

**KENNEWICK IRRIGATION DISTRICT  
JOB DESCRIPTION**

**GIS ANALYST/DEVELOPER**

**REPORTS TO:** Land and Water Resources Manager  
**DATE:** October, 2016

**GENERAL SUMMARY:**

Manages, coordinates, constructs, and maintains the District's GIS files and related software applications, maps and data products. Develops workflows, defines policies, and plans development and direction of GIS projects. Coordinates with other KID staff and management to define and customize GIS project content to meet specific departmental requirements. Develop, implement, operate, and maintain the District's enterprise GIS program. District lead in the design and development of enterprise GIS and related web services which may be linked to other District enterprise data systems. Writes programs and develops user interfaces, menus, and macro-level commands to meet high priority District GIS needs. Provides back up support to keep IT systems operating, especially in the absence of the IT Specialist.

**ESSENTIAL DUTIES:**

1. Provides support for the District's GIS activities as assigned.
2. Creates new GIS spatial and tabular data layers (including District facilities, rights-of-ways, boundaries, operational routes, and related information from legal descriptions, as-built drawings by various methods, such as GPS (Global Positioning Systems), digitizing and data entry.
3. Maintains existing GIS spatial and tabular data by performing regular updates in order to insure and maintain their validity.
4. Creates requested GIS products such as maps.
5. Develops procedures and standards relating to GIS operations, maintenance, and services.
6. Designs and implements efficient methods to convert and incorporate accumulated legacy system data such as spreadsheets and paper based recordings into the GIS database.
7. Promotes the sharing of data between the District and other county, state and federal agencies.
8. Working knowledge of operating system software, workstations, PC's, laptops, tablets, smart phones, plotters, scanners, digitizers, and other peripheral devices.
9. Assists with the administration of the District's State Environmental Policy Act and National Environment Policy Act requirements on projects within the boundaries of the District.
10. Utilizes computer programming code (Python, etc.) to automate GIS workflows and applications, updates, and office computer processes.
11. Creates and maintains Web mapping services and applications using Java Script programming language and multiple API platforms.

12. Creates and maintains organization of online platforms for data and web map sharing across multiple levels of departmental permissions.
13. Administers ArcGIS Server configuration for integration into the KID network.
14. Designs and integrates SQL Server instances and databases for migration of all GIS data.
15. Outlines procedures and policies for versioning and multi-user data editing workflows with ArcSDE in order to ensure data integrity.
16. Trains and assists various levels of GIS users within the entire District in GIS software and data use, and creates documentation of training materials.
17. District lead in the creation of GIS strategic plan that encapsulates all policies and procedures for the use and architecture of GIS in the District.
18. Troubleshoots and solves problems related to all aspects of the enterprise GIS software and data system.
19. As required, especially in the absence of the IT Specialist, troubleshoots and resolves software, hardware, and network problems to keep enterprise and operational software systems up and running.
20. Performs other related duties as assigned.

**EXPERIENCE/EDUCATION:**

A Master's degree in GIS, Computer Science or a closely related field **and** one (1) year of experience in programming in a GIS software environment, **or** a Bachelor's degree in GIS, Computer Science, or a closely related field **and** three (3) years of experience in programming in a GIS software environment; or any combination of education and experience which would provide the applicant with the desired skills, knowledge and ability to perform the job.

**WORKING CONDITIONS:** Work is performed in an office setting, at various public meeting locations, outdoors throughout Benton County in urban, agricultural and rural settings. Occasional travel may be required outside of Benton County. Attendance at meetings may require working during evening hours. Field visits may be required as needed.

**KNOWLEDGE, ABILITIES AND SKILLS:**

1. Knowledge of GIS software and data concepts and automated mapping procedures.
2. Knowledge of cartographic and land surveying principles.
3. Knowledge of computer programming languages (i.e. Python and JavaScript)
4. Knowledge of field data collection techniques, database management systems, computer network architectures, and Structured Query Language.
5. Knowledge of statistical analysis procedures and spatial data analysis.
6. Ability to effectively communicate information to other employees and to the general public, both verbally and in writing.
7. Ability to use GIS and GPS hardware and software to input, manipulate or edit spatial or tabular data.
8. Ability to use GIS software and related hardware to produce maps and reports.
9. Ability to customize GIS software and related applications to meet the needs of the District.

10. Ability to understand technical manuals and follow established procedures.
11. Ability to independently troubleshoot, problem solve, organize work load and assume responsibility for meeting deadlines.
12. Ability to establish and maintain accurate records of assigned activities and operations.
13. Ability to establish and maintain effective working relationships with other employees, vendors, and the general public.
14. Ability to be flexible to the needs of all District departments and citizens within the District.
15. Ability to think critically under stressful conditions.
16. Knowledge of land and water resources management processes.
17. Ability to articulate District water resource planning efforts to the public.
18. Knowledge of easements and rights-of-way, infrastructure, and water rights and law.
19. A working knowledge of the State Environment Policy Act, National Environment Policy Act, Shoreline Management Act, and the Growth Management Act.
20. Knowledge of water resource management policies, procedures, and law related to NPDES, Clean Water Act and Endangered Species Act.

Approved:



Charles Freeman, District Manager



Date

Confirmed by Board: October 18, 2016