

POSITION DESCRIPTION
TECH II: Water & Wastewater Plant Operator
January 30, 2012

GENERAL PURPOSE

Operates and maintains the water treatment facilities, wells, elevated storage tank and water distribution system, to provide drinking water for all residential, commercial, and industrial users in a cost-effective manner according to E.P.A. Standards.

Operates and maintains the wastewater treatment plant to assure cost effective wastewater processing for all residential, commercial, and industrial users in compliance with all E.P.A. Regulations.

Performs a variety of skilled, semi-skilled and routine tasks in the operation, repair, maintenance, and construction of streets, rights-of-way, storm sewer systems, public parks and recreation structures, buildings, grounds, commuter lots, street lighting and signs, vehicles and equipment, sidewalks, and tree maintenance. In addition, this position provides assistance to other Technicians when directed, in performance of various tasks as required.

SUPERVISION RECEIVED

Works under the direct supervision of the Assistant Public Works Superintendent: Water & Sewer.

SUPERVISION EXERCISED

Exercises close supervision over all certified water and sewer operators, maintenance staff, lab technician, temporary and professional staff as assigned. Provides lead worker guidance to other water and sewer plant operators.

Works closely with Lab Tech and other plant operators.

As specifically authorized by the Superintendent or Assistant Superintendent on tasks where the employee has special skills or certification.

ESSENTIAL DUTIES AND RESPONSIBILITIES

Water System

Performs skilled work including repair and routine maintenance of pumps, motors, filters, control devices and other water plant equipment.

Adjusts well and filter backwash flow rates to maximize filter efficiency.

Monitors and modifies chemical feed rate adjustments to maintain EPA standards. Performs water quality test on drinking water.

Recommends to the Superintendent, improved methods and procedures for more efficient plant operations as well as recommendations regarding plant, staffing requirements.

Maintains records of daily activities to include routine maintenance and repairs of equipment and machinery, chemicals added to public water supplies and results of water tested and meter readings, and other activities in compliance with EPA guidelines and maintenance programs.

Performs a variety of duties in the monitoring, maintenance, and repair of the water system equipment and facilities. Locates and repairs water mains and service lines, repairs, installs fire hydrants; test, inspects and reads water meters.

Performs required monitoring and testing of the water system to ensure EPA compliance.

Investigates customer complaints.

Repair of plumbing and electrical problems: replacing broken and leaking water pipes, valves and water lines; replace blown fuses and switches and repairs circuit faults.

Wastewater System

Operation and evaluation of all plant processes to achieve satisfactory treatment as required by the EPA. To perform a variety of skilled and semi-skilled tasks in the operation, repair and maintenance of the sewer plant. In addition, the Chief plant operator provides assistance to other operator and maintenance personnel when directed in the performance of various tasks as required.

Follow an established schedules of preventative maintenance activities for the operation of the wastewater treatment plant, such as lubricating and repairing equipment such as screw pumps, grit tank, blowers, filters, bar screens, conveyor belts, valves, etc.; repairs pumps by removing and replacing bearings, snap rings, gaskets, pump housings and associated piping; replaces main bearings on screw pumps; and replaces gears around aerobic digesters.

Practices safe and efficient operating methods in executing treatment procedures. Directs sludge processing, aerobic digesters, cleans bar screens and runs collected materials out of grit chambers. Transfers sludge to the aerobic digesters; adds polymer emulsifiers, and other chemical to the process; channels thickened sludge dewatering press for final processing. Collects samples for laboratory testing; and performs laboratory test to control plant operations.

Remove and test pumps, motors, and gauges to check for proper electrical current, and other potential problems, and repair or rebuild as needed and directed.

Answers alarms from Wastewater Treatment Plant lift stations, water plant and etc. during off-hours to correct problem.

Responsible for monitoring and ensuring the proper operation of gauges, meters, pumps, and control panels which affect the efficient flow and processing of wastewater, sludge and effluent. Coordinate sludge hauling to land application site.

