



IDENTIFICATION

Department	Position Title	
Environment and Climate Change	Manager, Geomatics and Information Technology	
Position Number	Community	Division/Region
23-11083	Yellowknife	Land Management and Administration

PURPOSE OF THE POSITION

The Manager, Geomatics and Information Technology is responsible and accountable for the provision of mapping and geographic information system services to support the management and administration of Northwest Territories public lands.

SCOPE

The Manager, Geomatics and Information Technology (the Manager) is located in Yellowknife and reports to the Director, Land Management and Administration. The Manager is responsible for the provision of Geographic Information Systems (GIS) products, services, expertise, and advice to the Land Management and Administration Division (the Division), the Department of Environment and Climate Change (Department), community governments, Indigenous groups, federal government, private industry and the general public in order to assist in the management and monitoring of Northwest Territories (NWT) public lands, including lands within NWT community boundaries. The Manager is responsible for administering the survey, mapping, and related systems that has a budget of \$250,000 annually. The position is also responsible for the management of departmental resources and staff in the unit and represents the Division and Department in geomatics and information working groups.

The mandate of the Department of Environment and Climate Change is to manage, administer and plan the sustainable use of public land in the NWT in a fair and transparent manner that reflects the interests of the people of the NWT. The management and administration of land in the NWT occurs in a unique context and is influenced by distinct social, economic, and cultural factors and complex regulatory considerations. The NWT land management system features a unique land ownership structure that includes public lands, Indigenous-owned settlement lands, federal lands, and private lands; a complex regulatory regime governing the use of land, water, and resources; Lands, Resources, and Self-government Negotiations and Agreements; Indigenous Rights and Consultation requirements.



The role of Indigenous governments is articulated in constitutionally entrenched Lands, Resources and Self-government Agreements and in federal legislation. The Department must manage a complex set of multiple accountabilities within these regimes that define varying powers, authorities and responsibilities linked to the Department's role.

The Manager 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 Regulations; and the Mackenzie Valley Resource Management Act and Mackenzie Valley Land Use Regulations*; 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; Northern Lands-Northern Leadership; and the Recreational Leasing Policy.

Geomatics and GIS services play a crucial role in enabling effective decision support and reporting in the sound management of land. These services are used to identify GNWT policy positions and operational priorities and to enable effective decisions and authorizations essential to fulfilling GNWT obligations. The Division is a resource for high-resolution aerial photography, satellite imagery, large-scale base mapping, GIS, and cadastral parcel information for lands located in the NWT.

Projects of varied scope and magnitude are routinely managed by the Manager and run concurrently. The Manager must effectively assess and prioritize projects and manage client expectations to achieve a successful outcome.

As a service unit to the Land Management and Administration Division, much of the Managers work is completed through consultation and collaboration. The Manager must foster and maintain an environment that encourages individual commitment, growth, and teamwork.

The Manager leads staff to deliver on the Division's priorities. The Manager is required to effectively utilize resources by assigning priorities in a changing environment, approving work plans, developing and motivating staff and ensuring their adherence to GNWT legislation, regulations, policies, and strategies.

RESPONSIBILITIES

- 1. Manages the provision of standard GIS products and information services to clients in the Department, community governments, other GNWT Departments, Indigenous organizations, federal government, private business, and the public in order to assist in the management and administration of public land and other lands in the NWT.**



- Manages activities to maintain the operation, currency and accuracy of the GIS and information systems for all land in the Northwest Territories, including that which is not administered by the Department.
 - Oversees the production of maps in digital and hard copy format following standard procedures.
 - Integrates and validates the quality of spatial data from a variety of sources.
 - Oversees the scheduling of updates to cadastral mapping, topographic base mapping, air photography and other land information on a regular basis.
 - Ensures web map services and products are operational, updated, and accessible to the public.
 - Manages the Department's GIS software licenses and ensures installations/upgrades are done regularly and in a timely manner.
 - Works closely with the Application Services group, Department of Finance, to ensure that the server based, and desktop applications are up to date and working efficiently.
 - Responsible for the maintenance of plotters and other specialized mapping equipment.
 - Coordinates activities with Department staff to ensure the integrity and currency of the land records.
 - Directly, and through direct reports, provides customized GIS solutions.
 - Develops more complex solutions that may require the combination of GIS and other data sets, advanced analysis and modeling techniques, independent judgement, or research into methods.
 - Plans, schedules, and conducts all phases of projects.
 - Engages with the Department and clients to ensure satisfaction with products or services that meet their needs in the most cost-efficient and timely manner.
 - Identifies data, techniques, and products to meet needs and relates this information to users.
 - Provides time and cost estimates.
 - Provides geomatics expertise and advice to the Department and clients.
 - Oversees the provision of technical training and support in GIS software and methods to less experienced staff and those clients using GIS software themselves.
 - Initiates and implements procedures to make spatial data and non-spatial Departmental information more available to staff and to explore broader applications of it.
 - Ensures that up-to-date metadata is maintained for all corporate data layers.
 - Develops new or improved approaches and innovative solutions to information technology to enable the Department to provide products to best meet the need of land administrators.
- 2. Oversees the review of subdivision applications and administers contracts for the completion of subdivisions, control surveys, air photography and mapping services consistent with program criteria and objectives.**
- Administers the review of subdivision applications, including consultation, and provides recommendations to the Subdivision Authority for decision.



