

CITY OF BELLINGHAM

CLASSIFICATION SPECIFICATION

CLASS TITLE: GIS ANALYST

UNION:231

DEPARTMENT: Interdepartmental

SG:8

CS:N

FLSA:N

EEO4CODE:PR

NATURE OF WORK:

Performs a wide variety of business process, analysis and coordination functions to implement and maintain the integration and functionality of the GIS system. Assists in the management, quality control, delivery and utilization of GIS information services. Performs a variety of advanced analytical and geo-processing functions to create, maintain and retrieve data from the City's geographic information system (GIS). Develops and monitors GIS data quality control and update requirements to ensure proper data integration with other business systems. Develops and maintains data standards and procedures. Coordinates and reviews GIS data collection and mapping processes and conducts training about them. Incumbents also provide GIS support to other City departments, agencies, the public, private developers and consultants.

DISTINGUISHING CHARACTERISTICS:

GIS Analyst is the second in the two-level series of GIS Analyst and GIS Senior Analyst.

The GIS Analyst possesses advanced knowledge of GIS theory, systems, business integration requirements, workflow and software necessary to develop and maintain GIS quality control and update requirements, standards and procedures. The GIS Analyst takes a role in quality control and assurance, especially at the enterprise level, involving multiple business lines. Incumbents review business requirements from all departments within the enterprise and develop workflow and database design to support GIS utilization throughout the enterprise. The GIS Analyst is knowledgeable about integration requirements for business systems and may develop procedures or scripts to support those systems. The GIS Analyst is likely to be the expert in integration and business processes for multiple departments or the entire enterprise and for external users.

The GIS Senior Analyst is distinguished from the GIS Analyst by, in addition to possessing all of the duties and responsibilities of the GIS Analyst, possessing a more advanced level of knowledge and understanding of GIS theory, systems and software and uses programming skills for development and design of databases and applications. The GIS Senior Analyst is the expert in designing and developing databases and applications, which goes beyond integration and interface. The GIS Senior Analyst manipulates GIS or business information programmatically or through database manipulation to ensure efficient automated integration. Incumbents also function as the GIS database administrator and systems administrator for all GIS service delivery applications.

SUPERVISORY RELATIONSHIP:

Reports to a departmental manager or supervisor and may receive technical guidance from GIS Senior Analysts in the same, or another, department or from the GIS/Technical Services Manager. Provides technical leadership and direction to other, lower-classified GIS staff. Works

independently in performing duties. Works under applicable City and departmental policies, procedures, protocols and technical standards.

ESSENTIAL FUNCTIONS:

1. Leads business and analytical support to system integration with the GIS systems. Identifies key business requirements, writes and produces GIS business functional specifications and work flow to meet the needs of the new business process or system. Writes and updates data models, scripts and programs in support of specific business application needs such as public safety, billing, management, modeling, reporting and to automate routine processes or cartographic production.
2. Manages and monitors versioned edit and quality control processes of the City's spatial data server. Optimizes editing and data update processes and workflow to ensure optimal business system integration and work processes. Works with the Senior GIS Analyst in optimizing database design and data manipulation on the spatial data server.
3. Administers the cartographic and mapping feature information delivery of mapping server services for ArcGIS Server and other integrated business systems. Manages and streamlines update processes and administers business integration requirements.
4. Develops, applies and monitors quality control measures on city wide and departmental GIS data sets for spatial integrity, attribute consistency and integrated system data consistency. Ensures proper data integration between GIS datasets and business systems.
5. Coordinates and performs research, data collection and data entry for the creation and maintenance of GIS data.
6. Assists in management of GIS data and the maintenance of data quality assurance and quality control standards. Prepares and maintains the documentation of the GIS databases (metadata), procedures and business data integration requirements.
7. Coordinates, assists, and trains clients or subordinates in proper use and management of geospatial data, including maintenance of data quality assurance and quality control standards. Trains and supports City staff in the use and applications of GIS data viewing software and associated information.
8. Coordinates and provides support for special mapping and data analysis projects and services for other City departments, outside agencies, the public, private developers, and consultants. Facilitates technical dialogue with parties to determine product specifications and standards as well as provides customized presentations, reports and exhibits. May provide explanation of research, determinations, analysis methods and deliverable materials in private and public meetings.
9. Prepares written reports and documentation which describe application procedures, data requirements, software functions, and the work that will be performed or that has been completed.

ADDITIONAL WORK PERFORMED:

1. May direct lower classified GIS staff, interns, volunteers, extra labor or temporary employees including training, prioritizing(?) and reviewing work. Performs quality assurance review in GIS mapping performed by directed staff.
2. Other related duties of a similar nature or level.

KNOWLEDGE AND SKILLS:

Knowledge:

- Working knowledge of advanced GIS concepts, geo-processing functions and techniques, and spatial database management procedures. Comprehensive working knowledge of database concepts.
- Demonstrated knowledge of GIS programming and scripting languages .
- Knowledge of operating systems (Windows 2000/XP), products and concepts involved in the operation of desktop computers. Knowledge of the Structured Query Language (SQL) and its applications with GIS analysis and data/system integration.
- Knowledge of Oracle DBMS/SQL Server and ESRI ArcSDE Spatial Data Server.
- Demonstrated knowledge of GIS database design (geodatabase)
- Knowledge of the development, configuration and optimization of web mapping services (ArcGIS Server).
- Working knowledge of the functions of City departments, office operations and interdepartmental working relationships.
- Working knowledge of principles and procedures of project coordination.

Skills in:

- Excellent interpersonal skills for establishing and maintaining effective working relationships with clients, vendors and associates.
- Good oral communication skills, including good listening skills, to communicate with technical and non-technical internal clients.
- Working both as a member of a team and as a project leader.
- Writing in clear, concise language to produce reports and other required documentation.
- Operating, GIS hardware, software and related peripheral equipment as required to accomplish assigned duties.
- ESRI GIS software skills, including ArcInfo and ArcView for analysis and mapping.
- Planning, organizing, decision-making and time management skills, including the ability to appropriately prioritize assignments.
- Working independently under pressure and with minimal supervision to solve problems and meet deadlines.
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Ability to:

- Combine knowledge of GIS databases and software with common sense and insight in solving problems and making decisions.
- Systematically identify and analyze the important dimensions of a problem, determining potential causes, obtaining relevant information, and specifying alternate solutions, then carrying out solutions or referring to the appropriate authority.
- Ability and willingness to demonstrate the Public Service Competencies of Service Orientation, Results Orientation, and Teamwork and Cooperation.
- Maintain consistent and punctual attendance.

- Physical ability to perform essential functions of the job including:
 - Adequate hearing, correctable vision, and manual dexterity.
 - Frequently operate a computer and read a computer screen or typewritten page;
 - Move between work sites;
 - Ability to occasionally lift light weight (up to 25 lbs.).

WORKING ENVIRONMENT:

Work is primarily performed in an office setting and requires sitting and working for extended periods at a computer work station.

EXPERIENCE AND TRAINING REQUIREMENTS:

- Bachelor's degree with coursework in cartography, computer science, civil engineering, geography, GIS, or related field.
- Three (3) years of GIS experience, at least 1 year of which supporting business processes with integrated systems or performing equivalent work.
- A combination of experience and training that provides the applicant with the knowledge and skills to perform the work will be considered.

PREPARED BY: D. Burdick
Joint Classification Committee
5/09

REVIEWED BY: _____
Ted Carlson,
Director of Public Works

REVISED BY: D. Burdick
C. Gatz
01/2012

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