

DEPARTMENT OF NATURAL RESOURCES

POSITION DESCRIPTION

Working Title: Remediation and Redevelopment (RR) Program GIS Analyst

Classification: IS System Development Services – Senior

Purpose of the Position:

This position supports planning, implementing, upgrading, and supporting the development of the RR Program's Geographic Information Systems (GIS) mapping applications and geospatial data needs. Primary responsibilities include managing and maintaining the RR Program's web-based mapping applications and all requisite map/feature services; performing advanced technical data and database design; analyzing data requirements; performing spatial data analyses; and assisting with necessary quality assurance and quality control processes to support RR Program IT operations and business needs. The position requires specific knowledge and experience relating to: understanding and managing GIS data and applications in multiple environments; GIS relational database management in Oracle /ArcSDE; a desire and ability to find functional solutions; working on development teams to integrate complex IT/GIS solutions existing in desktop, mobile and web environments.

The RR GIS Analyst is responsible for working with RR IT support staff to understand and meet the IT and GIS business needs of the RR program. This position works closely with the RR program and other DNR IT staff. This position works primarily on geospatial data, databases, web services, and mapping applications that support GIS applications and database systems to meet the needs of the RR program and may collaborate other Environmental Management division or other cross-divisional needs. This position works collaboratively with other IT staff supporting the needs of RR to support data, application, and process development as needed. This position also performs tasks that may involve customized geospatial data analysis, field data collection coordination, map production, document management or similar activities. This position may be a member or leader of RR and IT project teams.

Location, Geographic Scope and Travel Requirements:

This position can be stationed in any primary DNR office or service center in the state. If not stationed in Madison, occasional travel to Madison will be required as needed to coordinate with RR or IT staff. This position will report to the DNR IT Executive Program, whose management is primarily in DNR Headquarters in Madison. Occasional travel within the state may also be required.

Scope of Authority:

This position works under the general supervision of the DNR IT GIS Data, Analysis & Integration Section Supervisor and works closely with the Business Relationship Manager(s) for RR, RR staff, and the RR management team, as appropriate. With limited supervision, this position will manage GIS datasets and systems for the program, GIS-focused IT projects or initiatives, or portions of larger IT projects that focus on GIS data or processes.

Responsibilities and Accountabilities:

40% A: Maintenance, Enhancement and Development of GIS Applications and Systems – Manage and maintain GIS web, mobile, and desktop mapping and data collection applications for the RR Program.

- A1. Work with BRM, managers and management teams, presenting information about new or changed applications, changes in data architecture, potential new business opportunities due to technical advances, and impacts on business rules and processes.
- A2. Conduct maintenance of ArcGIS for Server (AGS) web/feature services using ArcGIS Desktop and AGS tools.

- A3. Maintain ArcGIS Portal and ArcGIS Online (AGOL) datasets, web maps, and mobile and web mapping applications.
- A4. Assist with application design updates as business needs or technologies change. This may include assisting with improving performance, security, and reliability of applications when in use.
- A5. When requested, assist in the testing and debugging of IT applications, using a variety of professional tools, to meet needs and specifications.
- A6. Update and maintain documentation for RR Program GIS web and mobile applications and GIS data layers. Coordinate finding resolution to RR GIS application issues. Work with peers and GIS admin staff to resolve problems with RR GIS data and applications when necessary.
- A7. Work with RR IT team to develop technical documentation for GIS applications and processes.
- A8. Assist with IT technical quality assurance reviews when requested, provide sufficient training enabling current or future RR program staff to utilize and/or maintain the GIS information systems.
- A9. Adhere to standards, procedures, and system development framework guidelines to ensure the success and quality of GIS projects.
- A10. Participate in application user design and post-implementation reviews.

45% B: Geospatial Data Development, Collection, Analysis & Maintenance – Manage and maintain GIS data for the RR Program, ensuring compliance with all necessary statutes, rules and agency policies.

- B1. Help facilitate GIS data collection, assessment and integration of GIS layers with Oracle data tables.
- B2. Maintain and support RR program ArcSDE content, GIS map services, ArcGIS Online (AGOL) and Portal GIS data and applications.
- B3. Edit, QA/QC, and maintain RR Program geospatial data.
- B4. Apply appropriate GIS software and tools, and apply relevant data standards, best practices, standard operating procedures, etc.
- B5. Identify and communicate process improvement and automation opportunities relating to RR GIS data and applications.
- B6. Assist with geospatial analyses as needed using appropriate software, tools, and techniques.
- B7. Communicate on topics relating to GIS to RR program managers, RR and DNR staff, and customers.
- B8. Coordinate with RR and IT staff to create detailed map products for use by RR Program staff, partners and the public as requested.
- B9. Manage GIS Oracle/SDE database components required for RR program GIS needs.
- B10. Serve as data custodian/steward of RR's statewide GIS data layers by performing the following tasks: update, maintain, create, organize and grant access to statewide vector and raster datasets and maintain metadata consistent with DNR's GIS standards.
- B11. Respond to open records requests by extracting GIS and tabular data and sending it to requesters, then documenting per DNR procedures.
- B12. Facilitate GIS data collection using mobile, web, and desktop systems, assess and integrate GIS information with data in spatial or tabular Oracle tables.
- B13. Provide support to office and field staff on mobile, desktop, and web-based GIS solutions.

