



IDENTIFICATION

Department	Position Title	
Environment and Climate Change	Geomatics Analyst	
Position Number	Community	Division/Region
23-16447	Yellowknife	Land Management and Administration/HQ

PURPOSE OF THE POSITION

The Geomatics Analyst is responsible to develop and implement Geomatics related projects; data management; provide advice, recommendations and assistance to the Manager of Geomatics and Information Technology, the Land Management and Administration division, departmental clients, and other governments and agencies.

SCOPE

The Geomatics Analyst is located in Yellowknife, in the Geomatics and Information Technology Unit, which is the resource center for high-resolution aerial photography, satellite imagery, large-scale base mapping, GIS, and cadastral information for Public Land in the NWT. The Geomatics Analyst will create geospatial data/databases, hardcopy, digital and online maps and products, in accordance with the Department's mandate to support the management and administration of public land. This position supports the GNWT's strategic objective to promote the transfer of public land to community governments by making available necessary mapping and land information to facilitate effective land management and administration practices at the community level.

The Geomatics and Information Technology Unit provides guidance and expertise to all divisions within the Department of Environment and Climate Change, as well as Regional Operations offices, on matters related to mapping; spatial data creation, maintenance, storage and standards; geospatial software and hardware; and online geospatial tools and services. The unit promotes the use of geospatial data and tools for decision making through education and outreach and collaborates with a variety of internal and external partners to maximize the benefits of investments made in the GNWT's geospatial resources.



Reporting to the Manager of Geomatics and Information Technology, Land Management and Administration, the Geomatics Analyst is responsible for the provision of GIS products, services, expertise, and advice to the Division, the Department, other GNWT Departments, community governments, Aboriginal groups, federal government, private industry and the general public in order to assist in the management and monitoring of Public Land. The position is also a technical advisor for less experienced staff undertaking their own GIS projects.

The incumbent is expected to follow operational processes related to data and project management and is responsible for maintaining data held within the Environment and Climate Change department geospatial data holdings. The Geomatics Analyst will assist as needed with the development and facilitation of training activities.

The Geomatics Analyst works within a legislative framework which includes the *Public Land Act*, *Commissioner's Land Act* and Regulations; *Northwest Territories Lands Act* and Regulations; *Community Planning and Development Act* and Regulations; the *Area Development Act* and associated Regulations; and the *Mackenzie Valley Resource Management Act* and Mackenzie Valley Land Use Regulations; Canada Mining Regulations; *Land Titles Act*; as well as the settled Lands, Resources and Self-government Agreements within the NWT; Interim Measures Agreements; and the Devolution Final Agreement. The position also works within a Cabinet approved policy framework including the Land Pricing Policy; the Land Lease Only Policy; the Land Use and Sustainability Framework. Guidance is also taken from municipal bylaws including a Community Plan and Zoning Bylaws.

The Geomatics Analyst provides technical support and expertise within the Department and to other GNWT Departments; other levels of government; Aboriginal groups; private industry; and the public in navigating around mapping provided through ATLAS.

RESPONSIBILITIES

- 1. Provides standard GIS products and services to clients in the Department, municipal governments, GNWT, Aboriginal organizations, federal government, private business, and the public in order to assist in the management and administration of Public Lands and other lands in the NWT.**
 - Coordinates activities to maintain the operation, currency, and accuracy of the GIS system for all Public Lands in the NWT.
 - Integrates and validates the quality of spatial data from a variety of sources.
 - Schedules and maintains updates to cadastral mapping on a regular basis.
 - Ensures web map services and products are operational, updated, and available to the public.
 - Administers the Departments GIS software licenses and ensures installations/upgrades are done in timely manner.
 - Troubleshoots the Department's GIS and information software.



- Maintains and troubleshoots large-format plotters and copying equipment.
- Coordinates activities with lands staff and the land management system to ensure the integrity and currency of the land records.
- Plans, schedules, and conducts all phases of projects including the annual acquisition of updated imagery.
- Develops more complex products that may require the combination of GIS and other data sets, advanced analysis and modeling techniques, independent judgment, or research into methods.

