties performed within the job. Duties may include, but are not limited to, the following:

Level I

- Makes periodic inspections and adjustments of water treatment and wastewater treatment plant equipment such as bar screens, clarifiers, aeration equipment, pumps, meters, valves, motors, secondary filters, UV disinfection, solids dewatering and liquid chemical feed equipment.
- Performs sampling and testing water/wastewater, adjusting chemicals as necessary, and accurately records results and findings in a timely manner;
- Operates water and wastewater treatment plants and pumping station equipment; lubricates and makes minor repairs and adjustments to plant equipment. Makes daily process control decisions and implements daily changes.
- Maintains and calibrates process control instrumentation such as pH probes, turbidimeters and chlorine analyzers.
- Records plant readings and process data in an accurate and complete manner, including operational data from plant meters, process Control SCADA System and laboratory reports.
- Monitors, inspects and performs light maintenance of wastewater lift stations and control systems and records pump station data.
- Collects samples including raw, partially treated and potable water, raw and partially treated sewage, sludge, biosolids, wastewater effluent, and receiving water samples. Follows all procedures related to collecting samples for analysis by other certified laboratories and City procedures.

- Conducts process control laboratory analysis. Conducts compliance monitoring analysis for constituents without sufficient hold time for contract laboratory analysis. Maintains, programs and monitor automatic samplers for proper operation.
- Conducts housekeeping tasks such as hoses and cleans decks, screens, tanks, wells and channels, and flushes process piping. Removes grit and screenings and hoses scum or foam from wastewater process tankage. Maintains clean working conditions of process buildings, process equipment, laboratory, process control room and other similar areas.
- Performs routine and scheduled light maintenance of equipment per manufacturers Operation and Maintenance Manuals. Maintains written maintenance records and utilizes Computerized Maintenance Management System (CMMS). Runs CMMS reports, work orders, maintenance history and accurately enters information into CMMS.
- Implements various safety and regulatory plans including, but not limited to Risk Management Plan, Process Safety Management Plan, Respiratory Protection Program, Hazardous Materials Business Plan, Confined Space Program, and Lockout/Tagout safety procedures Program.
- Reviews work to verify compliance to standards and regulations including NPDES permit

Level II - Additional Duties to those listed above

- Use the CMMS to obtain standardized scheduled work orders, input minor repairs, and create work orders.
- Maintains accurate and complete operating logs
- Use of the SCADA system to monitor and make changes as directed by the Level III
- Reviews work to verify compliance to standards and regulations including NPDES permit

Level III - Additional Duties to those listed above

- May provide lead direction to lower Levels
- Will individually make or directs other operators to make process changes as necessary to maintain compliance with NPDES Permit and process control.
- Reviews work to verify compliance to standards and regulations including NPDES permit

- Assists in the preparation of plant process and regulatory reports.

Level IV Lead Operator – Additional Duties to those listed above.

- Provides lead supervision for treatment plant operators.
- Monitors the operation of water and wastewater treatment plant(s), insuring that operational problems have been located and corrected.
- Provides training for less experienced personnel.
- Complies and submits reporting information to regulators.
- Assists with long term planning, preparation of annual budget and capital improvement programs.
- Assists with work performance evaluations of level I, II, and III operators.

MINIMUM QUALIFICATIONS

Knowledge of:

Safety procedures such as lock out-tag-out, and confined space.

Processes and procedures used in the operation and maintenance of wastewater and water treatment, pumps, motors, related mechanical, electrical and instrumentation devices.

Common tools and methods of mechanical repair.

The basic principles and methods of water and wastewater treatment.

The procedures involved in operating and maintaining wastewater extended aeration activated sludge, secondary filtration, UV disinfection; the procedures involved in operating and maintaining water system including well supply pumps and motors, arsenic treatment, chemical coagulation and filtration, backwash, backwash recovery, disinfection and system supply pumps.

Water and wastewater facility operations, maintenance procedures, policies, practices and regulatory requirements.

Basic principles of math and its application related to water and wastewater treatment processes

Basic safety techniques and potential hazards associated with wastewater treatment and collection system operation.

Basic chemical tests for water and wastewater process control

Inspecting assigned areas for a wide variety of maintenance, repair and risk management issues

Use of computers and computer application software

Recognizing, prioritizing and accomplishing needed tasks.

All Levels - Ability to:

Understand and follow a variety of oral and written instructions in an independent manner.

