

CITY OF HAMILTON

CORPORATE SERVICES DEPARTMENT
(INFORMATION TECHNOLOGY DIVISION – BUSINESS APPLICATIONS - LOCATION - 55 YORK BLVD. 6th FLOOR)

GEOGRAPHIC INFORMATION SYSTEM (GIS) ANALYST – PUBLIC HEALTH - CUPE 5167

SUMMARY OF DUTIES

Reporting to the Supervisor, Business Applications, the GIS Analyst – Public Health facilitates the analysis, compilation, organization, interpretation, and dissemination of geographically referenced and Public Health data sets through processing and inputting digital spatial and attribute data into a geographically referenced database in order to produce a variety of data sets, digital files, maps, sketches, graphic displays and reports.

The GIS Analyst – Public Health will utilize their experience and knowledge of the City's business, Public Health, Esri's ArcGIS, as well as GIS best practices to support continued improvement in the collection and reporting of spatial data.

GENERAL DUTIES

Prepares, maintains, updates, manipulates and analyzes the digital maps and associated databases related to Public Health and the City's Geographic Information System.

Creates custom database and thematic maps. Inputs, manipulates and retrieves spatial and tabular data and investigates field conditions as necessary.

Analyzes and translates/interprets Public Health business needs into GIS application and operational requirements.

Critically evaluates information gathered from multiple sources, reconcile conflicts, decompose high-level information into details, abstract up from low-level information to a general understanding, and distinguish user requests from the underlying true needs.

Performs quality assurance/quality control tasks to ensure data integrity.

Co-ordinates and completes the development of Python scripts, FME Scripts, customized user interfaces, menus and other GIS applications using vendor-supplied programming tools and various software languages.

Collaborates on the development, implementation and maintenance of GIS databases and/or application development standards, and in the development and review of GIS database specification and design documents for both "in-house" and contracted database development.

Conducts research and development; analyze, interpret, and report on research findings, making appropriate recommendations.

Completes spatial analysis and/or GIS application development projects with Public Health to assist in decision making, public awareness, program implementation, and policy development.

Provides content administration, data dissemination, documentation, spatial analysis, map production, user training, and general GIS user support to Public Health.

Collaborates on cross-functional teams with Public Health, and other City staff and consultants that may be involved in spatial analysis and/or GIS application development projects throughout Public Health, and the Corporation. Must manage workplan based on changing priorities.

Maintains on-line metadata and/or application help databases to include new or revised GIS data layers and/or application functionality.

Employs existing software tools and procedures to analyze, extract and distribute GIS data in a variety of standard data and media formats, maintaining a detailed data service request log, ensuring data distribution contracts, copyright and statements of liability are complete and properly authorized.

Receives data from external agencies and, using existing tools, to analyze, verify and document the content and quality of the data, import it into the GIS environment, and propose a maintenance plan that meets the Public Health user's requirements.

Participates in continuous improvement practices, on an ongoing basis, to minimize redundancy and maximize inter-operability among databases and data structures across the corporate GIS repositories.

May be assigned to an initiative or project requiring the individual to take direction from other Public Health or IT leads.

May be required to provide on call support.

Performs other such duties as assigned which are directly related to the major responsibilities of the job.

QUALIFICATIONS

1. University Degree or College Diploma in Geographic Information Systems, Engineering, Land Surveying, Geography and Urban Planning or related disciplines including Library Science, Computer Science, Information Systems.
2. Five (5) to seven (7) years of demonstrated experience and proven knowledge in mapping, spatial database analysis and user support, including practical experience working with GIS technology (Esri suite of products preferred), preferably in a municipal, or Public Health environment.
3. Demonstrated experience and proven knowledge in designing and implementing spatial database technology, preferably in a municipal, Public Health, or related environment with thorough working knowledge of spatial theory and practice.
4. Working knowledge and experience with a range of computer and software including, GIS products (e.g. Esri ArcGIS), GIS databases (e.g. ArcSDE, Oracle 12c, SQL Server), GIS terminology, GIS methods and techniques, scripting languages (eg. FME, Python), cartography and cartographic procedures, coordinate systems and projections, geo-spatial digital imagery, digital equipment (e.g. survey, GPS, data collectors) on-site users GIS and tool support and trouble-shooting, managing GIS software and databases.
5. Experience and knowledge in the Public Health sector, utilizing Public Health datasets, defining GIS requirements, deciphering reports, and extrapolating data.
6. Demonstrated ability to translate complex Public Health data into meaningful information and useful products for different audiences using Esri tools such as Story maps, etc. i.e. Knowledge translation tools and techniques.
7. Experience gathering and translating Public Health business requirements into GIS solutions, and assessing impacts of business processes on data integrity.
8. Must have good attention to detail and demonstrate analytical, problem solving and technical skills to manage, maintain, update and prepare database records (spatial & tabular formats), manipulating,

analyzing and managing tabular and spatial data; and to resolve technical problems and information requirements by gathering/analyzing data, selecting/designing desired file and record format requirements, documenting revisions undertaken.

9. Working knowledge of office software applications (e.g. Outlook, Word, Excel, PowerPoint) in support of communications, reporting, presentations and training.
10. Knowledge of project management methodologies, including capacity to monitor projects, track work and provide input into work planning.
11. Knowledge of data modelling practices and database design standards including database security protocols with experience defining and implementing physical data models for standard business and spatial data/information.
12. Good written and oral communications skills including experience preparing reports, technical instructions, and data share agreements.
13. Strong interpersonal skills to effectively deal with requests and concerns of clients/partners.
14. Ability to work both independently as well as in a team environment, work under pressure, make sound and logical judgments, and meet deadlines.

THE INCUMBENT SHALL COMPLY WITH ALL HEALTH AND SAFETY POLICIES AND PRACTICES FOR THIS POSITION AND THE WORKPLACE.
