IDENTIFICATION

Department	Position Title	
Environment and Climate Change	Climate Scientist	
Position Number	**Community**	**Division/Region**
23-16456	Yellowknife	Climate Change, Cumulative Impacts and Knowledge/ HQ

PURPOSE OF THE POSITION

The Climate Scientist (Scientist) informs and implements a strategic and coordinated approach to gathering, analyzing, synthesizing and sharing climate data, information and research to inform and enhance climate change adaptation and resiliency, climate change mitigation and environmental management in the Northwest Territories (NWT).

SCOPE

Located in Yellowknife and reporting to the Senior Climate Change Scientist (Scientist), the Climate Scientist (the Scientist) is compiles, manages, analyzes, and disseminates climate data, information and research and is responsible for the coordinated implementation and assessment of the Northwest Territories (NWT) Climate Monitoring Network.

The Scientist maintains expert knowledge of monitoring, climate data quality methodologies and methods of climate analysis and research. The Scientist clarifies NWT climate data needs, opportunities and priorities, and undertakes the analysis and modelling of climate data including the development of climate information products that will support Government of the Northwest Territories (GNWT) decisions, environmental management, climate adaptation, mitigation, and general scientific knowledge.

The Department of Environment and Climate Change (ECC) works to promote and support the sustainable use and development of natural resources and to protect, conserve and enhance the NWT environment for the social and economic benefit of all residents.

The Climate Change, Cumulative Impacts and Knowledge Division (Division) coordinates climate change action for the GNWT, leads the implementation of the government's Knowledge Agenda, and fulfills ECC's regulatory obligation to monitor and report on cumulative environmental impacts.

The Scientist contributes to developing, implementing and assessing the Climate and Climate Change Knowledge Framework (Framework) which outlines a plan to address climate change-related information, data, and research needs to inform NWT climate change decision making. The Framework is guided by the 2030 NWT Climate Change Strategic Framework (CCSF) and its corresponding Action Plan (Action Plan) as well as the Knowledge Agenda.

The Scientist works to ensure Framework activities, including climate data collection, analysis, synthesis, and sharing is undertaken collaboratively by coordinating, engaging and building partnerships with internal (e.g., GNWT departments and ECC divisions) and external partners and stakeholders (e.g., Indigenous, community, territorial, provincial and federal governments, industry, environmental and non-government organizations, co-management and regulatory boards, academia and the public).

The Scientist prepares technical and plain language reports and public information materials about climate data, climate impacts, climate products, climate information to consider climate change, and evaluates proposals for funding, requests for tenders, service contracts and preparing and administering Contribution Agreements and Service Contracts. The Scientist sources financial resources from potential funding agencies through partnerships and grants and negotiates funding or partnerships with funding agencies.

The Scientist represents the GNWT in national, intergovernmental and industry and public forums, ensuring alignment with national standards where possible, while recognizing local issues. The position maintains qualifications in professional, technical and administrative areas by attending and completing seminars, training and other professional development opportunities as identified.

The Scientist demonstrates intrapersonal skills and diplomacy and develops respectful working relationships with representatives from other GNWT departments, Indigenous governments and organizations, community governments, the federal government and other external partners.

The Scientist collaborates closely with the Division's Knowledge Agenda and Cumulative Impact Monitoring Program groups. The Technical Specialist works collaboratively with colleagues within the Divisions of ECC, particularly Forest Management, Waters Monitoring, and Stewardship and Wildlife and with colleagues in the Departments including Infrastructure (INF), and Industry, Tourism and Investment (ITI). The Scientist also works with industry partners and colleagues in NWT Indigenous government and Indigenous organizations, community governments and federal departments including Environment and Climate Change Canada (NCCC), Natural Resources Canada, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and with its provincial and territorial counterparts.

Work is performed under the general direction of the Senior Climate Change Specialist.

RESPONSIBILITIES

1. **Informs the development and coordinates the implementation of strategies related to climate, climate change science, knowledge, and climate impacts**
   - Identifies, implements, monitors, reports and evaluates climate, the consequences of climate change (climate impacts), and climate knowledge framework actions.
   - Provides strategic and expert advice and supports the development of goals, objectives, priorities and programs related to enhancing climate change knowledge.
   - Reviews and evaluates information and documents (i.e. reports, studies, proposals, climate tools, climate products, policies and legislation).
   - Works collaboratively with partners to enhance climate change knowledge.
   - Identifies opportunities where traditional knowledge may be utilized as a source of climate change knowledge
   - Undertakes engagement including with Indigenous Government organizations and stakeholders to understand climate and climate change knowledge gaps.

2. **Coordinates, oversees and enhances climate monitoring and related monitoring programs.**
   - Leads the coordination and oversight of climate monitoring in the NWT including GNWT, federal, academic, community, and industry climate monitoring networks.
   - Coordinates and enables comprehensive collaboration on priorities, methodologies, equipment, data management and data dissemination.
   - Analyzes the climate monitoring networks to ensure the data is representative, meeting ECC and other GNWT climate needs.
   - Identifies and address monitoring gaps/needs to better achieve CCSF and Action Plan goals and actions and resolve network redundancies.
   - Collects, gathers and reviews data, identifies problematic observations and coordinates or conducts data Quality Assurance/Quality Control (QA/QC).
   - Verifies, compiles, organizes, and manages climate monitoring data in regional databases.
   - Works with other departments, governments, agencies, organizations, communities, consultants and industries as applicable to develop and implement climate and climate impacts monitoring.

