



GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST

SCOPE OF WORK:

Work involves assisting with or conducting computer-automated mapping and/or spatial data modeling using geographic information system (GIS) techniques. Projects vary among state agencies depending on the need for planning, management, or development of resources. Many projects require sharing a variety of databases and related information gathered and maintained by other functions, such as information gathered through surveying, soil testing, studies of geological formations, mineral deposits, etc.

DUTIES PERFORMED AT ALL LEVELS:

- Design and coordinate development of an integrated GIS database of spatial data.
- Develop analyses and presentation of data, applying knowledge of geographic information systems and map projections.
- Review existing and incoming data for quality and documentation; oversee entry of data into database, application of coordinate geometry, keyboard entry of tabular data, manual digitizing of maps, scanning and automatic conversion to vectors, and conversion of other sources of digital data.
- Determine effective presentation of information and select cartographic elements needed.
- Create output, such as maps and graphs, using computer and geographic information system software and related equipment, including plotters.
- Meet with users to develop system or project requirements.
- May train users and/or digital conversion technicians.

NOTE: The duties listed are not intended to be all-inclusive. Duties assigned any individual employee are at the discretion of the appointing authority.

GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST I

2113

GRADE J

LEVEL DEFINITION:

The various levels of work in this class series are distinguished primarily by the complexity of the design and development of a GIS project. The more complex projects require larger amounts and variety of data, a greater need to develop and apply non-standard methodology and development of programming command sets to accomplish the end product. Alternatively, higher-level positions deal with highly sensitive projects,

those requiring extreme accuracy and detail, etc., and may be assigned management responsibilities. Individuals at the highest level in this series are required to know and apply theories of geography and cartography and have attained the required management skills.

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- Develop routine command sets (macros) using GIS software and hardware to produce digital and analog maps.
- Compile digital data needed to produce maps; convert data as necessary.
- Assist with the development of command sets and production of more complex maps under the guidance of more experienced specialists.

MINIMUM QUALIFICATIONS:

Requires the completion of a bachelor's degree with a major in geography or cartography with coursework or training in geographical information systems usage; a bachelor's degree in a natural or earth science or engineering field and one year of work experience in geographical information systems usage; or an associate's degree in one of the above fields and three years of geographical information systems usage experience.

Note: The hiring authority at the time of recruitment may specify a requirement for a specific degree or specialized coursework, experience in a special type of project, or special knowledge requirements.

GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST II

2114

GRADE K

LEVEL DEFINITION:

(See level definition for all classes in this series provided at the Geographical Information Systems Specialist I class.)

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- Develop routine to moderately complex command sets (macros) using GIS software and hardware to produce needed digital and analog maps.
- Determine methods to analyze spatial relationships, including adjacency, containment, and proximity; display results of analyses using maps, graphs, and tabular data.
- May respond to inquires and/or make public presentations regarding the use and capability of geographical information systems.

- May supervise less experienced GIS specialists, digital conversion technicians, or administrative support staff.

MINIMUM QUALIFICATIONS:

Requires the completion of a bachelor's degree with a major in geography or cartography with coursework or training in geographical information systems usage and two years work experience in duties similar in complexity to those described for Geographic Information Systems Specialist I; or a bachelor's degree in a natural or earth science or engineering field and three years work experience in duties similar in complexity to those described for Geographic Information Systems Specialist I; or an associate's degree in one of the above fields and five years work experience in duties similar in complexity to those described for Geographic Information Systems Specialist I.

Note: The hiring authority at the time of recruitment may specify a requirement for a specific degree or specialized coursework, experience in a special type of project, or special knowledge requirements.

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GRADE M

LEVEL DEFINITION:

(See level definition for all classes in this series provided at the Geographical Information Systems Specialist I class.)

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- Provide consultation and guidance to agency administrators in developing GIS projects.
- Provide significant input to the commitment of services to other agencies; planning and cost estimates for services; and evaluation of work to ensure effective services.
- Develop and implement policies and procedures to guide the operation of a GIS function; develop budgeting and monitor costs.
- Evaluate technological advances and provide recommendations for use of new equipment or methodology.
- May administer and manage activities of a GIS function involving a staff of GIS personnel performing a variety of GIS projects.
- May provide expert testimony on cases involving spatial data modeling or mapping.

MINIMUM QUALIFICATIONS:

Requires the completion of a master's degree with a major in geography or cartography with coursework or training in geographical information systems usage and one year of

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work experience in duties similar in complexity to those described for Geographical Information Systems Specialist II. Or a bachelor's degree with a major in geography or cartography with coursework or training in geographical information systems usage and three years work experience in duties similar in complexity to those described for previous levels of Geographical Information Systems Specialist. Or a bachelor's degree in a natural or earth science or engineering field and six years work experience in duties similar in complexity to those described for previous levels of Geographical Information Systems Specialist. Must also be able to demonstrate knowledge and ability to administer a major agency function and to manage assigned professional staff.

Note: The hiring authority at the time of recruitment may specify a requirement for a specific degree or specialized coursework, experience in a special type of project, or special knowledge requirements.

Eff. Date: 07/96

Rev: 12/99 – Revised minimum qualifications to allow an earth science field

Rev: 07/12 – Conversion to Hay System