

GEOGRAPHIC INFORMATION SYSTEM (GIS) ANALYST ROLE

Role Summary

The GIS Analyst Role consists of two grade levels (13 and 14). Incumbents are responsible for constructing and maintaining the cadastral mapping system and associated ownership information, parcel identification, resolution of related matters for one or more regions, and application of Geographic Information System (GIS) technology to the cadastral program. Primary contacts are with the division administrators, regional manager, area manager, appraisers, property valuation specialists, management analysts, local government staff, and internal/ external customers.

Working Conditions

Periods of high stress, often weeks at a time, working under pressure of critical projects with hard deadlines. Mental stress is encountered as a result of critical deadlines, managing a heavy workload, the technical nature of the work, and the significance of decisions made. Long periods of sitting at computer terminal.

Education and Experience

- Grade 13: competencies and degrees of proficiency are typically acquired through a combination of education and experience equivalent to a bachelor's degree in computer science, geography, math, or closely related field and six months experience working in the information technology field constructing and maintaining a cadastral mapping system (GIS, CADD, or similar) and digital photography. One year of related experience may substitute for two years of education. Other equivalent combinations of education and experience will be evaluated on an individual basis.
- Grade 14: competencies and degrees of proficiency are typically acquired through a combination of education and experience equivalent to a bachelor's degree in computer science, geography, math, or closely related field and one year of experience working in the information technology field constructing and maintaining a cadastral mapping system (GIS, CADD, or similar) which included at least six months experience in development of application programming functions. One year of related experience may substitute for two years of education. Other equivalent combinations of education and experience will be evaluated on an individual basis.

Department Core Competencies

In addition to the role specific competencies, there are four, department core competencies that all employees are expected to successfully achieve. These are:

- *Interpersonal Skills:* Builds constructive and effective relationships with internal and external customers and is committed to meeting customer needs in a timely and accurate manner. Listens actively and attentively and demonstrates an appreciation of other perspectives. Builds the appropriate rapport required to do business. Openly demonstrates an understanding of and respect for the value of co-workers' contributions to the department mission.

- *Decision-Making and Accountability:* Considers the department's vision, mission, and values in making decisions and taking actions. Identifies and considers possible alternatives before making decisions. Bases decisions on achieving desired outcomes pursuant to the departmental business plan or management direction. Uses a combination of analysis, experience, and sound judgment that results in fairness and consistency, while being accountable for actions. When serious ethical issues are at stake, takes all necessary actions.
- *Commitment to Continuous Improvement:* Ability and willingness to continually seek greater efficiency in agency programs, is results driven, and meets changing requirements in work or direction. Adapts to changing conditions and work responsibilities. Accepts constructive criticism and suggestions and uses them to improve performance.
- *Personal and Work Ethics:* Creates own measures of excellence, and practices what he/she promotes. Sets goals that provide challenges and measures goal attainment regularly. Displays a contagious optimism about the work to be done. Goes beyond traditional ways to address issues despite obstacles or resistance. Is able to generate ideas, fresh perspectives, and original approaches and engages in open-minded thinking. Employs strategies to promote ideas and proposals to increase probability of acceptance. Mentors others to improve the performance necessary to achieve success. Reflects a belief that the results achieved are a direct result of his/her personal decisions and actions.

Grade Levels

Each grade level lists the essential duties that describe work performed 50 percent or more of the time (predominant work). Established work plans identify day-to-day tasks.

Grade 13

Predominant/Essential Duties

- Develop routines to automate cadastral maintenance.
- Create desktop GIS applications.
- Provide customer assistance via telephone technical help.
- Develop informational and functional requirements to use cadastral and Computer Assisted Mass Appraisal) CAMA system data in the GIS environment.
- Analyze databases and construct special program applications for use by department staff for spatial analysis purposes.
- Develop necessary queries for developed applications.
- Prepare procedures for developed applications.
- Provide GIS technical and processing support to cadastral data, applications, and work flows.
- Work with complex CAMA and parcel mapping conversion process between multi-jurisdictional entities using GIS applications.
- Assist cartographers and local governments with technical and interpretive data using GIS applications.
- Assist with the design of software applications.
- Perform statewide quality assurance reviews to ensure consistency and adherence to established standards and procedures.

