



JOB POSITION: ENGINEERING / GIS TECHNICIAN (Asset Management)

Division:	Engineering
Status:	Non-Exempt
Grade:	10 – 13 – Depending on Qualification (DOQ)
Job Code:	N/A – (General Description)
Reports To:	Program Manager – Planning & Asset Management
Date:	March 9, 2021
Revised Date:	March 9, 2021
Last Reviewed Date:	March 9, 2021

SUMMARY OF JOB

The role of Engineering / GIS Technician is to support the Authority’s planning and asset management functions by providing field and office support for Geographic Information System (GIS), Mapping, and Asset Management programs and other activities managed by the Engineering Services Division. Specific duties include but are not limited to: Updating and maintaining the Authority's Asset System of Record, data quality control, data acquisition, data maintenance, and data transformation, and fulfilling data requests with a quick turn-around. The Engineering/GIS Technician assists in preparation of maps, data summaries and other visualizations to clearly and effectively communicate information to internal staff, the public, and other stakeholders. An effective candidate for this position understands the importance of GIS at the Authority and is motivated to help advance the state of practice.

An ideal candidate for this position will have superb working knowledge of Geographic Information Systems (GIS) fundamentals and demonstrable proficiency in industry standard GIS platforms such as ESRI products and platforms with demonstrable skills in database management and program development.

ESSENTIAL DUTIES AND RESPONSIBILITIES

In order to perform this job successfully, an individual must be able to perform each essential duty satisfactorily. Assigned duties and responsibilities will include the following, depending on qualifications. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Performs basic field surveying for data collection using GPS equipment and asset management software platforms.

- Manipulates geographic data in spatial and tabular databases.

- Reads and interprets record drawings, as-builts, plans, and specifications.

- Performs quality control of work for exactness, neatness, and conformance to specifications and internal standards.

Assists in training others in the use of GPS equipment and asset management software platforms.

Coordinates, processes data, and prepares summary reports for hydraulic analysis and hydrant flow tests.

Assists with field and office work to support engineering projects including water and wastewater capital improvements.

Coordinates quality control, data validation, and input of data into mapping and databases.

Integrates work order and as-built information into the Asset System of Record.

Examines work for exactness, neatness, and conformance to specifications.

Assists and trains system users with hardware, software and conversion of documents.

Assist in the production of presentation quality maps, exhibits, graphics, schematics, plots, and other technical documents.

Creates and processes field survey data for use in updating the asset registry.

Assists in creation of base maps and asset inventories for design projects from the asset system of record.

Undertakes daily updates and quality control in the Authority's asset management databases and GIS for design project areas.

Provides assistance in improving and updating existing internal GIS standards, templates, and workflows.

Able to develop standard operating procedures for documenting common workflows.

Assists with data collection, monitoring, and documentation of field activities, as needed.

Imports and manipulates survey data to update the Asset System of Record.

Updates GIS mapping and databases.

SUPERVISORY RESPONSIBILITIES

Depending on qualifications and experience, may supervise entry-level technicians and interns.

PREFERRED QUALIFICATIONS

The requirements listed below are representative of the knowledge, skill, and/or abilities of an excellent candidate for this position.

Use Python / Ruby scripts to retrieve data sources for production and updating of authoritative data in an enterprise geodatabase.

Design maps and visualizations, develop mapping software, and automate geographic analysis.

Ability to automate data QA/QC whenever possible

Documentation of processes and workflows to help convey information to users of different levels of expertise.

Develop web-based GIS applications using ArcGIS Online

Familiarity with asset management basics and geographical information systems (GIS).

Strong working knowledge of cartographic principles and their application in the digital realm.

Strong working knowledge of map coordinate systems and projects, and their usage in GIS applications.

Strong computer skills, and experience with or ability to learn new GIS applications and programming techniques for improving data processing workflows.

Proficiency in use of computers and various software programs such as Microsoft Office suite, ESRI products and platforms, Innovyze geographic information/asset management systems, SharePoint, etc.

Working knowledge of hand-held and RTK GPS receivers.

QUALIFICATIONS AND EXPERIENCE

Minimum requirements: Bachelors or Associates degree from an accredited college or university or certificate in GIS or related program from a recognized technical training institution. Two (2) or more years related experience preferred or equivalent combination of education and experience. Strong knowledge of cartographic principles and their application in the digital realm.

Strong knowledge of map coordinate systems and projections, and their usage in GIS.

Basic knowledge of equipment, materials, methods and procedures used in water and sewer related activities.

Skill in use of computers and various software programs including but not limited to InfoNet Desktop, InfoNet Mobile, ArcMap, AutoCAD, Microsoft Excel, Microsoft Word, Microsoft PowerPoint, Microsoft Access, and Microsoft Outlook preferred.

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.

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 exposure 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