Performs equipment, building and grounds maintenance activities, applies chemicals, makes process controls decisions using own judgement, collects samples and conducts laboratory test.

Performs building maintenance and janitorial tasks; paints buildings, performs grounds maintenance, removes snow and ice from roadways and parkways and other related functions.

General Public Works

Effectively and efficiently operate a variety of equipment ranging from hand tools to large motorized machinery and vehicles, and is responsible for the maintaining such equipment for safe operation.

Assists in the construction, maintenance and repair of Village streets, storm drainage, parks, rights of way, buildings, and related infrastructure.

Assists in the mowing and maintenance, repair and installation of streets, storm drainage systems, buildings, grounds, parks and open spaces.

Ensures proper maintenance and operation of vehicles, tools and equipment by participating in cleaning and inspecting equipment before and after use.

General Employee

Pursues professional development.

Read and be familiar with the Village Personal Policy Manual.

Oversee the safety of employees by instructing individuals in proper Federal, State and Village safety standards including trenching / excavation, confined space entry, lock out tag out, blood borne pathogens, right to know and material safety data sheets. Provide training as required.

Conducts duties in a safe manner with regard but not limited to. Attitude and actions, use of drugs and alcohol, use of clothing and accessories; operation of tools, equipment, and vehicles; observance of rules and procedures; use of protective gear; maintenance of hazard free work space; and use of proper body mechanics such as when lifting.

Other duties as may be assigned.

PERIPHERAL DUTIES

Meter reading, hydrant flushing, valve exercising, leak detection, conduct plant tours, post community event sign.

As assigned.

DESIRED MINIMUM QUALIFICATIONS

Education and Experience:

Graduation from high school education or GED equivalent.

Class B Public Water Supply Operators license.

Class 2 Wastewater license.

Five years of operational experience with water and wastewater plant operations, at least two of which have been with a municipal water system.

Five years of supervisory experience in mechanical, electrical, and plumbing repair and maintenance work.

Necessary Knowledge, Skills, Abilities, and Attitudes:

Considerable knowledge of all principles and procedures involved in the pumping, treatment, and distribution of drinking water by municipal water and wastewater treatment facilities.

Considerable knowledge of laboratory methods and procedures and good knowledge of occupational hazards and safety precautions in performing water treatment operations.

A practical working knowledge of chemical, biological and physical sciences essential to the practical mechanics of filtration, aeration, and ion exchange.

Demonstrated ability to maintain and adjust pumps, instruments, valves, processors, control panels, alarm dialers, well level data, and other water equipment.

Demonstrated ability to safely and effectively apply chemicals to obtain optimum water and wastewater quality results.

Considerable knowledge of principles and procedures involved in the collection and treatment of wastewater treatment plant.

Considerable knowledge of methods of chemical treatment and lubrication.

Considerable knowledge of the effects of water pollution on streams

An above-average ability to analyze data and develop sound plans.

Demonstrate ability to maintain and adjust pumps, instruments, valves, processors, digesters, grit tank, primaries, secondary and final tanks, bio-disc, alarm dialers, wet well level data, and other wastewater equipment.

Monitor and interpret laboratory and operational data; ensure treatment processes are in compliance with regulated guidelines.

Ability to independently trouble shoot and resolve mechanical and electrical problems and make correct repair to equipment.

Demonstrated ability to take accurate instrument readings, and keep clear and regular records.

Good knowledge in plumbing, excavating, carpentry, cement, heavy equipment operations, hand tools.

Ability to repair water main breaks, install fire hydrant and water main valves.

Ability to calculate percentages, fractions, decimals, volumes, ratios, present values and spatial relationships.

Ability to interpret basic descriptive statistical reports.

Ability to use functional reasoning in performing influencing functions such as supervising, managing, leading, teaching, directing and controlling.

Ability to exercise the judgment, decisiveness and creativity required in situations involving the evaluation of information against sensor and/or judgmental criteria, as opposed to criteria that are clearly measurable.

