GEOGRAPHIC INFORMATION SYSTEM (GIS) TECHNICIAN

Job Description

The job description does not constitute an employment agreement between the City and employee and is subject to change.
The specific statements shown in each section of this description are not intended to be all-inclusive.
They represent typical elements and criteria considered necessary to successfully perform the job.

Class Title:	Geographic Information System (GIS) Technician	**Effective Date:**	February 1, 2024
Working Title:	Geographic Information System (GIS) Technician	**Type:**	Non-Represented
Department:	Public Works	**Supervisor:**	Environmental & Technical Division Manager
FLSA Status:	Non-Exempt	**Supervises:**	None

CLASSIFICATION SUMMARY

Under the direction of the Environmental & Technical Division Manager, the GIS Technician works to support the operations and initiatives carried out by the Public Works Department through its five divisions, and provides geospatial services to other City Departments and staff, as needed. The GIS Technician must be proficient with ESRI software (ArcGIS Pro), have a good understanding of geodatabases and geodatabase applications, be able to create maps and web apps using cartographic principles, and demonstrate excellent interpersonal and written communication skills.

This position is generally responsible for maintaining accuracy, integrity, and completeness of the Department's geodatabase and spatial datasets; ensuring that City staff have access to geospatial data and that they are properly trained to use it; and providing geospatial products and services to support the Public Works Department and City staff. Some responsibilities include: developing, maintaining, modifying, and organizing geodatabases; creating, maintaining, and updating spatial datasets, metadata, and data standards; developing GIS program related procedures and standards; implementing data quality controls and assurances; performing research to inform projects; creating and acquiring data; performing queries, spatial analysis, geocoding, and geoprocessing; creating maps and web applications; maintaining the ArcGIS Online platform and published content; producing graphical, tabular, statistical and spatial products; writing technical reports; and providing technical support and training to GIS users and non-users (including the public).

SUPERVISION

This position is not supervisory, but may act as a lead worker on GIS-related projects and works closely with Environmental and Technical Division staff.

PHYSICAL DEMANDS – SAFETY – WORKING CONDITIONS

The physical demands (including lifting, mobility, movement, and manual dexterity), work environment and working conditions described below 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.

Physical Demands
In the performance of job duties, the employee is frequently required to sit; talk or hear; walk; use hands to finger, handle, or feel objects, tools or controls; bend; and reach with hands and arms. The employee is regularly required to climb or balance, stoop, kneel, climb stairs, crouch, or crawl. The employee must occasionally lift and/or move up to 40 pounds and infrequently lift and/or move up to 60 pounds. Specific vision abilities required by this job include close, distance, color and peripheral vision; depth perception; and the ability to adjust focus. Visual acuity necessary to perform an activity such as: preparing and analyzing data and figures; accurately transcribing letters and numbers; viewing a computer screen; extensive reading. Manual dexterity and coordination are required to perform the work. These abilities are necessary to use a computer and various software programs, calculator, phone, copier, and other related tools and equipment.

Safety
Employees must maintain a safe work environment by complying with City and Department safety policies and rules and by practicing safety while performing the essential functions of the position.

Working Conditions
In the performance of the job duties, the employee will perform the work both indoors and outdoors; the position is office based with seasonal field data collection, which may require travel to field sites. Work may include exposure to varying and extreme weather conditions. Duties may involve exposure to inclement weather, environmental pollutants, high noise levels, and construction and traffic hazards. May also be required to work in and around waterways. Indoors, job duties will be performed in an office environment under usual office working conditions. Work is also performed in numerous meeting settings in offices, conference rooms, and public spaces. The noise level in the work area is typical of most office environments, with telephones, frequent interruptions, and background noises. Duties include occasional contact with customers in conflict situations. Employees in this classification may work a hybrid remote schedule depending on business and operational needs.

May be subject to 24-hour call back for emergency conditions. Occasional evening and weekend work may be required.

ESSENTIAL FUNCTIONS – DUTIES & RESPONSIBILITIES

An employee in this classification may perform any of the following duties; however, these examples do not include all the specific tasks which an employee may be expected to perform. Based on the Public Works Department's cross-functional team approach to projects, all employees may perform duties in sections other than those regularly assigned as needed and directed. Duties and responsibilities are subject to change by the employer as the needs of the employer and requirements of the job change.

It is the responsibility of every employee to represent the City of Keizer by responding to the public, citizens, its employees, and others promptly, professionally and with courtesy. This includes regarding everyone, internal and external, as a customer and delivering the best service possible in a respectful and patient manner. Additional responsibilities include assisting other staff in the performance of their duties as assigned, maintaining regular job attendance and adherence to working hours, and operating a motor vehicle safely and legally while on City business.

30%   Maintain accuracy, integrity, and completeness of the Department's geodatabase and spatial datasets.

Utilizes geographic information system (GIS) tools to perform routine data maintenance; inputs, updates and maintains GIS datasets; verifies data integrity; views and edits data using cartographic techniques; enters, updates and maintains data layers and relational databases.

Creates and modifies GIS datasets, manages and maintains legacy GIS datasets; develops and implements GIS-based solutions to support asset management and analyses for engineering, survey, water, stormwater, environmental, parks, and other City projects.

Researches various records to maintain current, accurate digital maps and databases; finds and compiles source information for mapping; visits field locations to collect or verify data.

Understands and reconciles legal property documents and exhibits. Converts existing drawings and source data from various formats for integration into the GIS system.

Maintains metadata describing data sources, accuracy, reliability and completeness, map feature types, descriptive feature attributes and other information about GIS data layers.

Creates and maintains geodatabase models, and creates GIS web apps and maps through ArcGIS Online.