2. Maintains parcel mapping and reviews Subdivision Applications.

- Maintains the spatial database where all parcel mapping, topographical mapping and aerial photography records are stored and kept organized.
- Provides support to applicants so that subdivision and land applications are processed efficiently and in a timely manner.
- Maintains a permanent record of all documents associated with decisions on subdivision applications.
- Drafts mapping of new lots from all survey plans that are registered at the Land Titles Office, maintaining an up-to-date record of the surveyed lots dataset for the entire Northwest Territories.
- Drafts mapping of the boundaries of dispositions and ownership of land in the Northwest Territories and maintains the mapping of the parcels in the spatial database.
- Provides advice and drafts lease sketches and other maps to attach to legal documents each time a new disposition of land is granted, or an existing disposition is amended
- Maintains a historical record of all parcels that become obsolete so that a spatial record of chronological interests is maintained.

3. Provides support, maintenance, and oversight to the provision of GIS services.

- Provides support and training to clients, including GNWT users and public clients, in the utilization of the ATLAS system.
- Interacts with clients to ensure satisfaction with products or services preparation of survey sketches, design of map sheet layouts, design of control networks and the layout of the flight lines.
- Develops more complex products that require advanced analysis and modelling techniques as a tool in making responsible land-based decisions (e.g. 3D terrain, flood risk modelling).
- Maintains mapping equipment for the Division, including plotters and large-format copiers.
- Establishes and monitors processes to measure and evaluate the effectiveness of the services that are provided.
- Represents the Division in Geomatics-based organizations and initiatives.



WORKING CONDITIONS

Physical Demands

No unusual demands.

Environmental Conditions

No unusual demands.

Sensory Demands

No unusual demands.

Mental Demands

No unusual demands.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge in the ESRI suite including but not limited to ArcGIS (Desktop and Pro) and ArcGIS Online (knowledge of open-source GIS packages would be an asset but is not required).
- Knowledge of GIS and geographic principles.
- Knowledge of GIS analysis, AutoCAD, modeling, and software in order to provide products
- Strong project management skills and the ability to work under minimal supervision.
- Analytic, cognitive knowledge of Relational Databases and problem-solving skills, related software such as Access, SQL or Oracle.
- Knowledge and ability to deal with complex information; use MS Operating Systems, MS Office, Internet, and Email programs.
- Interpersonal skills in working with individuals at all levels of Government and private industry.
- Ability to work efficiently and independently to meet deadlines and set priorities for completing GIS projects.
- Ability to communicate effectively with colleagues and clients to recommend appropriate products and services that meet their needs in a timely and affordable manner.
- Oral and written communication skills, including good listening skills to communicate technical concepts to train and support staff members and clients using GIS technology.
- Ability to solve complex application problems in GIS and to develop new products and techniques that meet client's needs and keep abreast with changing methods in a rapidly developing field.
- Time management and organizational skills.
- Technical and non-technical writing abilities.
- The ability to use multi-media technology for the management of projects and development of presentations.



- The ability to stay on top of trends and adapt new technologies in the workplace.
- Initiative and resourcefulness to work independently.
- Contributes to the continuous development and maintenance of Land Tenure systems including ensuring an effective and efficient functional relationship between the systems and the web map viewer ATLAS; administering contracts and upgrades; monitoring performance; and reporting/addressing functional problems.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:

Bachelor's degree in natural resources, geography, environmental science or a related field or in information management or GIS with accompanying background in one of the above. With demonstrated skill, with at least three years full-time experience working with Esri GIS technology including representing, digitizing, creating, editing, converting and documenting spatial data, and producing hardcopy and on-line GIS map products. Sound understanding of GIS concepts and terminology.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

Position Security (check one)

- ☐ No criminal records check required
- ☐ Position of Trust – criminal records check required
- ☐ Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

- ☐ French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
READING COMPREHENSION:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
WRITING SKILLS:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
- ☐ French preferred

Indigenous language: Select language

- ☐ Required

☐ Preferred