3. **Leads climate data management.**
   - Leads the development and maintenance of a climate data management system for the GNWT and supports and ensures the archiving of climate data and sharing of climate data with decision makers and operational staff.
   - Plans and implements best practices for data stewardship, data compilation and synthesis projects and prepares non-technical materials and about climate products and tools.
   - Implements data sharing agreements with other governments and organizations.

4. **Shares knowledge.**
   - Identifies and prioritizes needs and provides recommendations and advice on requirements and design of climate data tools and derived climate information products for the NWT and partners.

- Coordinates and leads the development of materials, products, maps, graphs, and tools, summarizing climate, climate impacts, and climate change information to inform decision making.
- Responds to inquiries and provides advice to the public, government agencies, Indigenous and community governments, stakeholders and the Legislative Assembly relating to NWT climate data, climate impacts, and information products.
- Organizes and conducts project workshops, technical sessions, leads training (including developing training materials) and conducts community information sessions.
- Provides climate change technical advice on regulatory processes such as environmental impact assessments and represents the department in public hearings.
- Collaborates with partners to provide advice, to co-develop climate information products.

5. Conducts climate data analysis and research

- Coordinates, leads and contributes to research including the analysis and interpretation of climate and climate impacts data obtained from meteorological stations, satellite imagery, and computer models
- Summarizes climate data, determines spatial and temporal climate trends, develops climate summaries / indices/ indicators, including statistical analysis; identify, analyze, complex data sets, improve data products; conduct research on new methods and algorithms.
- Develops best practices to standardize/homogenize data, and to undertake analysis to support decision making.
- Researches, analyzes and evaluates information, studies, proposals, policies and programs related to climate data tools and products.
- Supports and conducts interdisciplinary climate change research including community- based partnerships and collaborates with universities to facilitate or oversee the field components of post- doctoral, graduate, and undergraduate research.
- Utilizes and enables climate modeling to help predict future change and evaluate the applicability of climate models.
- Develops reports and scientific papers on climate conditions, trends, forecasts and data quality issues (in conjunction with the Sr. Climate Change Scientist).
- Coordinates field and research programs that involve the collection of climate and related environmental data.
- Leads projects by developing proposals including budgets and schedules, prepares contribution agreements and prepares service contracts, tracks and accounts for all project-related expenses and completes research activities on time and within budget.

WORKING CONDITIONS

Physical Demands

The position is required to conduct fieldwork during which the incumbent is required to lift and maneuver heavy monitoring equipment, walk/hike/stand in outside situations to maintain and

operate equipment at various climate and air monitoring stations, to climb ladders to access some monitoring equipment and to work in awkward positions to repair instruments. Travel to field sites involves travelling over challenging terrain and weather via float planes, helicopters, ATVs, boat, snowmobile or on foot.

Environmental Conditions

Exposure to various weather conditions such as extreme cold. Travel to field sites may involve travel in small aircraft, driving on winter roads and periodic exposure to adverse weather conditions, biting insects and wildlife.

Sensory Demands

The incumbent is subject to long periods of concentrated focus while working with computer programs, reviewing reports and other related documents. The incumbent will be required to operating, troubleshooting, and repairing instruments using hardware tools, electronic tools, gauges, etc. and installing, inspecting, repairing monitoring stations.

Mental Demands

The incumbent requires tact while dealing with community and non-government organizations and other government agencies. They will be required to present to scientific peers, collaborators, community groups, etc. The incumbent may be periodically required to travel to communities and isolated locations for field work and community meetings.

The incumbent travels to community meetings in the NWT and national meetings representing the NWT up to six times a year and conduct field work up to once a month.

While in the field, the incumbent is expected to continuously manage scientific and logistical activities to ensure safe work practices and predict and mitigate potentially hazardous situations; manage conflicts amongst field staff and manage any potential stress associated with work in isolated areas.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of the of climate processes, controls of climate, climate data, climate variability, climate change science, climate monitoring, data loggers including data logger programming, climate instrumentation, climate models and downscaling.
- Knowledge of climate and climate change science including: Northern climatology, climate monitoring and quality control of climate data, future climate projections and Intergovernmental Panel on Climate Change Scientific Assessments.
- Knowledge of climate change impacts, climate adaptation and mitigation.
- Knowledge of Geographic Information Systems (GIS), spreadsheets, databases, presentation and word processing software.
- Knowledge of programming and statistical analysis packages such as Python, R, Fortran, C, VBA, SPSS, SAS, or other similar software to analyze and visualize large amounts of scientific data.

- Knowledge of statistical methods to review, analyze and interpret data and produce reports.
- Knowledge of climate databases and portals.
- Knowledge of federal and territorial climate change programs, research, and approaches.
- Research, analytical skills, and the ability to assess and make sound decisions with respect to environment and climate change issues.
- Project management skills, including experience with project charters, work plans, etc.
- Organizational and time management skills, including the ability to plan, coordinate, prioritize activities, and meet deadlines.
- Communications skills both written and oral, including sharing scientific knowledge and complex processes with non-technical audiences.
- Negotiating and dispute resolution skills to resolve conflicts and differences of opinion.
- Ability to manage politically sensitive and controversial matters with sensitivity, tact, and diplomacy.
- Ability to think strategically, using experiential judgment as well as the analysis and synthesis of multiple concepts and priorities.
- Ability to speak as a technical expert at public hearings.
- Ability to work effectively both independently and in collaboration with other professionals in a team situation.
- Ability to develop and deliver communications and knowledge transfer products and tools including presentations, digital products, such as maps, etc.
- 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:

Completion of a graduate degree in climate science or environmental science with a climate focus with at least two years relevant work experience, preferably, with climate change experience, field experience, and/or northern experience

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