



IDENTIFICATION

Department	Position Title	
Finance	Manager, Remote Sensing & Western Arctic Centre for Geomatics	
Position Number	Community	Division/Region
15-14770	Inuvik, NWT	NWT Centre for Geomatics

PURPOSE OF THE POSITION

The Manager, Remote Sensing & Western Arctic Centre for Geomatics (WACG) directs the work and activities of the remote sensing team and the Western Arctic Centre for Geomatics to provide remote sensing services and scientific advice on data acquisition, drone program coordination, remote sensing analysis, project management and publication of data and results to the web. The Manager coordinates geomatics research and science in collaboration with partners within and outside the GNWT. The Manager is responsible for the provision of expertise, leadership and vision to ensure services are effective and efficient and are responsive to the government's mandate.

SCOPE

The position is located in Inuvik and is part of the Western Arctic Centre for Geomatics, a regional office of the NWT Centre for Geomatics (NWT CG) division, within the Office of the Chief Information Officer branch in the Department of Finance. The Manager reports to the Director of the NWT Centre for Geomatics Division. The NWT CG is the GNWT Centre of Excellence for geomatic services, Earth Observation (EO), geographic databases and applications, remote sensing and geographic information systems.

The Remote Sensing & Western Arctic Centre for Geomatics business unit provides expert technical and scientific services to all departments of the GNWT, as well as related boards and agencies. The WACG promotes the use of remote sensing and Earth Observation for decision making and coordinates strategic investments in EO data assets to support a broad range of applications including analysis, monitoring and research. The Western Arctic Centre for Geomatics achieves its objectives through increased coordination of remote sensing projects; the development, implementation and maintenance of operational monitoring programs and applied science; the promotion of, and education and outreach on remote sensing and its value

to the territory; facilitating collaboration between stakeholders with common interests; the development of new projects and proposals; and pursuing third party funding sources to resource projects and initiatives.

A major challenge for this position is to continually increase the level of access to, and quality of, remote sensing services and underlying information holdings and technologies. This is essential in order to facilitate the GNWT, and other stakeholders to make responsible and appropriate decisions. Failure to do so may result in less well-informed decisions which may not fully meet the interest of NWT residents and businesses.

The Manager, Remote Sensing & Western Arctic Centre for Geomatics is responsible for the delivery of these services. This includes the delivery of information to the public and the exchange of information between the Government and partner organizations including the private sector, the Government of Canada and Indigenous governments organizations. The Manager is also responsible for maintaining a collaborative partnership with the Aurora Research Institute and co-development of research projects and funding proposals.

The Manager is responsible for communicating project outputs and products as they become available to facilitate decision making and prevent duplication of work or protocols within and across government departments. Communication is also required on matters of policy as it relates to the operation of Remotely Piloted Aircraft Systems by GNWT departments and regular briefing to the Informatics Policy Council and Risk Management.

Projects of varied scope and magnitude (from very small to several hundred thousand dollars) are directed to the Centre routinely by clients. The Manager must effectively assess and prioritize projects and manage client expectations in order to achieve a successful outcome. The Manager also works closely with the Geomatics Services and Enterprise Geospatial Systems Managers in achieving the broader objectives of the NWT Centre for Geomatics.

The incumbent leads the Remote Sensing & Western Arctic Centre for Geomatics team through ongoing development, integration, management and promotion of remote sensing services and technologies in order to meet the complex, diverse and evolving needs of the Government of the NWT and its program departments. The Manager must have a deep understanding of departmental business requirements, strategic objectives of the Government, as well as economic, social, and environmental drivers.

The Manager fosters and maintains a positive environment for staff that encourages individual growth and teamwork and emphasizes the importance of excellent client relationships.

The Manager is responsible for highly technical professionals, including two Remote Sensing Analysts in Inuvik, as well as one Remote Sensing Analyst, a UAS Coordinator and a Remote Sensing and Application Specialist in Yellowknife.

The Manager has an operating budget of approximately \$754,000 including \$724,000 in compensation and benefits and \$30,000 in operations and maintenance.

