

DEPARTMENT OF NATURAL RESOURCES

POSITION DESCRIPTION

Working Title: Waterways (WW) Program Floodplain Mapping Program Manager

Classification: IS Data Services – Specialist

Purpose of the Position:

This IS position is responsible for administrating multi-source data systems for the acquisition, development, storage, and retrieval of Wisconsin's and the Federal Emergency Management Agency's data necessary for production of regulatory floodplain maps and related water information. This position is responsible for maintaining a system that will be compatible with and allow integration into other DNR data systems.

Coordination with the DNR Information Technology Executive Program (DNR IT) and the Division of External Services Waterways Bureau is required to ensure system compatibility with applicable federal data systems.

This position is also responsible for the overall management of Wisconsin's Floodplain Mapping projects funded by Federal Emergency Management Agency (FEMA) Cooperating Technical Partner (CTP) grants, coordinating with the GIS Data, Analysis and Integration Supervisor, DNR IT, the Dams and Floodplain Section Manager and Lead Floodplain Engineer, Division of External Services Waterways Bureau. The position will coordinate all Geographic Information Systems (GIS) staff assignments, track project schedules, manage budgets, and coordinate grant application materials. Management of all GIS-related aspects of cooperative floodplain mapping efforts with FEMA, which are needed to develop Wisconsin specific flood maps, is required. This includes preparation, submittal and management of detailed federal project grants related to digital map production. The position also serves as the Floodplain Mapping Program GIS technical lead and makes recommendations with minimal supervisor review.

The position will also develop appropriate systems to allow for automation of map production and reporting and is responsible for ensuring compliance with FEMA's floodplain mapping process. The position will develop advanced GIS databases and technical tools to improve efficiency of automated mapping and be responsible for review of database production by GIS staff. The position will also serve as a project manager for assigned projects.

Location, Geographic Scope and Travel Requirements:

The location of this position is in DNR central office, 101 S. Webster St., Madison. Limited telework may be available per DNR and WW bureau policies. Travel within the state, and occasionally out of state will be required but is typically infrequent.

Scope of Authority:

This position works under the general review of the DNR IT GIS Data, Analysis & Integration Section Supervisor and will work closely with the Dams and Floodplain Section Manager, Division of External Services Waterway Bureau, the Lead Floodplain Engineer, the Business Relationship Manager(s) for the External Services (EX) division, WW staff, and the WW management team, as appropriate. This position will prepare, submit, and manage federal project grants and act as a point of contact for FEMA staff. With support of managers, this position will direct the work assignments of other GIS staff in the program to maintain FEMA schedule and budget requirements. This position may provide consultation, guidance and support to agency business program managers and staff, as well as other DNR IT and GIS professional, specialist, and consultant positions. This position may be a member or leader of WW or IT project teams.

Responsibilities and Accountabilities:

40% A: Manage CTP grants and coordinate GIS staff project time in coordination with the Lead Floodplain Engineer

- A1. Oversee staff, priorities, schedules, grant applications, and track budgets. Develop project plans, establish deadlines, and assign priorities to GIS project leads.
- A2. Lead integration of new GIS technology. Provide training to GIS and engineering staff on database management technologies and development of GIS applications.
- A3. Review development of FEMA databases developed by GIS staff to assure spatial and attribute accuracy.
- A4. Perform advanced technical database development, control and support. Develop and implement new technical methods and internal documentation to ensure databases meet all FEMA mapping guidance and standards to produce FIRMs, Flood Insurance Studies and other required GIS datasets.
- A5. Coordinate with engineering staff to ensure data accuracy.
- A6. Support other GIS staff with day-to-day activities involved with developing FIRMs.

25% B: Lead evaluation and implementation of FEMA data management plans and applications.

- B1. Assess and/or implement and maintain necessary software and database and GIS systems needed to produce flood insurance rate maps (FIRMs) accurately and effectively.
- B2. Lead utilization of data analysis, modeling, tools, and techniques as it relates to producing floodplain maps and other nonregulatory floodplain products.
- B3. Identify and implement policies and procedures to meet data security requirements for access to FEMA applications.
- B4. Lead implementation of FEMA data policies and procedures. Analyze, organize and document business data requirements to develop options as FEMA mapping guidance and standards change.
- B5. Lead implementation and maintenance of compatible IT systems for tracking FEMA mapping information, project schedules and budgets. Direct work of IT contractors and consultants as necessary.

15% C: Lead evaluation and implementation of DNR IT data management plans and applications.

- C1. Lead coordination of the Floodplain Program data integration into DNR enterprise SDE database and mapping applications, ensuring managed data and processes follow agency standards, as applicable.
- C2. Independently resolve problems related to GIS and floodplain mapping software, test software when needed, and ensure software compatibility for users. Stay abreast of current systems and technology in order to achieve process improvements and efficiency in internal GIS procedures.