Grade 14

Predominant/Essential Duties

- Perform GIS-related application programming functions outside of the existing out-of-the-box functionality of the software (Arc View, Arc Explorer, and/or Excel).
- Meet specialized requests and improve efficiency of software and hardware by developing new programs in Visual Basic (VB), Visual Basic Applications (VBA), and Visual Basic Web Applications (VB DOT NET) to run primarily in the Arc GIS and Microsoft applications (MS Access and Excel) environment.
 - Develop functional requirements by interviewing personnel to determine how an application needs to work and what the application is expected to do.
 - Develop new code.
 - Evaluate programming requirements using knowledge of a wide-range of data sources and structures (CAMA data, soils data, state/county data, Excel data, AutoCAD data).
 - Test, demonstrate, and develop prototypes for each application developed.
- Provide customer assistance via telephone technical help.
- Work with complex CAMA and parcel mapping conversion process between multi-jurisdictional entities using GIS applications.
- Assist cartographers and local governments with technical and interpretive data using GIS applications.
- Perform statewide quality assurance reviews to ensure consistency and adherence to established standards and procedures.

Competencies and Degrees of Proficiency

The Competency/Proficiency Chart identifies the role specific competencies, degrees of proficiency, and guidance required for each grade level. Role specific competencies describe the knowledge, skills, and abilities required to perform the essential duties. The degrees of proficiency indicate the difficulty and/or complexity level of the tasks and assignments.

Competency/Proficiency Chart – Geographic Information System (GIS) Analyst Role

Competencies	Grade 13 Minimal Guidance	Grade 14 Minimal Guidance
Demonstrated knowledge and effective application of federal/state statutes, administrative rules, and state policies and procedures relative to the role.	C	C
Demonstrated skill and ability to work on multiple tasks.	C	C
Demonstrated ability to provide timely and effective written, oral, and interpersonal communication.	C	C
Demonstrated knowledge and ability in organization techniques relative to the role.	C	C
Demonstrated knowledge of IRIS, MODS, CAMAS, GIS software, and related data file formats, individual county database systems, spreadsheet, and word processing programs.	C	C
Proactively focus efforts and energy on successfully attaining goals and objectives, assuming accountability for decisions, actions, and results. Follow issues through to completion.	B	C
Demonstrated knowledge and skill of word processing, spreadsheet, database, and software applications/programs relative to the role.	C	C
Demonstrated knowledge of department business processes and ability to apply that knowledge effectively.	B	B
Demonstrated knowledge of mathematics (algebra, geometry, trigonometry).	B	B
Demonstrated knowledge of right-of-way information, maps such as aerial, Government Land Office (GLO), Bureau of Land Management (BLM) and US Public Land Survey System, and private surveys.	C	C
Demonstrated knowledge of the cartographic process.	C	C
Demonstrated knowledge and skill of cadastral mapping.	C	C
Demonstrated ability to manage time effectively.	C	C
Demonstrated knowledge of the design, theory, and functions of computer applications.	B	C
Demonstrated analytical skills relative to the role.	B	C
Demonstrated knowledge of application development and support techniques, tools, and practices.	B	C

Degree of Proficiency

A: A degree of knowledge, skill, or ability commensurate with elementary-level tasks and assignments.

B: A degree of knowledge, skill, or ability commensurate with intermediate-level tasks and assignments.

C: A degree of knowledge, skill, or ability commensurate with advanced-level tasks and assignments.

D: An advanced degree of knowledge, skill, or ability commensurate with considerable experience and the application of the competency to non-standard tasks and assignments.

E: The most advanced degree of knowledge, skill, or ability, evidencing complete mastery and understanding of the subject.