RESPONSIBILITIES

1. Develops strategies and coordinates operations to ensure remote sensing services and scientific initiatives provide value within the GNWT, are relevant and responsive to the emerging needs of the organization.

- Develop and maintain a continuing awareness of cross-departmental activities, initiatives, and mandates to provide responsive remote sensing services.
- Coordinate and engage in strategic opportunities to:
 - Conduct applied remote sensing research and science.
 - Evaluate new analytical techniques.
 - Leverage partnerships toward addressing mandate objectives using remote sensing.
 - Execute projects using collaborative sources of funding.
- Provide science and research support for clients, academic partners, and research institutions including the Aurora Research Institute.
- Maintain a high degree of awareness of new advances and development in remote sensing services, practices and technology.
- Coordinate cross-Departmental funding initiatives to invest in Earth Observation data assets that meet multi-functional requirements.
- Provide strategic input in territorial, national, and international remote sensing-based organizations and initiatives.
- Provide leadership in interdepartmental, intergovernmental, and inter-agency initiatives that rely on or contribute to GNWT remote sensing assets, including data, information and technology.

2. Manages the provision of remote sensing services through the coordination, administration and delivery of projects and initiatives.

- Oversee the coordination of new projects in response to client requests or to address emerging needs of the organization.
- Ensure that project milestones are met, and deliverables are completed on time.
- Prepare contracting documents, evaluate contractor bids and technical proposals, and oversee the work of contractors including on-time delivery of final products and services.
- Coordinate Remote Sensing projects with other agencies to ensure that projects are efficiently run, and support costs are kept to a minimum.
- Initiate the development of long-term monitoring programs that provide consistent, reliable and authoritative information to decision makers.
- Oversee the field support services provided through Remotely Piloted Aircraft Systems, including developments of standards and policies, monitoring technological trends, data outputs and management.
- Develop activities to increase awareness of the use and applications of remote sensing through outreach.
- Engage stakeholders and clients as part of the business planning process to allocate resources effectively.

3. Manages the highly effective exchange and interoperability of geospatial information.

- Maintain an inventory of the remote sensing projects (ongoing and completed) in the NWT and the potential synergies between them and new stakeholder requirements.
- Ensure the development of appropriate GNWT Remote Sensing information management policies, standards, guidelines, processes and procedures to enhance data interoperability and use of technology in support of GNWT decision making by government departments and programs.
- Provide expert guidance and advice on the use of new technology or data management methods to improve the interoperability and exchange of remote sensing information, including data assets collected throughout GNWT departments.
- Provide expert advice on development and maintenance of GNWT technology standards as they relate to the field of remote sensing, and the management of related data and information.
- Work closely with the Managers of Geomatics Services and Enterprise Geospatial Systems to manage remote sensing data outputs for discovery and broad distribution.
- Provide assistance to clients for developing data acquisition strategies and their remote sensing information management plans and practices.

4. Reports on the effectiveness of remote sensing services to ensure they are meeting established goals and objectives and promotes results.

- Solicit feedback from users on the utility of products and operational monitoring services.
- Identify and implement approaches to improve services.
- Work with the NWTG and ARI to develop a communications plan and outreach materials for various audiences.
- Understand and document information requirements and decision-making processes in all relevant stakeholder domains.
- Engage stakeholders in a continuous manner through personal communications, forums or workshops, to coordinate their requirements.
- Educate stakeholders about the potential and limitations of remote sensing technologies relevant to respective domains.
- Periodic measuring and reporting of unit outcomes, including measurements of program effectiveness as it relates to the Western Arctic Centre for Geomatics and its partnership with the Aurora Research Institute and other partners.

5. Manages the human resources and financial resources of the unit.

- Directly manage the work of Remote Sensing staff by assigning and evaluating projects and initiatives.
- Oversee performance management and monitor objectives and manage capacity and demand.
- Coordinate staffing activities, including casual, term, student and indeterminate employees.
- Assist other organizations that share capacity and resources with staffing and employee mentorship, including those of the Aurora Research Institute.
- Establish an effective and collaborative team environment.
- Provide complete and timely information to employees.

