



## IDENTIFICATION

Department	Position Title	
Environment and Climate Change	Wildfire Scientist	
Position Number	Community	Division/Region
23-15797	Fort Smith	Forest Management

## PURPOSE OF THE POSITION

The Wildfire Scientist (Scientist) is responsible for the development, review and implementation of a wildfire research program throughout the Northwest Territories (NWT) for the Department of Environment and Climate Change (ECC). The Scientist undertakes research and provides expert opinion and direction to Senior Divisional and Departmental staff, other Government of the Northwest Territories (GNWT) Departments, Regional Stakeholders, Indigenous Governments and Renewable Resource Co-Management Boards. The incumbent also works collaboratively with national and international research bodies.

## SCOPE

Located in Fort Smith and reporting to the Manager, Fire Operations (Manager), the Wildfire Scientist is responsible for the administration of a budget up to \$100,000 to ensure wildfire research is carried out in the NWT. The position carries out responsibilities in all five NWT regions in accordance with *the Forest Management Act* and regulations, *Forest Protection Act*, the NWT Forest Fire Management Policy 53.07 and Traditional Knowledge Policy 53.06.

The Forest Management Division (FMD) provides the policy, planning, and regulatory framework for the stewardship, protection, and sustainable management of forest resources on 80 million hectares of land in the Northwest Territories (NWT). The fire management program is a key area of responsibility. The Fire Operations Section of the Division provides scientific fire management expertise and supports the fire management program. The Section conducts applied research for enhanced fire science knowledge, leads the wildland fire prevention and mitigation programs and manages an information management framework for fire management. The use of geomatics plays a significant role in the ability of the Section to provide effective support.



The Scientist undertakes research and develop funding proposals, prepare and manage contracts and contribution agreements as well as seek external funding opportunities to enhance existing research initiatives. The position provides functional supervision to the Fire Management Geomatics Analyst position and may supervise casual staff and summer students.

The position is responsible for providing expertise in wildfire research and the interactions of wildfire with wildlife and the environment. The position will be required to work independently; however, the incumbent will work closely with regional and headquarters staff, research institutions, co-management boards, communities and federal counterparts with responsibility for wildfire research. The position also provides a critical link between researchers, academics, operational staff and executive leadership by translating wildfire science into practical, plain language materials for distribution to the wider NWT community.

The quality of information provided by the incumbent will dictate the success of major portions of the fire program and will have direct impact on effective management of wildfire in the NWT. The incumbent is expected to ensure the integration of wildfire research into other departmental programs in order to accomplish the department's natural resource management goals and objectives. Scientifically sound and defensible research results will link directly into GNWT land use planning, including wildlife management plans and forest management plans undertaken by the GNWT.

## **RESPONSIBILITIES**

### **1. Designs conducts and oversees wildfire research to improve wildfire management knowledge and inform policy decisions.**

- Conducts scientific research to enhance knowledge of wildfires and the interaction of wildfires, wildlife and the environment;
- Identifies and prioritizes wildfire research goals;
- Engages with key stakeholders to provide an opportunity to contribute to the research prioritization process;
- Evaluates research results and makes recommendations for incorporation of findings into policies, standards and practices;
- Authors or co-authors reports, publications and papers on research results;
- Applies wildfire expertise to pursue research to mitigate the impact of wildfire on species at risk and better understand wildfire interactions with the environment;
- Creates research proposals and work-plans according to prioritized research goals;
- Interviews and selects candidates for employment in relation to studies such as term technical employees or casuals;
- Supervises and directs the work priorities and responsibilities for these subordinates;
- Provides field support and direction to collaborating researchers including agency biologists and University graduate students;
- Responsible for preparing an annual report of research projects and findings;



- Reviews, on behalf of the Forest Management Division, wildfire research permit applications submitted through the Aurora Research Institute;
- Authorizes wildfire related research applications under *the Forest Management Act*; and
- Assesses Climate Change research and integrates research results into wildfire questions.

**2. Serves as the Government's wildfire science expert.**

- Maintains in-depth and current knowledge of wildfire science and management at a national and international level including legislation and policies; scientific research, literature; predictive modeling systems and issues;
- Acts as Lead senior wildfire science expert on inter-departmental, national and international working groups;
- Develops briefing materials and provides professional advice to senior management, program staff, departmental staff, stakeholders, and academia on wildfire science and management;
- Creates briefing notes for senior management to communicate relevant research results;
- Evaluates and interprets studies by other agencies and determines the applicability of information, techniques and practices for the GNWT;
- Participates in fuel management and prescribed fire programs and conducts field experiments to advance this knowledge; and
- Directs the wildfire science components of the Land Use Planning, Wildlife Range Planning and Forest Management Planning processes.