10% C: GIS Project Management

- C1. Help collect and write user stories and acceptance criteria for GIS-related needs.

- C2. Work with the business relationship manager (BRM), RR IT team, business sponsor and managers to estimate and prioritize user stories in conjunction with non-GIS needs.
- C3. Participate in sprint planning, daily scrums, sprint reviews and retrospectives. Communicate GIS project progress, problems and/or shortfalls to RR Business Relationship Manager, GIS IT Section Chief, and RR Program staff and leadership as requested.
- C4. As required, assist with drafting project plans, track progress and report on status.
- C5. Assist with presentations or content for meetings, workshops, conferences, and Departmental briefings as requested.
- C6. Support project or task teams to complete implementation of GIS applications or systems integration.

5% D: Organizational Responsiveness

- D1. Manage data and GIS systems in compliance with all applicable DNR data, application, and documentation standards.
- D2. Manage public records applicable to job duties following all applicable agency policies.
- D3. Review and keep abreast of changes in knowledge and practices of position-related activities in responsibilities.
- D4. Participate in job-related training and organizational meetings as assigned by supervisor.
- D5. Prepare forms and reports as necessary for personnel and budget accounting purposes in a timely manner.
- D6. Perform other position-related duties as assigned.
- D7. Follow all general and position-related safety requirements.

Knowledge, Skills and Abilities:

- 1. Knowledge of customer service concepts and strategies with strong problem-solving skills.
- 2. Knowledge of web technologies for serving software and mapping system applications to customers.
- 3. Knowledge of relational database management, creation and maintenance including knowledge of Oracle and SQL.
- 4. Knowledge of GIS, spatial database management, creation and maintenance.
- 5. Knowledge of electronic document capture, storage and management.
- 6. Knowledge of data collection procedures.
- 7. Ability to communicate highly technical information effectively to a range of audiences (e.g., managers, other IT staff, program customers)
- 8. Ability to be detail oriented and perform tasks with a high level of accuracy, while keeping an eye on the big picture.
- 9. Ability to demonstrate good prioritization and organizational skills, and to work independently on multiple tasks/projects at one time.
- 10. Proficient with Microsoft office products including Access, Excel, Word, Teams, Power Point, and SharePoint.
- 11. Knowledge of business analysis and project management principles and processes.
- 12. Ability to communicate effectively to both technical staff and non-technical staff, including managers, both verbally and in writing.
- 13. Knowledge of Environmental Systems Research Institute (ESRI) technologies, including: ArcGIS Desktop software (ArcGIS Pro); ESRI desktop extensions and tools (e.g., Spatial Analyst, 3D Analyst,

Model Builder); ESRI ArcSDE database structure and management; and ArcGIS Online (AGOL) and ESRI Portal data, map, and application development and management.

14. Knowledge of ESRI ArcGIS for Server (AGS) web map and feature service development and maintenance.
15. Skilled in creating web and/or mobile mapping applications in AGOL, Portal, VertiGIS Studio, Geocortex Essentials, or similar environments.
16. Knowledge of fundamental methodologies to perform technical geospatial data collection, processing, coordinate conversion, QA/QC, distribution, management, etc.
17. Knowledge of fundamental methodologies of mapping sciences and cartographic design.
18. Knowledge of SQL, Python, Arcade, R and/or other scripting languages useful to support or automate GIS processes.
19. Knowledge of electronic document capture, storage and management.
20. Knowledge of application testing protocols and best practices.
21. Knowledge and skill working with developers to create technical specifications for use by programmers for coding.
22. Skill determining the data analysis needed to support decisions and aid in designs; also doing data analysis, including analyzing database structures, writing queries, and developing reports, documents, and/or communications.
23. Skill working with subject matter experts, business analysts and other IT professionals in the development of technical specifications for use by programmers developing complex applications.
24. Ability to implement quality assurance/quality control practices with other IT professionals.
25. Ability to maintain and enhance relational databases with spatial components.
26. Skill in interpersonal relations, especially related to working on inter-disciplinary teams.

Physical Requirements and Environmental Factors:

Physical requirements include talking in front of groups, sitting for long periods of time, lifting and carrying 5 to 30 lbs. Environmental factors include working indoors in an office setting and independently traveling to offices around the state.

Equipment Used:

Computers, tablets, smartphones, field data recorders, GPS devices, projectors, virtual meeting software/hardware, calculator, copy machine, and telephone.

Telework Evaluation:

Telework may be an option, following DNR policies. Regular travel to DNR central office in Madison is expected.