- Manages all technical contracts for the provision of professional surveyor and consultant services provided to the Department, as well as other GNWT Departments when requested.
 - Responsible for the accuracy and correctness of the spatial datasets where all parcel mapping, topographical mapping and aerial photography records are maintained.
 - Ensures that a historical record is maintained of all parcels and information records where the chronological transactions are always preserved.
 - Compiles, prepares, and updates high-resolution imagery, parcel and topographic base mapping and subdivisions to ensure accurate recording of land interests and features.
 - Ensures new mapping is brought into the digital mapping system and that old maps are archived to divisional standards.
 - Interprets and evaluates, adjusts and compiles newly registered survey plans into the cadastral dataset.
 - Creates composite drawings of legal surveys and sketches for tender documents on a computer assisted drafting system (AutoCAD) or manually.
 - The position is responsible for the preparation of survey sketches, design of map sheet layouts, design of control networks and the layout of the flight lines that are tendered for projects required by GNWT Departments.
 - Prepares legal descriptions as required for disposition and reserving land.
- 3. Oversees the continuous development and maintenance of information systems.**
- Ensuring an effective and efficient functional relationship between the spatial and non-spatial systems.
 - Administering contracts and upgrades.
 - Maintaining the security and integrity of information used by the Division.
 - Developing and implementing standards on data format and database structures.
 - Monitoring performance; and
 - Reporting on/addressing functional problems.
- 4. Manage the human, financial and administrative functions of the unit to provide effective and efficient services within budgeted frameworks.**
- Participate as a member of the Divisional management team in planning the short- and long-term objectives for the Division.
 - Develop and implement annual work plans that establish short- and long-term objectives.
 - Directly supervising the work activities of geomatics and information management staff.
 - Administer human resource functions of reports, including staffing, direction setting and performance evaluations.
 - Administer the annual budget and project future budget requirements in a fiscally responsible manner.



- Oversee contract management as required, including preparing terms of reference and statements of work to direct contractors, and evaluating the completeness of deliverables.
- Develop objectives and performance indicators for the unit including individual staff goals, ensuring they are complimentary to the Division's goals and objectives.
- Recognize staff training opportunities and requirements.
- Provide positive leadership; encourage employee development through performance appraisals, training plans, and professional development opportunities.

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

- An understanding of the importance of current and accurate geographic information to the sound management of land in the NWT.
- Knowledge of GIS and geographic principles, concepts, and terminology.
- Knowledge of GIS analysis, AutoCAD, modeling, and software to provide products and services.
- Knowledge of relational databases and related software such as Access, SQL and Oracle.
- Knowledge of network hardware, software, and service standards.
- Knowledge of computer hardware and software, hand-held portable devices, servers, printers and plotters, scanners, the Internet, spreadsheet, graphics, presentation, and word processing software.
- Ability to conceptualize, design, implement, and evaluate projects involving several staff with professional-quality results, including multi-disciplinary projects.
- Ability to handle confidential data and information in a discrete and professional manner.
- Ability to work to critical deadlines and manage changing, often competing, priorities.
- Knowledge of management practices required to supervise, motivate, guide and communicate with Division staff, consultants, and clients.



- Interpersonal skills such as tact and diplomacy to effectively liaise with the Division, the Department, other Departments, Indigenous groups, and other clients.
- Ability to work efficiently and independently to meet deadlines and set priorities for completing projects.
- Ability to communicate effectively with system users to develop 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 and other systems.
- Ability to solve complex application problems 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.
- 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, information management, GIS, or a related field with accompanying background in one of the above; and at least three years full-time experience working with Esri GIS technology (ArcGIS desktop, ArcGIS Pro, ArcGIS Server, published web map services) including representing, digitizing, creating, editing, converting, and documenting spatial data, and producing hardcopy and online GIS map products. One year of supervisory experience would be an asset.

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