**3. Management of the Fire Science Fiscal Resources and Personnel.**

- Manages a fire science budget of \$100,000 annually;
- Responsible for providing functional supervision to the Fire Management Geomatics Analyst in support of the GNWT Fire Program;
- Contributes to the work plans and evaluations for the Fire Management Geomatics Analyst in collaboration with the Manager, Fire Operations;
- Responsible for annual program plans and budget submissions for fire science program, track and manage assigned in-year budget, approve expenditures for assigned budget and report in-year expenditures as required;
- Creates funding proposals in support of research objectives;
- Creates and manages service contracts, contribution agreements and Memorandums of Understanding in support of field research objectives;
- Creates long term budget plan as required for multi-year planning purposes;
- Analyzes and summarizes year-end expenditures to compare actual results to predicted and assess the adequacy of program plans;
- Responds to public inquiries, other agencies and interest groups (this includes preparing draft letters and documents for executive); and



- Responsible for ensuring business files are maintained and electronic correspondences filed.

#### **4. Supports Wildfire Operations.**

- Develops new or enhanced operational wildfire management practices, safe work directives, technology, decision support tools or prediction models based on internal and external research results;
- Provides support to existing NWT wildfire research sites and guides the creation of new research sites;
- Ensures the Fire Behaviour Service Center procedures are based upon sound wildfire scientific principles and the products communicate results in a clear and consistent manner; and
- Serves on Wildfire Incident Management Teams as required.

#### **5. Performs other related duties.**

- Responds to information requests and concerns made by the public, Department, GNWT and outside Agencies;
- Represents the Department at meetings, workshops and symposiums;
- Serves on various internal (Division, Department and GNWT) or external (Local, National and International) committees and forest management advisory groups; and
- Provides support to other resource management activities as directed from time to time.

### **WORKING CONDITIONS**

#### **Physical Demands**

Position requires field work which could involve long days, walking long distances carrying heavy loads on uneven ground – moderate intensity (annually 4-6 weeks for up to 12 hours per day).

#### **Environmental Conditions**

Field work can cause exposure to extreme weather conditions including high temperatures (annually 20-30 days for up to 12 hours per day).

#### **Sensory Demands**

Exposure to high decibel noise from aircraft, outboard motor, all-terrain vehicles (ATVs) (5 to 10 days per year for up to 8 hours per day).



### **Mental Demands**

The incumbent will have a disruption to family life due to long travel for operational wildfire deployments, field sessions and meetings/conferences six to eight times annually for one to three weeks at a time.

There is an expectation to work irregular or long hours, or to work on weekends or holidays when field activities or meetings and deadlines require it.

The incumbent will on occasion be required to deliver presentations to GNWT staff, external collaborators, the public and co-management partners. Presentations may be stressful as the incumbent will be required to explain or defend government positions to a wide range of audiences, that may include community members, Band Councils, Ministers and Members of the Legislative Assembly.

There will be numerous highly stressful situations where the incumbent will have to deal with high profile and sometimes emotional issues and tight deadlines. There may be many requests for Briefing Notes and Decision Papers for the Minister.

- Public presentations (1-4 times annually)
- Analyzing and drafting legislation instructions and briefing notes (monthly)
- Developing and fostering management partnerships, managing financial arrangements and administering contracts (2-4 times annually)
- Living in isolated camps, lack of privacy, no medical facilities (1-6 weeks annually)

### **KNOWLEDGE, SKILLS AND ABILITIES**

- Comprehensive knowledge of wildfire science, wildfire management and of the boreal forest as a dynamic ecosystem.
- Ability to work independently and without supervision in a cooperative work environment both within the Department and external to the Department.
- Knowledge of forestry legislation such as *the Forest Protection Act* and *Forest Management Act*.
- Working knowledge of forest research, research methods and scientific reporting including study design, field and quantitative techniques.
- Demonstrated ability to gather data, perform scientific and statistical analyses and interpret results in order to draw conclusions, identify trends and provide advice and recommendations.
- Demonstrated ability to write and edit a wide variety of documents and extension materials (such as technical reports, newsletters and briefing notes) in a clear concise manner and produce graphic and visual material such as overheads and slides.



- Demonstrated ability to plan and deliver presentations and training to diverse groups and to provide technical advice at an appropriate level to wildfire personnel, the public and scientific audiences.
- Ability to build and maintain cooperative and productive relationships and effectively negotiate and consult with internal and external stakeholders.
- Ability to manage a diverse portfolio of complex projects simultaneously.
- Proficient with the Microsoft Office suite of software packages, GIS, and database management programs.
- 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:**

A degree in one of the natural science disciplines (Biology, Forestry, Wildlife or Wildfire Management, Environmental Studies, Environmental Sciences or Resource Management), or a bachelor's degree in Forestry or a graduate certificate in a natural sciences discipline, AND a minimum of three (3) years of experience in wildfire management, or related experience including wildfire management, research, program monitoring and evaluation.

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