Performs quality assurance and control checks of GIS data and non-spatial databases with minimal supervision to ensure data integrity.

Plans, mobilizes, and conducts data collection in the field using GPS/GNSS equipment and provides training to non-technical staff to support accurate data collection efforts.

Develops and maintains geospatial data on desktop and mobile applications. Ensures data meets appropriate data accuracy and content standards for quality assurance and quality control.

Develops operating procedures and standards within area of specialty.

35%   Ensure City staff have access to geospatial data and that they are properly trained to use it.

Assists Department staff with GIS queries, spatial and statistical analyses, and map production needs, including evaluation of data sources and preparation of reports, maps, exhibits, and graphs.

Performs research on a variety of topics to compile data and inform product development, and prepares professional technical reports.

Provides timely user support including troubleshooting, problem solving, needs assessments, and equipment maintenance, field testing hardware and software.

Develops and implements user training for City staff, as needed.

Communicates information to others such as emergency responders, utility companies, engineers, other government agencies, and the public in need of geographic information.

Coordinates intergovernmental agreements involving GIS support from other agencies. Reviews contracts and provide recommendations/advice to supervisor.

Analyzes, evaluates, and specifies hardware and software products for use in GIS. Assists in system administration, hardware, software, and peripherals installations, and upgrades. Analyzes system failures; recommends and assists in problem resolution.

Coordinates with management staff, support staff, or IT personnel to solve GIS application problems.

30%   Provide geospatial products and services to support Department and City staff.

Communicates with project team members and others to define data needs, project requirements, and desired outputs. Prepares a variety of maps, illustrations and other graphic representations that meet specific customer needs.

Meets with GIS customers (users and non-users) to define project requirements and interpret project needs into best-fit GIS solutions. Utilizes GIS software tools to independently develop complex GIS solutions aimed at satisfying customer requirements.

Produces accurate, high-quality cartographic products (digital and paper) and reports in accordance with technical guidelines and project requirements.

Compiles, manipulates, and performs basic coding and programming to refine geographic data from a variety of sources including but not limited to, CAD files, field observations, satellite imagery, aerial photographs, and historical maps.

Digitizes geographic data features and performs geocoding to rectify unreferenced data. Proofs and reviews maps for completeness and adherence to standards.

Manages individual projects and tasks related to GIS, database design and management, and data visualization.

Customizes GIS workflow and software programs to support data collection, asset management, and analyses.

Recommends methods and documents procedures for generating geographic-related products. Assists in the design and organization of spatial data and the integration of associated attribute data.

Performs spatial analysis, geoprocessing, and database queries, as needed.

Uses GIS software programs to modify and update data and to compose mobile mapping, inspection, and field-ready products. Operates large format plotter to produce hardcopy map products.

5% General Duties

Follows all Personnel Policies and abides by the Ethical Standards and Core Values of the City.

Operates as an effective member of the Public Works team; keeps the Division Manager and team informed of project status and program progress.

Communicates effectively (verbally and in writing) to a variety of audiences. Establishes effective working relationships with members inside and outside the organization.

Performs multiple duties and assignments concurrently; prepares short- and long-term projects and work assignments; maintains records of materials and equipment used; develops and maintains project files and other records; maintains time sheets and personnel reports as required; provides status reports to supervisor as directed.

Attends conferences and/or training sessions to maintain current knowledge of industry policies, standards, practices and technologies.

May be placed on emergency on-call as directed by supervisor.

MINIMUM QUALIFICATIONS

Education & Experience
Bachelor's degree with major course work in computer science, geography, engineering technology, or a related field; a minimum of two years' experience with GIS software from Environmental Systems Research Institute (ESRI); and experience in use of a GIS system and in developing maps and applications using GIS; or any equivalent combination of education and experience.

Licenses, Certifications & Other Requirements
- Required at time of hire and maintained during employment: Valid Oregon driver license.
- Pass background investigation.

ADDITIONAL QUALIFICATIONS

Knowledge
- Positive and effective customer service principles.
- Geographic information system principles, practices, and concepts.
- Proficiency with ESRI software, products and solutions, and the ArcGIS online platform.
- Advance principles of data management, metadata management, and quality control/assurances as applied to spatial data.
- Working knowledge of interactive web maps, publishing and maintaining web services using ArcGIS online, or a cloud-based GIS platform.
- Applicable hardware, software and systems maintenance and support methods including GPS/GNSS devices and smart devices.
- IT system concepts and practices as applied to geographic information systems administration and management.
- Data security and integrity principles.

Skill & Ability
- Strong communication and interpersonal skills.
- Ability to independently manage multiple assignments, prioritize tasks and plan work, and work with limited direct supervision.
- Experience working with different coordinate systems, map projections, and datum's
- Ability to work with vector and raster datasets.
- Proficiency with MS Office Suite, especially Word and Excel.
- Skilled in performing research and writing professional technical reports.
- Detail oriented; ability to focus and/or concentrate to accurately input and proof attribute data.
- Explain to people with a non-technical background what the technical information means and how it can be used.
- Strong critical thinking, problem solving, and troubleshooting skills.

    Preferred but not required:
- Experience or working knowledge of Public Works operations and/or utilities.
- Experience using/working with Google Earth, KMZ files, and/or AutoCAD files.
- Familiar with raster data and/or LiDAR datasets.
- Experience using Python, Arcade, ModelBuilder or another common GIS scripting language.

Licenses, Certifications & Other Requirements
- Preferred at hire, must be able to obtain within 90 days of hire: First Aid & CPR Certification, NIMS IS 100, 103, 200, 700, and 800 Certification.