Job Description

Position Title: Geographic Information Systems (GIS) Specialist

Department: Information Technology

Reports To: Geographic Information Systems (GIS) Coordinator

Purpose

To develop, produce, maintain and implement the delivery of information management activities, geographic information systems (GIS) products and services for the County of Grey's internal departments, lower tier municipalities and other public sector bodies and private sector clients.

Responsibilities

GIS Mapping & Analysis

- Creates, maintains, and manages spatial data used in the County's geographic information system (GIS), and documents the processes used to create those datasets.
- Installs, configures, tests, evaluates and maintains GIS software and other associated software and applications in conjunction with GIS Coordinator and with Technology & Infrastructure team.
- Provides quality assurance and quality control of source documents used in the ongoing development and maintenance of the GIS database.
- Establish mapping standards for cartographic design including three dimensional maps and drapes for specialized map products, data models, formats, and templates for the County.
- Provide thematic maps, spatial data analysis, and presentation materials for County departments, local Municipalities, and external agencies as required.
- Maintains current GIS knowledge base within a technological field that is rapidly and constantly evolving (e.g. GIS software, satellite imagery, object oriented programming, data integration, GPS and Internet technologies). Analyses and determines how new GIS and Internet technologies can be best utilized to further enhance GIS capabilities and information representation within the County of Grey.
- Performs other related duties as assigned.

GIS Training

- Provides end user training on ArcGIS Desktop to internal staff and lower tier staff. Provides end user training on County GIS web site to internal staff, lower tier staff and end users

Provide GIS Services to Local Municipalities

1. Provide high quality GIS services including:

a. Digitizing of Municipality's parcels, zoning, official plan, road infrastructure, water/sewer infrastructure, tourism and culture data, etc.
b. Conversion of Municipality's needs studies to GIS format
c. Publish data to County GIS website via ArcGIS web services

2. Provide consulting on data models for Municipality's projects

Public GIS Web Site Support

- Publish services as required to ArcGIS Server for consumption by web applications and remote clients.
- Provide technical support to County staff, public users of the County GIS web site via email, telephone and in person.
- Maintain documentation for public web site.
- Test web applications.

Other Duties

- Promote and educate County staff on the application and value of GIS.
- Responsible, as an employee, for occupational health and safety practices.
- Performs other duties as may be assigned from time to time.

Working Conditions

Usual hours of work are thirty-five (35) per week, Monday to Friday. Overtime can be expected to deal with normal operational and statutory deadlines and peak periods. Must have personal auto available for travel.

Contacts

Internal Working Relationships

Works with all members of the organization.

External Working Relationships

Works extensively with staff from lower tier municipalities, conservation authorities, etc. Works extensively with the public to help with corporate GIS website.

Knowledge and Skill

- In-depth knowledge of the functionality, operation and specifications of municipal government standards as it pertains to GIS, including knowledge of business processes of front line County departments.
- Job requires sound technical knowledge of GIS and its application including ESRI based products (e.g. ArcGIS Desktop, ArcGIS Server, ArcGIS Online) and imagery software.
- Extensive skills with ESRI ArcGIS Desktop software for map creation and data analysis

- Knowledge of Microsoft SQL server and administration tools.
- Job requires an expert knowledge of applied geography, projections, coordinate systems, datums, surveying principles, primary and secondary data, satellite imagery, remote sensing, aerial photographs, image and coverage registration, cartographic principles, documentation of applications, metadata, digital elevation models, data quality and error propagation in raster and vector spatial data, methods of spatial interpolation, and methods of data and image classification.
- Job requires comprehensive knowledge of Windows based software; Word, Excel, Power Point, and HTML editors, E-mail (Outlook) and sequential and relational data bases.
- Job requires knowledge of Land Information Ontario (LIO) mandate, the Ontario land use planning system; related provincial geographic databases, and Ontario cadastral.
- Work is occasionally reviewed by supervisor for soundness of approach and technical decisions. Job requires referring problems in conflicts in data management requirements to project leader, supervisor or manager.
- Job requires analytical and evaluative skills to develop and deliver user instruction for accessing databases and customized geospatial software use.
- Superior interpersonal and communication (verbal and written) skills including the ability to convey technical information to a non-technical audience.
- Capacity to think critically and solve technical problems individually and in a group setting.
- Three (3) or four (4) year Community College Diploma or University Degree and a one (1) year post graduate certificate in Geographic Information Systems, with a minimum of 2 years' experience in similar duties.

The following skills would be considered an asset:

- Knowledge of civil design and AutoCAD software;
- Python programming, specifically with Esri libraries;
- Experience with Geocortex.

Impact of Error

Publishing data incorrectly to Internet could expose private data and expose County to legal issues.

Errors in digitizing/plotting of maps for such purposes as Ontario Municipal Board Hearings could cause a loss of credibility on the part of the County.