High level of discretion, decisions frequently restricted only to specific policies, some guidance from superiors.

Skill in promoting staff effectiveness through teamwork.

Ability to maintain confidentiality when situation warrants.

Ability to work independently, with little supervision.

Ability to work under pressure with frequent interruptions and handle stressful situations.

Ability to establish and maintain courteous and effective working relationships with employees, public officials, general public, consultants, developers, and governmental agencies.

Attitude which promotes strong personal, professional, and organizational integrity, fairness, honesty, accountability, and responsibility.

Knowledge of hazards and safety precautions associated with municipal maintenance and repair activities.

Knowledge of equipment, facilities, materials, methods and procedures used in maintenance, construction, and repair activities.

Skill in snow and ice removal operations including plowing and salting.

Skill in bituminous concrete paving and portland cement concrete placement procedures.

Ability to operate a variety of office equipment including a telephone, photocopier, facsimile, personal computer and meter reading equipment.

Ability to understand and follow complex oral and written instructions.

Ability to communicate effectively verbally and in writing. Ability to prepare accurate and grammatically correct written reports.

Ability to operate various word processing and spreadsheet software programs on a personal computer.

Skill to operate various word processing and spreadsheet software programs on a personal computer.

Basic ability to operate a variety of equipment ranging from hand tools to large motorized machinery and vehicles. Operate such devices as listed, but not limited to: back hoe, sewer jet, snow plowing equipment, pumps, small engines, crack seal equipment, grass mowers, air compressor, trencher, grass trimmers, gauges, air hammer, asphalt paving machine, roller, compactor, locating equipment, chainsaws etc.

Ability to perform heavy manual tasks for extended periods of time, Ability to work safely, Above average physical dexterity and endurance, Ability to work effectively in a wide range of weather conditions in the course of normal duties.

Attitude which promotes strong personal, professional, and organizational integrity, fairness, honesty, accountability, and responsibility.

SPECIAL REQUIREMENTS

After-hour, weekend and or holiday shifts may be assigned by the supervisor.

Must respond to emergency call-ins and to carry a cell phone or pager.

A valid State of Illinois Class B CDL drivers license, or the ability to obtain within sixty days.

Special certificates or licenses may be required if or when job duties expand.

TOOLS AND EQUIPMENT USED

Motorized vehicles and equipment, including dump truck, pickup truck, utility truck, bucket truck, sewer Vac-all, asphalt paving machine, street roller, plate compactor, saws, pumps, welders, compressors, jack hammer, sanders, generators, mowers, common hand tools and power tools, shovels, wrenches, leak detection devices, shoring equipment, pencil, pen, ruler, ladders or scaffolding, tape measure, snow plow, blower, mobile radio and locator. Personal computer, including word-processing, mapping and work order software, calculator, telephone, facsimile and photo copier.

PHYSICAL DEMANDS – The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to reach with hands and arms; walk; talk; hear; stand; sit; climb; balance; stoop; kneel; crouch or crawl; use hands to finger / handle / feel / operate objects; tools, or controls.

The employee must frequently lift and /or move up to 50 pounds and occasionally lift and /or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT – The work environment characteristics 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.

While performing the duties of this job, the employee regularly works in outside weather conditions, ranging from sub-zero temperatures to temperatures in excess of 100 degrees Fahrenheit and in rain or snow to dry conditions. The employee frequently works near moving mechanical parts, equipment and vehicles. The employee occasionally works in high precarious places as well as below the ground surface in excavations for utility repairs. The employee may be exposed to fumes or airborne particles, toxic or caustic chemicals and vibration. The employee is occasionally exposed to the risk of electrical shock.

Noise level in the work environment can vary from normal to loud.

SELECTION GUIDELINES

The duties listed above are intended only as illustration of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

Formal application, rating of education and experience, oral interview and reference check, job related tests (skills, physical, medical, psychological, drug screening etc.) may be required.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.