Alberta

Job Description

Ministry

Agriculture and Forestry

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Fire Weather Network Lead

Current Class

Technologies 5

Requested Class

Technologies 6

Job Focus

Operations/Program

Supervisory Level

01 - Yes Supervisory

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

M [redacted]

Organizational Structure

Division, Branch/Unit

Forestry Division, Wildfire Mgmt Branch, WRPS

[redacted]

Supervisor's Position ID

[redacted]

Supervisor's Position Name (30 characters)

Fire Weather Program Lead

Supervisor's Current Class

Meteorologist 2

Design: Identify Job Duties and Value

Changes Since Last Reviewed

Date yyyy-mm-dd

2024-04-01

Responsibilities Added:

Supervision of two field based Fire Weather Network Technicians.
- Recruitment, training and supervision of the Fire Weather Network Technicians.
- Scheduling, prioritization and approving of field activities.
- Develop a plan to maintain weather stations for assignment to the Fire Weather Network Technicians.

Identify budget and expenditure requirements for the entire fire weather network.

Coordinate the procurement and contracted services for supporting the fire weather network.

OH&S awareness for field related risks and compliance for staff.
- Safety documentation maintained in shared drive for all unit staff on an ongoing basis.
- Assist unit staff with incident reporting, safety equipment purchasing, review and write hazard assessments when required, updates completed every three years to meet legislation requirements.

Lead the collaboration with the Wildfire Telecommunications team for the Alberta Wildfire Lightning Detection

System.
• Collaborate and coordinate installations, upgrades and repairs to the lightning detection sensors across the province.
• Cross training with the Wildfire Telecommunications Team for system configuration in order to provide back up support.

Provide leadership for the radiosonde system maintenance and support.
• Provide training to field staff.
• Provide assistance to field delivery of radiosonde deployment.
• Annual maintenance of the equipment.

Responsibilities Removed:

None.

Job Purpose and Organizational Context

Why the job exists:

The position will be responsible for the provincial coordination of and contribute to activities pertaining to the expansion, operation, and maintenance of the WMB provincial scale real time automated fire weather network. The WMB network provides real time data that conforms to the Canadian Forest Fire Danger rating system, World Meteorological Organization and Environment Canada standards retrieved via satellite and cellular modem connections. Timely and accurate data is required for evaluation and forecasting of fire weather and fire danger conditions across Alberta.

Responsibilities

1. The position requires the ability to coordinate staff, budgets and workloads.
• It is expected that the position will coordinate field staff and resources across the province.
• Responsible for ensuring that work is done in a timely and cost efficient manner.

2. Planning and implementation of expansion of the Fire Weather Network.
• Liaison with communication technician and field staff to help establish network location requirements, site selection and intergovernmental cooperation where necessary.
• Responsible for the planning, budgeting of weather network projects and expenses.
• Assess instrumentation and component requirements to be used in the network to meet fire management needs.
• Input into budgeting both capital expansion costs and operational costs related to the network
• Responsible for the tendering and procurement of equipment and external contracts
• Conduct and coordinate the fabrication and installation of new stations.
• Coordinating the activities of staff during site installations, upgrades or relocations.
• Operation and maintenance of the Fire Weather network. Fire weather data conforming to Canadian Forest Fire Danger Rating System (CFFDRS) and national standards is collected and provided to stakeholders.
• Coordinate operational activities of staff in the field with regards to station operation and maintenance
• Coordinate and complete the scheduled maintenance of fire weather stations and response to emergency repairs as needed.
• Maintain and calibrate instrumentation to ensure production of a scientific quality data set that meets the established CFFDRS and federal standards.
• Procure materials and supplies required for the operation and maintenance of the Fire Weather Network stations.
• Maintain current documentation and databases associated with fire weather station records and history of operations.
• Inventory control and inventory management of all available equipment and government assets related to the network.

3.Foster the Development of Standardized networks in other provinces and or with other Stakeholders
• Work with other provinces to develop their capacity to construct and manage similar networks.

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Coordinate the procurement and contracted services for supporting the fire weather network.

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Provide leadership for the radiosonde system maintenance and support.

- Provide training to field staff.
- Provide assistance to field delivery of radiosonde deployment.
- Annual maintenance of the equipment.
- Work with other agencies to coordinate compatibility between other similar networks, E.g. Agriculture Canada,Environment Canada, Water Survey Canada

Problem Solving

Typical problems solved:

The position requires advanced knowledge with regard to the technical aspects of the job. It has often taken on an advisory role to those in other agencies. Additionally the position requires superior planning and budgeting skills and the ability to coordinate staff throughout the province.

Types of guidance available for problem solving:

The Fire Weather Network is a province wide meteorological network currently with 145 stations and 11 lightning sensor sites. These are complex multi-sensor stations that transmit data in real time, via cellular communications. The sensors measure parameters including lightning strikes, all season precipitation, wind speed and direction, air temperature, relative humidity, snow depth, net radiation, soil temperature and soil moisture. Hands on experience with these sensors is obtained by working with them in the field, conducting maintenance on them, and becoming familiar with their operations. Minimum five years of working in the field with this equipment will make the incumbent proficient with the sensors and hardware at meteorological stations. Manuals of a scientific and technical nature provides guidance to ensure the network meets the established CFFDRS and federal standards.

