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**JOB POSITION: Water Resources Engineer I**

**Division:** Water Operations  
**Status:** Exempt  
**Grade:** 18  
**Job Code:** 287  
**Reports To:** Director of Water Operations  
**Date:** 10-10-18  
**Revised Date:** 10-10-18  
**Last Reviewed Date:** 10-10-18

**SUMMARY OF JOB**

Performs and oversees a variety of activities and programs related to the Water Distribution System, Cross Connection & Backflow Prevention, Metering, and Non-Revenue Water reduction efforts.

**ESSENTIAL DUTIES AND RESPONSIBILITIES**

Include the following. Other duties may be assigned or scheduled.

- Proficiency in regulations and best practices governing the operation, installation, repair, and maintenance of a public water distribution system.
- Proficiency in the best practices relating to the analysis, and reduction of Non-Revenue Water (NRW).
- Leads, plans, and coordinates efforts to protect the public water system through enforcement of state, local, and Authority regulations and best practices relating to cross connection and backflow prevention.
- Monitors, reviews, investigates, and makes recommendations to improve the water distribution system, NRW reduction efforts, cross connection & backflow prevention efforts, and overall system hydraulics.
- Coordinates projects with various internal/external, office and field personnel.
- Develops, collects, maintains, organizes, and distributes accurate data to support the reduction of NRW.
- Develops, collects, maintains, organizes, and distributes accurate data to support the prevention of cross connection and backflow.
- Participates in the development, implementation, and revision of; NRW, and cross connection and backflow prevention programs, policies, and procedures.
- Analyze water production, distribution, and metering systems to assist with optimization strategies.
- Utilize hydraulic models to analyze water distribution systems.

- Prepares technical reports on system improvements including recommendations on capital projects.
- Works with internal staff to understand water system operations and distribution and metering challenges.
- Performs water distribution system analyses to assist with data collection, monitoring, and reporting.
- Proficiently operates computer software including; hydraulic modeling, asset management and GIS systems, computer aided design (CAD), billing and Microsoft office products including but not limited to Word, Excel, & PowerPoint.
- Provides design and drafting services and prepares detailed drawings for water projects using current AutoCAD software.
- Reviews and processes data collected by field instruments.
- Manages construction of assigned water projects.
- Reviews plans, specifications, and submittals for assigned projects.
- Directs field crew(s) in the collection of data required for NRW analysis, and cross connection and backflow prevention.
- Conducts site visits and field inspections as necessary.
- Assists internal and external customers with questions relating to Authority facilities and services.
- Participates in various work teams as assigned.
- Confers with department manager and/or director on problems encountered in assigned area.
- Assists in the formulation of long-range programs for infrastructure improvements.
- Schedules and monitors work of assigned staff.
- Prepares cost estimates on assigned projects.
- Engages in engineering research.

### **SUPERVISORY RESPONSIBILITIES**

Manages/supervises assigned employees in accordance with the organization's policies and applicable laws. Responsibilities include; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems.

### **QUALIFICATIONS**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Ability to direct and supervise personnel.
- Ability to develop, review and recommend processes and procedures for assigned area, identifying and discussing impact on assigned area, the division and the entire organization.

- Ability to think logically and analyze data.
- Ability to effectively present information to management, public groups, and/or employees as necessary
- Ability to respond to inquiries or complaints from employees and customers orally or in writing as necessary.
- Ability to establish and maintain effective working relationships with co-workers, employees, other Water Authority departments and the general public.
- Ability to represent assigned area in meetings attended.
- Ability to work with minimal supervision and negotiate and resolve conflict.
- Ability to analyze and solve difficult technical and administrative problems.
- Ability to define problems, collect data, establish facts and draw valid conclusions.
- Ability to read and interpret documents such as safety rules, operating and maintenance instructions, maps and procedure manuals.
- Ability to apply common sense understanding to carry out instructions furnished in writing, oral or diagram form.
- Ability to write reports, correspondences and procedure manuals in a clear concise manner.
- Ability to communicate technical concepts to technical and non-technical audiences.
- Ability to work alone or in a team environment.
- Must possess and maintain a good work ethic concerning attendance, punctuality, positive attitude, meeting deadlines, being a team player and encouraging teamwork among employees.
- Thorough knowledge of the principles and practices of civil engineering as related to the preparation of plans and specifications for a wide variety of utility and engineering projects.
- Working knowledge of equipment, materials, methods and procedures, safety standards and specifications used in water and sewer related activities.
- Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.
- Ability to adapt approved engineering methods and standards to a variety of utility projects.
- Skill in operating computers and software associated with job responsibilities.
- Working knowledge of water distribution system modeling, CAD, and GIS.
- Analyzes related software and hardware and develops plans to fund and implement new or modified software or hardware to achieve the goals and objectives of the business unit.
- Evaluates, develops, implements, and revises GIS-related policies and procedures to achieve the goals and objectives of the business unit.
- Supports the Director of Engineering in the development, implementation, and revision of asset maintenance-related policies and procedures.

## **EDUCATION and/or EXPERIENCE**

Bachelor's degree from an accredited college or university with a major in civil engineering or related field plus one or more years of related experience.

## **CERTIFICATE, LICENSE, REGISTRATION REQUIREMENTS**

- Must possess a valid Virginia driver's license or have the ability to obtain one within 60 days of employment date. No more than six (6) demerit points on driving record if required to drive Water Authority vehicles.
- Possession of Certification issued by the Commonwealth of Virginia showing the successful completion of the Fundamentals of Engineering Exam.

## **PHYSICAL DEMANDS OF THE JOB**

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 regularly required to walk, stand, and sit; use hands to finger, handle or feel; reach with hands and arms; talk and hear.
- Specific vision abilities required by this job include ability to adjust focus. If corrective lenses are noted on driver's license, the lenses must be worn when operating Authority vehicles.
- Repetitive movement using equipment is involved.
- While performing the duties of this job, the employee is regularly required to stoop, kneel, crouch, bend, climb, balance or crawl.
- Employee must be able to stand for an extended amount of time at the jobsite.
- Employee must be physically able to walk several miles during the day.
- Employee must be physically able to regularly reach overhead.
- Employee must regularly lift, carry and/or move up to 50 pounds and occasionally 100 pounds. Assistance is required on weight amounts above those listed. Failure to do so could result in injury and denied Worker's Compensation benefits.

## **WORK ENVIRONMENT ENCOUNTERED IN THIS JOB**

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.

- Employee will be regularly exposed to moderate or high noise level, extreme outside weather conditions, uneven, steep, slippery terrain conditions, dusty conditions and wet and/or humid conditions.
- Employee will be subject to exposure to moving mechanical parts and heavy equipment operation.

- Employees will be subject to roadway hazards, i.e. traffic.
- Employee will be subject to outside hazards, i.e. poison ivy, bees, spiders, dirt, animals.
- Employee will be subject to confined areas, i.e. confined spaces, sewer manholes, water vaults, wastewater pits, and/or protected trenches.

### **GENERAL STATEMENT AND SELECTION GUIDELINES**

The above statements describe the general nature and level of work assigned to in this job position. They should not be construed as an exhaustive list of all job duties or tasks performed by personnel so classified.

The following will identify the selection guidelines for job placement:

- WVWA application
- Rating of education, experience, training and qualifications
- Reference checks
- Interview with WVWA management team
- Applicant must pass a pre-employment physical and drug/alcohol test
- A criminal background check and social security number verification will be performed. The results must match information provided by the applicant on the WVWA application.
- Job related test might be required and would be administered to all applicants applying for the position