

**CLASSIFICATION:** CARTOGRAPHER III

**Class Code:** 1577-22

**Date Established:** 11-30-99

**Occupational Code:** 9-2-2

**Date of Last Revision:** 7-17-15

**Exempt Status:** Non-Exempt

**BASIC PURPOSE:** To design, develop, create and maintain spatial data in a professional Geographic Information System (GIS) environment. To utilize the latest technology to edit and perform quality assurance in server based GIS environments. To develop and implement standards to produce high-quality professional mapping products for a variety of purposes. To plan, direct, supervise and review the work of Cartographers and to interpret aerial photography.

**CHARACTERISTIC DUTIES AND RESPONSIBILITIES:**

- Performs geospatial data editing using industry-standard technology to digitize, audit and maintain spatial database records.
- Designs and develops new GIS applications, relationships and data models; Maintains GIS server integrity and accuracy.
- Supervises and coordinates the work activities of cartographers and other staff engaged in digitizing GIS data, producing maps and preparing related illustrative material; Identifies educational needs of other staff members in GIS concepts, data developing, educational documentation of procedures or training, and teaching or instructing others.
- Communicates with individuals from various organizations for the purposes of producing maps and other GIS products.
- Performs quality assurance/quality control functions on maps, graphs and data tables for accuracy, completeness, appearance and adherence to standards and specifications; Creates and revises Standard Operating Procedures as required to ensure data integrity and system operation.
- Prepares emergency response related maps for use by state, regional and local public safety agencies; Provides GIS support and mapping production to the State Emergency Operations Center.
- Utilizes various aspects of the GIS and Server components to make decisions, identify underlying principles in data sets and publish map services in support of public safety missions.

**DISTINGUISHING FACTORS:**

**Skill:** Requires skill in analyzing and interpreting data, policy, and procedures OR in using equipment in order to arrive at logical conclusions or recommendations.

**Knowledge:** Requires logical or scientific understanding to analyze problems of a specialized or professional nature in a particular field.

**Impact:** Requires responsibility for contributing to immediate, ongoing agency objectives by facilitating the direct provision of services to the public or other state agencies. Errors at this level

result in inaccurate reports or invalid test results and require a significant investment of time and resources to detect.

**Supervision:** Requires partial supervision of other employees doing work which is related or similar to the supervisor, including assigning job duties, providing training, giving instructions and checking work.

**Working Conditions:** Requires performing regular job functions in a controlled environment with minimal exposure to disagreeable job elements and little risk of hazard to physical or mental health.

**Physical Demands:** Requires light work, including continuous walking or operating simple equipment for extended periods of time as well as occasional strenuous activities such as reaching or bending.

**Communication:** Requires summarizing data, preparing reports and making recommendations based on findings which contribute to solving problems and achieving work objectives. This level also requires presenting information for use by administrative-level managers in making decisions.

**Complexity:** Requires evaluating a combination of wide-ranging job functions to determine work procedures, to solve problems, and to reach conclusions by applying analytical, technical, or scientific thinking. This level also requires planning policies and long-term strategies, drawing conclusions based on available criteria, and evaluating the effectiveness of program objectives.

**Independent Action:** Requires objective assessment in analyzing and developing new work methods and procedures subject to periodic review and in making decisions according to established technical, professional or administrative standards.

#### **MINIMUM QUALIFICATIONS:**

**Education:** Bachelor's degree from a recognized college or university with major study in architecture, cartography, geography, geomatics, geology, surveying, engineering, computer science, graphic art, or related field.

**Experience:** Three years' experience in cartography, surveying, or mapping, or in a closely related field, two years of which shall have been in a supervisory capacity.

Or

**Education:** Associate's degree from a recognized college or technical institute with major study in Computer Aided Design and Drafting (CAD), Geographical Information Systems (GIS), computer science, cartography, commercial art, drafting, graphic art, or a related field.

**Experience:** Five years' experience in cartography, surveying, mapping, or in a closely related field, two years of which shall have been in a supervisory capacity.

**LICENSE/CERTIFICATION:** Must possess a valid driver's license for statewide travel.

For Cartographer III- Information and Analysis Center (IAC)- only: Must obtain and maintain relevant information sharing certifications as determined by the New Hampshire Information and Analysis Center and in accordance with current federal requirements. Such certifications must be specified on the supplemental job description and approved by the Division of Personnel prior to recruitment.

### **SPECIAL REQUIREMENTS:**

1. Must have good sense of design layout and proportion. Must have advanced abilities to use the latest GIS industry-standard technology for data preparation and map production. Must be able to perform duties in stressful and time-sensitive environment; maintain, and adapt quickly to changes in GIS technologies, and have the ability to enforce accuracy in all GIS data that leaves the office.
2. Must work extended hours at night and on weekends when required during statewide emergencies.
3. Candidates will undergo comprehensive background investigations.
4. For Cartographer III (IAC) only: Must work a flexible schedule to include nights and weekends, to accomplish the mission of the IAC. Must carry a cell phone, pager, or other mobile notification device.
5. For Cartographer III (IAC) only: Must obtain and maintain a US Government Security clearance within one year of employment.

### **For promotion from Cartographer II to Cartographer III, employees:**

- (a) Must meet the minimum qualifications and experience requirements of Cartographer III.
- (b) Must receive two (2) consecutive twelve (12) month satisfactory performance evaluations in the Cartographer II position.
- (c) Must successfully complete the Division of Personnel Certified Public Supervisor program.
- (d) Must receive written recommendation for promotion from unit manager identifying that the candidate possesses or has obtained knowledge of the following:
  - i. Ability to satisfactorily perform the accountabilities specified for Cartographer III.
  - ii. Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

**RECOMMENDED WORK TRAITS:** Knowledge of the practices, principles and techniques in the field of cartography. Knowledge of state and federal mapping procedures and requirements. Knowledge of graphic arts methods and procedures. Knowledge of the New Hampshire state highway system. Knowledge of relational databases and data management techniques. Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models. Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction. Ability to coordinate field and office workloads. Ability to maintain harmonious relationships with other employees. Must be willing to maintain appearance appropriate to assigned duties and responsibilities as determined by the agency appointing authority.

**DISCLAIMER STATEMENT:** This class specification is descriptive of general duties and is not intended to list every specific function of this class title.