

City of Madison

Job Description



Title: GIS Manager

Department: Engineering

FLSA Status: Exempt

Pay Grade: 112

New Position

Position Change

Effective Date 1/12/2026

The following information is designed to outline the functions and position requirements of this job. It does not identify all tasks that may be expected, nor address the performance standards that must be maintained.

General Position Summary:

This position is responsible for overseeing the planning, development, implementation, and maintenance of geographic information systems across the organization. This leadership role ensures the effective integration of spatial and non-spatial data to support planning, infrastructure, public safety, environmental management, and other strategic functions. Incumbent provides technical direction, guidance to other departments, and supervises support staff to deliver accurate, timely, and actionable geospatial information and tools. Incumbent is responsible for establishing GIS standards, ensuring data integrity, implementing innovative GIS solutions, and guiding the adoption of emerging technologies such as web mapping, remote sensing, and mobile GIS applications.

Essential Functions/Major Responsibilities:

- Provides mapping support and geographic information to internal departments, the public, and external stakeholders, including specialty maps, map books, and digital map displays.
- Maintains and updates the City's base maps, spatial databases, and address assignments; oversee data accuracy, integration, and distribution.
- Supervises GIS staff and directs daily operations, project prioritization, and staff development.
- Develops and implements long-term GIS strategies, goals, and policies aligned with City objectives.
- Coordinates and participates in subdivision plat, site plan, and asset data reviews; maintains subdivision history records and provides asset management data to the Finance Department for accepted subdivisions and annexations.
- Supports Planning Commission and City Council through map presentations and spatial data for proposed developments.
- Implements and manages enterprise GIS systems, including custom applications, system upgrades, data security, and recovery procedures.
- Coordinates GIS-related activities with other departments, outside agencies, consultants, and permitting authorities (e.g., ADEM, Army Corps of Engineers).
- Assists in preparing permit applications and technical reports, including NPDES/MS4 documentation and annual audits.
- Archives and maintains digital records of subdivision and site plans for reference and compliance.

- Plans and manages GIS project budgets, vendor contracts, system specifications, and milestones.
- Provides training, technical support, and documentation for internal GIS users; promotes GIS awareness across the organization.
- Represents the City in professional GIS forums, and ensure operations comply with applicable legal and ethical standards.
- Oversees all UAS operations performed by the Engineering Department, including flight planning and obtaining all required approvals from FAA.
- Assists members of the public regarding property information, new development, and some engineering-related projects.
- Calculates Stormwater User Fee and coordinates with the Madison County Tax Collector's Office for billing.

Secondary Functions:

- Evaluates and performs light maintenance to large format plotters within the Engineering Department to ensure best functionality.
- Performs other related duties as required.

Job Scope:

- Performs duties with little direction given, operating from established procedures and in-depth knowledge of the art and science of land use planning
- Decisions are made within constraints of law and departmental policy with wide latitude for interpretation and independent decision-making.
- Consequence of errors can be serious.

Supervisory Responsibility:

Supervises work of assigned staff, to include hiring and performance management.

Interpersonal Contacts:

- Collaborates with GIS professionals, engineers, surveyors, planners, members of the Police and Fire Departments, other emergency response personnel, school personnel, code enforcers, equipment professionals, and members of the general public to give or exchange information and provide deliverables.

Knowledge, Skills, and Abilities:

- Knowledge of geographic information system (GIS) principles, practices, and industry standards related to data management, mapping, and spatial analysis.
- Knowledge of geospatial software and tools, including the ESRI ArcGIS suite, ArcGIS Online, and mobile GIS applications.
- Knowledge of cartographic design principles and map production techniques, including symbology, labeling, and scale.
- Knowledge of database management systems, such as PostgreSQL/PostGIS or SQL Server, and data modeling concepts.
- Knowledge of municipal planning, engineering, and public works functions as they relate to GIS applications.

- Knowledge of relevant local, state, and federal regulations, including addressing standards, environmental permitting (e.g., ADEM, MS4), and public records requirements.
- Skill in managing enterprise GIS architecture, including implementation, upgrades, and integration with other systems.
- Skill in supervising, training, and evaluating GIS staff and coordinating cross-departmental GIS initiatives.
- Skill in interpreting and analyzing engineering plans, plats, legal descriptions, and survey data.
- Skill in using scripting and automation tools such as Python, SQL, or ModelBuilder for geoprocessing and workflow efficiency.
- Skill in developing custom GIS applications or dashboards for internal and external use.
- Skill in preparing clear, concise maps, reports, and technical documents for a variety of audiences, including elected officials and the public.
- Ability to plan, organize, and manage multiple GIS projects and priorities in a dynamic environment.
- Ability to establish and maintain effective working relationships with staff, departments, external agencies, and the public.
- Ability to communicate complex technical information clearly, both orally and in writing.
- Ability to ensure data accuracy and integrity through quality control methods and documentation standards.
- Ability to work independently and exercise sound judgment in problem-solving and decision-making.
- Ability to represent the City in professional meetings, conferences, and regional GIS groups.

Education and/or Experience:

- Bachelor's degree in an engineering field or any related field required.
- Eight (8) years of experience highly preferred in Civil Engineering design, inspection, geotechnical or materials testing, surveying, digital mapping or construction. Preferably some experience in each category.
- UAS Part 107 license preferred.

Additional Requirements:

- Strong background record required due to accessibility to city property and interaction with public.
- Must maintain a strong driving record for city insurance purposes and record may be periodically checked by the city.

Job Conditions:

- Normal office working conditions plus working outside in various weather conditions.
- Must be able to work occasional overtime and weekends and at times with little or no notice.

Physical Capabilities:

- This position's physical requirements involve light work exerting up to 20 pounds of force occasionally, and/or up to 10 pounds of force to move objects.
- Work is typically performed while sitting at a desk or table.
- The employee occasionally lifts light and heavy objects.

Mayor Approval, Date

Department Head Approval, Date