IS DATA SERVICES PROFESSIONAL
Geographic Information System (GIS) Specialist

Geographic Information Systems (GIS) is an electronic information system that integrates hardware, software, and data for the collection, management, analysis, and display of information that has a geographic location associated with it.

This position works under the limited supervision of the Deputy State Historic Preservation Officer (SHPO) in the Division of Historic Preservation/Public History at the Wisconsin Historical Society. Federal law requires states to maintain inventory of historic properties and map locations, this position performs the job duties of this requirement. This position performs digital training and educational activities for the Historic Preservation Office. This position manages the geospatial information component of the Wisconsin Historic Preservation Database (WHPD) and in that capacity is responsible for overseeing data input and data verification. This position works with a broad range of public and private partners including customers, historic preservation staff, project consultants, government agencies, and other stakeholders to maintain, develop and implement Geographic Information System (GIS) data and software in a custom application.

Goals and Work Activities

45% A. Plan and Manage Historic Preservation GIS Initiatives

A1. Gather data on application needs and services including software applications, mapping information, data requests, pricing for access and GIS policy.

A2 Working with others, identify critical GIS data needed by owners of historic properties, government agencies, preservation organizations, and other key audiences.

A3. Design, develop, organize, prioritize, and implement GIS initiatives to meet internal and customer needs.

A4. Train staff in GIS mapping software and provide technical assistance when necessary.

A5. Monitor and maintain all necessary licenses and software upgrades for GIS software.

A6. Work with programmers to maintain interface between GIS data and WHPD Database.

A7. Problem-solve or interpret erroneous or inconsistent map data to resolve conflicting locational information using division or web-based resources.

A8. Review all GIS data for quality and coordinate revisions based on feedback from others.

50% B. Manage the GIS Data in Wisconsin Historic Preservation Database (WHPD)

    B1.   Manage and market GIS data including user subscriptions, renewals, and customer service.

    B2.   Manage and maintain the State Historic Preservation Officer's (SHPO) Internet Map Server.

    B3.   Produce detailed custom maps utilizing GIS geospatial data.

    B4.   Produce custom spatial data sets for staff and customers.

    B5.   Work with others to implement marketing plans and increase user subscriptions.

    B6.   Monitor compliance with GIS data user contracts and other agreements.

    B7.   Write detailed scripts to dynamically query database.

    B8.   Merge geospatial data from multiple sources to update WHPD application.

5% C. Other Duties as Assigned

KNOWLEDGE, SKILLS AND ABILITIES

1. Proficiency with Esri ArcGIS products including, ArcGIS Server, ArcGIS Enterprise, ArcPad and other digital web standards.
2. Proficient in GIS terminology and concepts.
3. Ability to design, implement, and manage web mapping applications.
4. Ability to utilize complex data structures with multiple tables and link to geospatial data to generate maps.
5. Ability to write dynamic queries in SQL Server Management Studio to search tabular and geospatial data in SQL Server and ArcGIS software.
6. Esri course in Data Management in the Multiuser Geodatabase.
7. Esri certification in ArcGIS Enterprise.
8. Experience with using GPS units, ArcPad software, and integrating GPS data into ArcGIS.
9. Basic knowledge of historic preservation principles and practices.
10. General knowledge of types of cultural resources data related to archaeological sites, archaeological surveys, historic buildings and properties.
11. Understanding of the business of historic preservation including state and federal historic preservation laws and able to identify how GIS technology can address historic preservation business needs.
12. Familiarity and expertise with computer applications including word processing, email, spreadsheets, and other applications, including conversions and formatting.
13. Experience analyzing many forms of spatial data including but not limited to digital maps, historic maps, USGS topographic maps, city engineering maps, aerial imagery, CAD drawings, and plat maps.
14. Ability to use GIS data to produce professional quality and informative maps for Division staff to demonstrate historic preservation concepts to diverse audiences.
15. Ability to use locational information found on a map and transpose it accurately onto a map of a different scale or format (e.g., paper to digital).
16. Ability to problem-solve to resolve errors in map data.
17. Ability to communicate effectively in written English.
18. Strong technical writing skills with demonstrated ability to convey complex information in a readable and instructive format.
19. Ability to assign, track, coordinate and manage multiple projects.
20. Demonstrated interpersonal communication skills and ability to work collaboratively with a team and with customers.
21. Able to legally operate a motor vehicle from the Wisconsin Department of Administration State Fleet in the State of Wisconsin.

Physical demands of this job are:
- Occasionally walking to, crouching at and standing at files and other office equipment.
- Working at the computer terminal, telephone and files causes occasional twisting and reaching.
- Computer terminal typing and entries require fingering in motions that can be repetitive and continuous.
- Periodically talking with, and listening to Society staff; state officials; professionals; and members of the public in the performance of job duties for this position.
- Must have the strength, physical dexterity and flexibility necessary to perform the job duties for this position.