GENERAL PURPOSE: Under general supervision, performs a variety of professional and technical duties in system and database design, administration, security, QA/QC, and analysis. The GIS Analyst Programmer will have a dynamic role developing advanced GIS enterprise systems, configuring mobile and web applications, and supporting critical workflows using ESRI’s ArcGIS Enterprise platform to address challenges in operations and maintenance, asset management, and capital improvement planning.

DISTINGUISHING CHARACTERISTICS: The GIS Analyst Programmer is a master classification. Requires minimal direction and supervision to develop and support leading edge technologies. Ensures compliance with policies and procedures implementing solutions for the organization’s divisions, which includes web and mobile applications, cloud computing, database design and administration, server system administration, asset management, and GIS analysis.

PRIMARY DUTIES AND RESPONSIBILITIES: The following duties ARE NOT intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.

- Keeps the mission, vision and values of the Board of Public Utilities at the forefront of decision making and action; builds strategic and collaborative relationships and interacts with others in a way that builds confidence and trust; provides excellent customer service by taking action to accomplish objectives, maintaining high levels of work and productivity, and generating innovative solutions to work situations.
- Manage, configure, upgrade, and maintain systems, databases, backups and related infrastructures.
- Develop and maintain GIS application systems; consult with current and proposed system users to discuss and document project requirements for new and/or modified GIS system changes; and recommend computer-based solutions.
- Develop, configure, troubleshoot, and administer the GIS enterprise system to assist with the decision-making process, support BOPU goals, provide technical support, serve as subject matter expert to mentor and assist staff.
- Monitor, troubleshoot, and document GIS system problems; develop and implement solutions to hardware and software application problems; and oversee maintenance of system.
- Write detailed program specifications; define data relationships, and sequence of operations necessary to program complex data relationships.
JOB DESCRIPTION
GIS Analyst Programmer.docx

• Apply advanced knowledge of the software development life cycle methodologies and best practices developing support systems and applications.
• Research, evaluate, recommend, and install application software and equipment purchases and upgrades.
• Perform complex network modeling activities to ensure appropriate program development and system coordination and application utility; and develop and design complex analytical programs.
• Digitize, verify, correct, and update GIS data, including as-built entry and verification.
• Produce special purpose maps, applications, and models; determine and execute the appropriate sequence of operations using GIS software and programming to process, analyze and manage spatial data.
• Stay abreast of GIS technological trends.

MINIMUM QUALIFICATIONS:

Education and Experience:
Bachelor’s Degree in Geography with GIS emphasis, Engineering, Computer Science, or a closely related field; AND A minimum three to five years of hands-on experience with an enterprise GIS system and a minimum three to five years of hands-on experience performing GIS analysis and GIS development, preferably in the water/wastewater industry; OR an equivalent combination of education and experience.

Required Licenses and Skills:
• Driver’s license valid in Wyoming with good driving record.
• Python 2.7+
• ArcGIS Online and/or Portal for ArcGIS
• ArcGIS Desktop
• ArcGIS Pro
• ArcGIS Enterprise
• PostgreSQL, SQL Server, and/or Oracle

Advanced Knowledge of:
• Principles of mapping, global positioning systems and usage of aerial photography and satellite imaging.
• Theory, principles and practices of geographic information systems, including computerized data compilation techniques, ESRI database management systems, ESRI software and extensions, geoprocessing, geospatial analysis techniques and procedures, cartographic skills using ESRI software, graphics applications and overlays, and the development and implementation of spatial models for database and geospatial analysis.
• Administration and maintenance principles of ArcGIS Enterprise versioned relational geodatabases, ArcGIS Enterprise REST endpoint services, ArcGIS Online and/or ArcGIS Portal, and system configurations needed to maintain stability, security, and performance.
JOB DESCRIPTION
GIS Analyst Programmer.docx

- Data source integrity and metadata standards.
- Database systems integration, quality assurance procedures, and documentation of data sets.
- System access and security protocols, and hardware and software troubleshooting techniques.
- Intermediate to advanced Python 2.7+ and SQL programming knowledge, using a git version control system.
- Principles and practices of technology management, system development and systems integration.
- Field data collection methods and technologies.

Advanced Skill in:
- Analyzing GIS problems, evaluating alternatives, and recommending procedures for resolution of issues.
- Using GIS - ESRI software suite programs and application programming languages.
- Analyzing, identifying and implementing solutions to technical problems.
- Reading, understanding, developing, manipulating, and analyzing geographic information in a variety of data formats and projections.
- Understanding and working with data from multiple public and private sources.
- Compiling, organizing, analyzing and presenting technical information in reports.
- Operating a personal computer, mobile devices, and cloud environments utilizing specialized GIS software and file management procedures.
- Using initiative and independent judgment within established procedural guidelines.
- Prioritizing multiple tasks, projects and demands.
- Establishing and maintaining cooperative working relationships with co-workers and outside agencies.
- Effective verbal and written communications.

Working Conditions:
Work Environment: Work is performed 80% of the time in a standard office environment and 20% outdoors with exposure to all weather conditions (hot, cold, wet, humid and windy); occasional exposure to fumes, odors, dusts and mists.
Physical Demands: Light physical work requiring ability to stand 30%, walk 30% and sit 40% of work time; ability to lift, carry, push and pull objects weighing up to 25 pounds; specific vision abilities required by this job include close vision, distance vision, depth perception, color vision and ability to adjust focus; constantly required to use hands and fingers to handle objects and paperwork and to operate a computer and related equipment; hearing and speech needed to maintain communication with other employees; occasionally required to climb, balance, stoop, kneel, crouch and crawl; position requires working at a computer for long periods of time.