The problems that are faced are not always known, and the immediate solution is often unknown. Many new technologies are being utilized where similar problems have not been experienced in the past; as a result new solutions need to be discovered. A knowledge of the inner workings of the work done by Fire Weather in both a field and office setting allows the incumbent to easily navigate issues and come up with solutions.

Abstract and on the spot problem solving is required when working with external operations and persons as issues and solutions are ad hoc. In-depth knowledge on how the applications, sensors, and systems relate to each other is necessary.

Direct or indirect impacts of decisions:

Data from the Fire Weather Network is of a mission critical nature in the assessment and prediction of fire danger and

fire behaviour conditions. Timely and accurate fire weather data is a key component of fire management decision tools impacting fireline safety and resource deployment both in pre-suppression and suppression operations. These operations frequently involve highly significant expenditures.

Key Relationships

Major stakeholders and purpose of interactions:

Data collected from the Fire Weather Network is utilized by numerous external stakeholders including, National Climate Information Service (NAIS) , Agriculture Financial Services Corporation (AFSC), Environment and Climate Change Canada(ECCC), and Natural Resources Canada (NRCAN). The data is also available to the forestry industry, consultants and the general public through publications and on WMB websites . Large datasets and historical data are also made available through requests. This is an important source of data required by many of these groups to makemajor economic, environmental, and policy related decisions.

Develop working relationships with numerous equipment vendors to facilitate transferring of product specifications, problem solving, and to effectively resolve equipment and software related problems.

With the development of the network and our external contacts we have often taken on the role of liaison between various government agencies and the equipment suppliers.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Diploma (2 year)	Science		

If other, specify:

Technical Diploma

Job-specific experience, technical competencies, certification and/or training:

The job requires a two year technical diploma with a related six years of environmental monitoring experience.

The position requires field experience in addition to a theoretical knowledge in several areas.

- Meteorology
- Hydrology
- Electronics
- Telemetry Systems
- Mechanics and Construction

Possess in - depth knowledge of the standards and protocols used for sampling and data collection.

- Canadian Forest Fire Danger Rating System fire weather standards.
- Environment Canada Meteorological Standards

Certification in the following safety related areas:

- Standard First Aid
- Transportation of Dangerous Goods
- WHMIS
- Defensive Driving
- Working Alone Legislation, Occupational Health and Safety Act (Knowledgeable)
- Outdoor skills are required
- Good motor skills and eye-hand co-ordination
- Awareness and adaptability to changing environmental conditions to ensure safety while traveling and working in the field, year round.
- Be physically fit, with a demonstrated ability to work effectively in a variety of outdoor environments, year round and be capable of carrying up to 75 lbs in short distances.

Behavioral Competencies

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Creative Problem Solving	○ ○ ◉ ○ ○	Engages the community and resources at hand to address issues: • Engages perspective to seek root causes • Finds ways to improve complex systems • Employs resources from other areas to solve problems • Engages others and encourages debate and idea generation to solve problems while addressing risks	The Fire Weather Network Lead needs to continuously evaluate the stations and network to ensure it meets the highest quality and standards.
Agility	○ ◉ ○ ○ ○	Works in a changing environment and takes initiative to change: • Takes opportunities to improve work processes • Anticipates and adjusts behaviour to change • Remains optimistic, calm and composed in stressful situations • Seeks advice and support to change appropriately • Works creatively within guidelines	This position requires the ability to respond to issues with the network in a timely manner with creativity to adapt to different situations.
Drive for Results	○ ◉ ○ ○ ○	Works to exceed goals and partner with others to achieve objectives: • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations	The Fire Weather Network Lead has plans and targets for weather stations being operational and budgets to meet. Leading the Fire Weather Network Technicians will outline plans for maintenance and enhancement that they will need to achieve.
Develop Self and Others	○ ○ ◉ ○ ○	Plans according to career goals and regular development: • Aligns personal goals with career goals • Leverages strengths; attempts stretch goals • Provides feedback and openly discusses team performance • Values team diversity,	Developing your own knowledge as technology changes will be critical for this position. Ensuring staff are trained and updated to changing technologies and practices will be key to the success of this program.

		and supports personal development	
Systems Thinking	○ ○ ◉ ○ ○	Takes a long-term view towards organization's objectives and how to achieve them: • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration	This position is responsible to plan the long term viability and maintenance of the remote automatic weather station network.
Build Collaborative Environments	○ ○ ◉ ○ ○	Collaborates across functional areas and proactively addresses conflict: • Encourages broad thinking on projects, and works to eliminate barriers to progress • Facilitates communication and collaboration • Anticipates and reduces conflict at the outset • Credits others and gets talent recognized • Promotes collaboration and commitment	This position is required to work with many groups within the GOA and with stakeholders outside of the GOA. Effective communications and relationship building is key to the successful implementation of this system.