

Geographic Information System (GIS) Technician II
09/08/00 Draft
General Option

I. Nature of Work:

Works under General Supervision at a full performance level, to perform geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (wetlands, road centerlines, cadastre, historic sites, etc.). Employees in this classification will create, adjust, correct, manage, convert and distribute base maps and thematic data. Employees in this classification are expected to write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications.

Employees in this classification will receive supervision from a GIS Coordinator or Program Manager. Employees may be required to work on emergency notice during evenings, weekends and holidays and may be subject to call-in for emergency situations.

The Geographic Information System Technician II is differentiated from the following classifications for the reasons stated. The GIS Technician Trainee, I and II positions work, respectively, at introductory, intermediate and full performance levels in this classification series and are also differentiated, respectively, by close, moderate and general levels of supervision. The GIS Technician II may provide training to the GIS Technician I and Trainee. A GIS Coordinator has the skills of a GIS Technician II and has lead/supervisory responsibility for particular projects or is a specialist in certain areas.

II. Examples of Work: (Illustrative Only)

- Assist in the development of geographic information systems which may link parcel maps or orthophotos with environmental data, historic data, transportation data and health data to produce maps or quantify information about the impacts of features on parcel ownership.
- Digitize and maintain spatial databases of Maryland information; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information.
- Write programs and develops user interfaces, menus and macro-level commands to meet user needs. Provide training, debugging and database management for users.
- Evaluate information and data from outside sources to determine the quality of the data. Translate data from outside sources and convert data to assist users in completing their missions.
- Import, create, reformat and process data to produce spatial distribution maps for various studies.
- Provide geographic location coordinates from the GIS to facilitate spatial analysis and

data manipulation, calculate distances and area of features and interpret legal descriptions and certify changes in boundary lines.

- Participate in advanced training to attain greater expertise and skills in mapping, spatial analysis and computer skills.
- Work with the public and other government agencies to provide data to external users, ship data and process license agreements and payment for orders.
- Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.
- Perform other related duties.

III. Required Knowledge, Skills and Abilities:

- Knowledge of the methods and techniques employed in creating maps and GIS products.
- Knowledge in the fundamentals of Cartography.
- Knowledge of research methods and techniques to analyze statistical and spatial data.
- Knowledge of the principles of quality control and quality assurance procedures.
- Knowledge of geographical information system technology, computer software and hardware.
- Knowledge of UNIX and/or Windows NT Operating Systems.
- Knowledge of basic level programming skills in HTML, Java, Visual Basic, Avenue, Excel, Access, Arc Manipulation Language and Spatial Manipulation Language.
- Ability to initiate and maintain satisfactory working relationships with government officials and the public.

IV. Minimum Education and Experience Requirements:

Education: 1) A Masters Degree from an accredited college or university in Geography, GIS Technology, Cartography, Computer Science, Library Science or related field with at least 9 undergraduate credit hours in courses specifically related to GIS operation/management, or 2) a Bachelor’s Degree from an accredited college or university in Geography, GIS Technology, Cartography, Computer Science, Library Science or related field with at least 9 credit hours in courses specifically related to GIS operation/management, or 3) a high school degree and successful completion of one year of service at the equivalent of the GIS Technician I level.

Experience: No experience is required with a Master’s Degree. One year of experience is required with the appropriate Bachelor’s Degree. One year of successful service at the

equivalent of the GIS Technician I level is required for proficiency progression without the appropriate college degree.

V. Licenses, Registrations and Certificates:

A certificate issued for training in the operation and management of GIS is highly desirable, but not required for this position.

VI. Special Requirements of this Classification:

Employees in this classification may be subject to call 24 hours per day and, therefore, may be required to provide the employing agency with a telephone number where the employee can be reached or will be furnished with a pager. Successful operation of GIS systems is dependant on good vision and the ability to clearly distinguish line patterns and colors. Successful operation of GIS also requires the ability to concentrate in noisy environments and produce accurate data and reports. Medical conditions that might prevent these special requirements must be disclosed by the applicant in an interview process for evaluation before selection.

V. Suggested Grade Level:

Grade 18 Salary Range - \$39,250 to \$58,722

VI. Bonuses:

To enhance agency efforts in the hiring of new qualified information technology employees to fill vacancies in non-temporary positions, employees hired in these classifications may be eligible for a sign-on bonus up to \$3000. Also, a recruitment bonus may be earned by any active, non-temporary State employee who refers and recommends a qualified employee who is hired by their agency or department.

To enhance the retention of designated non-temporary information technology employees possessing higher level programming skills who work on mission critical information technology projects, qualified employees in these classes may be eligible to receive an information technology mission critical project bonus.