- C3. Perform Floodplain database security administration and control and monitor user access to databases. Coordinate customer access to existing data. Identify and implement policies and procedures to enable user access to data.
- C4. Perform detailed data analysis of existing applications. Research and recommend new systems to achieve enhanced functionality to integrate newly produced digital floodplain maps and other program digital products.

10% D. Ensure compliance with FEMA's Quality Assurance/Quality Checking requirements for flood studies and mapping.

- D1. Develop appropriate systems to allow automation of reporting requirements that comply with FEMA quality assurance specifications and guidelines.
- D2. Provide training and direction to consultants, DNR staff and contractors to ensure that data collection methods are compliant with FEMA standards.
- D3. Develop and implement a review process to provide quality assurance of mapping data developed by program staff and consultants.
- D4. Design and implement data inventory and documentation approaches. Oversee an organizational structure for GIS data management practices used in the FEMA map modernization initiative and guarantee compliance.

5% E: Oversee overall floodplain mapping project details for assigned projects.

- E1. Gather and process data layers necessary to develop, design and output FEMA compliant cartographic products.
- E2. Develop and maintain detailed documentation on processes used to develop project deliverables.
- E3. Create metadata that is compliant with FEMA and Federal Geographic Data Committee (FGDC) standards.
- E4. Coordinate public meetings to display mapping and other outputs and receive public comment with planning and engineering staff.
- E5. Incorporate information into FEMA's comprehensive data storage and retrieval system.
- E6. Oversee project schedule and ensure all deadlines are met.

5% F: Support of other program elements and personal accountability.

- F1. Collaborate with program staff and other DNR programs.
- F2. Follow department IT policies and program protocols on voicemail messages, emails, records, Outlook calendars, submittal of time sheets, travel expenses, and P-card reconciliation.

Knowledge, Skills and Abilities:

1. Knowledge of GIS database technology and how it is applied to floodplain mapping.
2. Skill in applying GIS technology to FEMA specifications related to development of new floodplain maps.
3. Detailed knowledge and experience in the use of FEMA tools for development and management of Flood Insurance Rate Maps including the Flood Map Desktop (FMD) extension to ArcGIS and the Mapping Information Platform (MIP) for tracking project specifics.
4. Detailed knowledge of Environmental Systems Research Institute (ESRI) ArcGIS Desktop software (ArcMap, ArcGIS Pro), including extensions and tools (e.g., Spatial Analyst, 3D Analyst, Python, etc.) and ArcGIS Online.
5. Knowledge and training in the use of FEMA's digital floodplain mapping standards and the data quality assurance/quality checking requirements for flood studies and mapping.
6. Knowledge of LiDAR data and techniques for processing data into the products needed for development of final digital products.
7. Ability to work with FEMA's digital floodplain program guidelines and standards, and its quality assurance standards.
8. Skill in applying geodatabase data models to water related applications.
9. Knowledge of DNR's grant program procedures and reporting requirements.
10. Knowledge of IT training, group dynamics, dispute resolution, and individual motivation.
11. Knowledge of processes and practices of water resources and water engineering relating to hydrologic and hydraulic modeling and flood mapping.
12. Skill in written and oral communication techniques.
13. Skill in project planning and experience in management of complex projects involving contractors and field staff.
14. Ability to stay on task with close attention to detail, maintain deadlines, and complete work with minimal errors.
15. Knowledge of relational database management, creation and maintenance including knowledge of Oracle and SQL.
16. Ability to communicate highly technical information effectively to a range of audiences (e.g., managers, other IT staff, program customers)
17. Ability to be detail oriented and perform tasks with a high level of accuracy, while keeping an eye on the big picture.
18. Ability to demonstrate good prioritization and organizational skills, and to work independently on multiple tasks/projects at one time.
19. Skilled at being proficient with Microsoft office products including Access, Excel, Word, Teams, Power Point, and SharePoint.
20. Skill in business analysis and project management.
21. Skill in applying organized project and process management techniques (e.g. Agile)
22. Knowledge of fundamental methodologies to perform technical geospatial data collection, processing, coordinate conversion, QA/QC, distribution, management, etc.
23. Knowledge of fundamental methodologies of mapping sciences and cartographic design.
24. Knowledge of SQL, Python, Arcade or similar scripting languages.
25. 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.

26. Ability to implement quality assurance/quality control practices with other IT and GIS professionals.
27. Skill in team leadership, coordinating and prioritizing other's tasks, and conflict management.

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. Occasional use of various field equipment may be requested.

Telework Evaluation:

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