



Code: 5644

Family: Technical Engineering

Service: Operation and Construction

Group: Engineering, Designing, and Structural

Series: Civil Engineering

CLASS TITLE: SANITARY ENGINEER IV

CHARACTERISTICS OF THE CLASS

Under general supervision, supervises professional sanitary engineering work in connection with water quality control and sterilization and the installation of City water systems, and performs related duties as required

ESSENTIAL DUTIES

- Supervises the inspection of plumbing lines and appurtenances and the collection of water samples by subordinate staff
- Supervises the sterilization of pumping stations, tunnels, water mains, and other structures of the City's water intake and distribution systems
- Directs and participates in lake surveys to determine water quality or potential health hazards in lake conditions
- Reviews and compiles laboratory data and prepares reports and charts on water quality for submission to federal and state regulatory agencies
- Coordinates the section's water sampling and testing activities with other bureaus in the department
- Supervises the disinfection and sampling of new and repaired mains, evaluates test results, and approves placing in service
- Receives phone calls from consumers, contractors, and engineers regarding water quality complaints and questions and provides quality customer service by submitting requested information in a timely and efficient manner
- Assigns subordinate engineers to investigate consumer complaints, reviews investigation reports for completeness and appropriateness of disposition, and notifies concerned parties of findings
- Conducts on-site inspections to ensure the quality and timeliness of surveys and investigations
- Conducts complex water quality investigations requiring considerable knowledge and management-level decision making
- Coordinates special surveys of the department's water quality control systems and recommends more efficient equipment or procedures to improve systems operations
- Oversees the ordering and maintenance of equipment and supplies used in water quality monitoring and water main disinfecting activities
- Trains staff on work procedures and evaluates their performance
- Keeps abreast of state and federal regulations governing water quality standards
- Enforces departmental safety policies

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Graduation from an accredited college or university with a Bachelor's degree in Sanitary, Chemical, Civil, or Environmental Engineering, or a directly related field of engineering, plus two years of professional sanitary engineering experience, or an equivalent combination of education, training and experience, provided that the minimum degree is met

Licensure, Certification, or Other Qualifications

- A valid State of Illinois driver's license is required
- A valid State of Illinois EPA Water Operator's certification (Class D or higher) OR a valid State of Illinois EPA Water Operator-in-Training certification (Class C or higher)

WORKING CONDITIONS

- General office environment
- Exposure to outdoor weather conditions, including inclement weather and extreme temperatures

EQUIPMENT

- Standard office equipment (e.g., telephone, mobile devices, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, Self-Contained Breathing Apparatus (SCBA))
- Scientific calculators
- Water quality testing and on-line field monitoring equipment

PHYSICAL REQUIREMENTS

- Ability to stand and walk for extended or continuous periods of time
- Ability to operate an automotive vehicle
- Ability to collect water samples from lakes, tunnels, pumping stations and water mains
- Ability to open a fire hydrant

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Considerable knowledge of:

- *sanitary engineer and water quality methods, theories, principles and procedures
- *applicable water treatment and purification theories, principles, methods, practices, and procedures
- *measuring equipment and instruments, including sanitary engineering mechanical and electrical recording equipment
- *sterilization and abatement treatments and methods
- *applicable safety principles, methods, practices, and procedures
- *applicable federal, state, local laws, regulations, and guidelines

Moderate knowledge of:

- *environmental inspection methods, theories, principles, and procedures

Some knowledge of:

- supervisory methods, practices, and procedures

Knowledge of applicable City and department policies, procedures, rules, regulations

Other knowledge as required for successful performance in the Sanitary Engineer III class

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action
- *COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions
- MANAGEMENT OF MATERIAL RESOURCES - Obtain and see to the appropriate use of equipment, facilities, and materials needed to do certain work
- MANAGEMENT OF PERSONNEL RESOURCES - Motivate, develop, and direct people as they work and identify the best people for the job
- *COORDINATION WITH OTHERS - Adjust actions in relation to others' actions
- INSTRUCTING - Teach others how to do something
- * JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
- *QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance

Other skills as required for successful performance in the Sanitary Engineer III class

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem

- REACH CONCLUSIONS – Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Other abilities as required for successful performance in the Sanitary Engineer III class

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
December, 2018