- Develop and implement on-going education and training programs for staff.
- Provide support and guidance to employees to help them accomplish defined initiatives and objectives.
- Manage and plan the unit's expenditures within the allocated budget.

WORKING CONDITIONS

Physical Demands

The incumbent works in a normal office environment but also conducts summer field work. During the summer field season, the incumbent may hike over rough terrain with a backpack and surveying equipment (up to 50 pounds) for 8 hours per day, up to 3 weeks per year.

Environmental Conditions

The incumbent works in a normal office environment but also conducts field work to validate project outputs or to support research objectives. While in the field the incumbent may be exposed to: rapidly-changing weather; conditions such as cold (hypothermia), intense sun (burn), wind, and rain; helicopters, airplanes, ATVs, and road vehicles (physical injury, noise fatigue, fumes from fuel); insects and insect bites; and dangerous, unforeseen, and uncontrolled field situations such as vehicular accidents, attack by wild animals, falls, and other accidents while travelling or on traverse (broken bones, cuts, etc.). The incumbent may be exposed to these environmental conditions while in the field for up to three weeks per year.

Sensory Demands

The incumbent works in a normal office environment but also conducts summer field work. While in the field, the incumbent may be affected by long hours of work (fatigue, stress). The incumbent may be exposed to these sensory conditions while in the field for up to three weeks per year.

Mental Demands

The Manager, Remote Sensing and Western Arctic Centre for Geomatics faces psychological and mental pressures in responding to incoming requests and ensuring services are delivered promptly. At times service demands may exceed existing capacity and the Manager must reprioritize work and resources and be responsive to a fast-paced work environment.

KNOWLEDGE, SKILLS AND ABILITIES

- Expert knowledge of remote sensing systems, sensors, processes, and analysis.
- Knowledge of the scientific principles and techniques behind geomatics and remote sensing research and monitoring, including field-based data acquisition and analysis.
- Advanced knowledge of various remote sensing computer applications and data management processes (image analysis software, geographic information systems, word processing, spread sheets and presentation software) including but not limited to ESRI, PCI, ENVI, Pix4D.
- Knowledge of needs and issues of National and International research scientists working in the NWT.

- Knowledge of needs and issues of NWT Indigenous Governments, organizations and communities including sensitivity to Northern and cross-cultural issues and concerns.
- Knowledge of policy and strategy development approaches.
- Knowledge of and experience in field work preparation and conducting efficient and safe field programs within prescribed budgets and timelines.
- Advanced knowledge of financial planning, budgeting and administration systems.
- Advanced knowledge of procurement, contracting and project management.
- Excellent interpersonal skills.
- Proven ability to supervise, motivate, guide, and communicate with staff, consultants, external researchers, and contractors.
- Excellent leadership skills needed to manage human resources and guide a program.
- Demonstrated ability to analyse complex issues, identify options and support sound decision making.
- Project management, organizational, and logistical skills to effectively manage and participate in independent and collaborative research projects.
- Ability to successfully manage various projects related to remote sensing and achieve results.
- Ability to generate viable new approaches and solutions to differing situations and problems as they arise.
- Ability to work in a high stress environment with tight deadlines.
- Ability to deal with politically sensitive issues where a high degree of sensitivity, tact, and diplomacy are required.
- Ability to facilitate meetings and workshops for decision makers and technical resources.
- Ability to develop and build relationships and partnerships with clients and stakeholders.
- Ability to initiate, anticipate, shape and adapt emerging remote sensing opportunities.
- Ability to advocate and encourage the use of remote sensing techniques and data in the GNWT and to stakeholders.
- Ability to interact with multidisciplinary groups including industry, government agencies, Indigenous government organizations and the public.
- Ability to resolve conflicts.
- Ability to communicate effectively in writing and orally.

Typically, the above qualifications would be attained by:

The knowledge, skills and abilities listed above are typically acquired by the successful completion of a university degree in a relevant remote sensing discipline followed by three (10) years of recent and progressive remote sensing experience and (3) years of supervisory and financial management experience.

Equivalencies may 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