Operate and maintain the City's water/wastewater treatment plant operations and related systems.

Perform tasks under unpleasant conditions.

Perform standard laboratory tests on water, sewage and sludge.

Give and receive work direction.

Follow oral and written directions.

Prepare and maintain accurate and timely records.

Establish and maintain cooperative working relationships with those contacted in the course of work.

Serve standby duties, with a 20 minute callback time, on a rotating basis to ensure continuity of operations during evening, nights, weekends and holidays.

Establish and maintain cooperation and working relations with those contacted in the course of work

Basic principles of math and its application related to water and wastewater treatment processes

Basic safety techniques and potential hazards associated with wastewater treatment and collection system operation.

Basic chemical tests for water and wastewater process control

Inspecting assigned areas for a wide variety of maintenance, repair and risk management issues

Use of computers and computer application software

Recognizing, prioritizing and accomplishing needed tasks.

Perform all work activities in a safe manner and to recognize unsafe conditions including confined spaces.

Read and interpret gauges and recording devices used in water and wastewater treatment facility operations.

Identify with Department and City goals and objectives and understand City priorities and needs.

Establish and maintain cooperative working relationships with co-workers and the general public.

Choose among a limited number of alternatives in solving routine problems.

Maintain regular and predictable attendance

This description lists the major abilities and requirements of the job and is not all inclusive. Not all abilities or duties are necessarily performed by each incumbent. Incumbents may be expected to perform job-related duties other than those contained in this document and may be required to have specific job-related knowledge and skills.

Level II, III and IV - Additional Abilities:

Perform standard laboratory tests such as pH, turbidity, EC, temperature, total solids, settleability, volatile solids, and water treatment process control tests including arsenic, chlorine residual and other similar analysis.

Perform and implement various chemical dosing calculations

Advanced utilization of the Computer Maintenance Management System

Understanding and skills to operate the facilities with the SCADA system.

Prepare computer spreadsheet reports (Excel) including process control and compliance for supervisor review and approval. Prepare written reports including daily operations, accurate and timely daily log. Process upset or violation reports to be completed the same day events took place.

Provide on the job training to new employees

Level III - Additional Abilities:

Operate the water and wastewater plants as a lone operator.

Level IV Lead Operator - Additional Abilities:

Act as Chief Plant Operator when Chief Operator is unavailable.

LICENSES AND CERTIFICATES

Possession of a valid Class C California Motor Vehicle License. Possession of a safe driving record per the city's driving standards and policies.

Level IV Lead Operator - Required: Valid Grade IV or higher Wastewater Treatment Plant Operator Certificate issued by the State Water Resources Control Board,

Level III - Required: Valid Grade III or higher Wastewater Treatment Plant Operator Certificate issued by the State Water Resources Control Board,

Level II - Required: Valid Grade II or higher Wastewater Treatment Plant Operator Certificate issued by the State Water Resources Control Board.

Level I – Required: Valid Grade I or higher Wastewater Treatment Plant Operator Certificate issued by the State Water Resources Control Board.

Desired: Possession of a valid Grade II or higher Water Treatment Plant Operator Certificate, issued by the State Water Resource Control Board. Certification must be obtained within 12 months, or 2 testing cycles of appointment.

TRAINING AND EXPERIENCE

A typical way to obtain the required knowledge and abilities would be education to completion of the 12th grade and sufficient full time or equivalent experience as a Water and Wastewater Treatment Plant Operator in a public facility and possession of the above knowledge, abilities and certifications.

TYPICAL PHYSICAL REQUIREMENTS

Requires the ability to bend, stoop, twist, and walk over uneven surfaces and walk up stairs in the elements for potentially extended periods of time. The wastewater facility is an elevated facility and requires climbing and descending numerous flights of stairs per day. Ability to climb stairs while carrying up to 25 pounds. Manual dexterity sufficient to use hand held devices without experiencing abnormal hand or wrist strain. Strength sufficient to use wrenches and other handheld equipment. Hearing sufficient to understand conversations, both in person and on the telephone. Ability to safely operate and drive a motor vehicle.

TYPICAL WORKING CONDITIONS

Working conditions in the office are free from extremes of temperature and humidity. Working conditions in the plant environment are subject to extreme variations in temperature, humidity and can include wind and rain. Frequently work on slippery or uneven surfaces. Work on ladders, scaffolds or other equipment. Working in areas

subject to dust, raw water, wastewater, sludge, biosolids, grease, chemicals and other contaminants.