JOB DESCRIPTION

TITLE: **GIS TECHNOLOGIST**

DEPARTMENT: **Information Technology**

LEVEL: **11**

Position Last Evaluated: Dec 2014
Job Desc. Last Updated: Apr 2019

JOB SUMMARY

Under the general direction of the Supervisor, Geographic Information Systems, the incumbent performs a wide variety of duties to support the operation, maintenance, and development of the City of Nanaimo Geographic Information System (GIS). The work consists of creating and maintaining spatial and related tabular data, performing spatial analysis, publishing electronic and hardcopy format maps, authors reports, or the creation of other electronic or hardcopy format visual and tabular information products that reference the GIS. In this capacity, the incumbent provides records management and decision support services to numerous departments across the organization. The work is performed within the terms of reference provided by established policies, standards, and specifications pertaining to the GIS. The incumbent must be able to competently carry out and complete the work using a variety of computer assisted design (CAD), GIS, and related application programs in an office or field setting.

TYPICAL DUTIES AND RESPONSIBILITIES

1.   Creates and maintains spatial and related tabular data stored within the GIS using a variety of electronic and hardcopy materials for reference including but not limited to civil engineering design drawings, land survey plans, sketches, schematics, aerial photography, remote sensing data, or other existing spatial and related tabular data.

2.   Formulates, maintains, and carries out workflows and data entry procedures in support of the creation and maintenance of spatial and related tabular data stored within the GIS, having regard for the applicable policies, standards, and specifications.

TYPICAL DUTIES AND RESPONSIBILITIES cont.

3.   Develops, maintains, executes, and monitors quality control and quality assurance procedures in order to ensure that the spatial and related tabular data stored within the GIS conforms to established policies and meets applicable standards and specifications.

4.   Develops and executes queries against spatial and related tabular data, and performs spatial analysis and related analytical procedures. Imports, extracts, converts, transforms, and disseminates spatial and related tabular data.

5.   Authors, publishes, and disseminates electronic and hardcopy format maps, tabular reports, charts, diagrams, schematics, and other information products that reference the GIS.

6.   Develops, codes, and maintains scripts and software application programs in order to enhance and automate data entry processes, quality control and quality assurance processes, queries, spatial analysis, or to enhance and automate the production of electronic and hardcopy format maps, tabular reports, charts, diagrams, schematics, and other visual information products that reference the GIS.

7.   Authors and maintains technical documentation and metadata for all processes, data, scripts, and applications under the incumbent's care and control in accordance with established policies, standards, and specifications.

8.   Develops, coordinates, and performs work on a variety of small projects and assists in those tasks for medium to large projects.

9.   Liaises and communicates with employees, consultants and external agencies as directed. Consults with users about information requirements, provides advice and suggests solutions.

10.   Responds to enquiries from employees, consultants, external agencies and the general public pertaining to maps, spatial and related tabular data, and other information products that originate from the GIS.

11.   Performs other duties as required.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES

Extensive knowledge of the use of GIS software technology in a local government setting as applied to asset and utilities records management, land records management, and transportation systems.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES cont.

Extensive knowledge of the principles of legal survey as they relate to the compilation and maintenance of cadastral mapping.

Thorough knowledge of desktop and mobile GIS application programs and software technology together with spatial and related tabular data extract, transform and load (ETL) application programs, and spatial data capture techniques using global positioning systems (GPS) as applied to mobile GIS field data collection.

Knowledge of script and software application development, server GIS application programs, and associated relational database management systems.

Ability to formulate and carry out workflows and GIS spatial and related tabular data entry procedures together with associated quality control and quality assurance measures.

Ability to develop and execute queries against spatial and related tabular data, perform spatial analysis, and related analytical procedures.

Ability to author maps, reports, charts, diagrams, schematics, technical documentation, and related materials.

Ability to apply analytical techniques to isolate and identify problems and formulate remedies or solutions to identified problems.

Ability to read and correctly interpret civil engineering design drawings, plans, profiles, diagrams, sketches, schematics, aerial photography, and remote sensing data.

Ability to read and correctly interpret land survey plans including but not limited to subdivision plans, reference plans, explanatory plans, strata plans, posting plans and air space plans.

Ability to read and correctly interpret certificates of title and related documents on deposit at the British Columbia Land Title Registry.

Ability to communicate with courtesy and tact in explaining policies, procedures, standards, and specifications, or exchanging data and information with employees, consultants, external agencies, and the general public.

Ability to track, monitor, and report the progress of work assignments together with the ability to plan and priorize the completion of work assignments in order to meet multiple work assignment timelines.

MINIMUM TRAINING AND EXPERIENCE REQUIRED

University degree in Geographic Information Systems or a related field.

A minimum of 2 years' experience with the application of GIS technology.

Or an equivalent combination of education and experience.

Membership or eligible for membership in the Applied Science Technologists and Technicians of British Columbia (ASTTBC) as a Certified Technician or Applied Science Technologist.

Possession of a valid Class 5 BC Driver's Licence.

GENERAL STANDARDS

All employees shall take reasonable care to protect their health and safety, and the health and safety of other persons by becoming familiar with the Occupational Health & Safety (OH&S) Program, following established safe work procedures, using protective equipment, and asking for training if unfamiliar with work requested to perform.

Contributes in maintaining a respectful, safe, and supportive work environment that embraces diversity and where everyone is treated with courtesy, dignity, and fairness.

Adheres to City policies and objectives.