

New

Ministry

Agriculture and Forestry

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Fire Behaviour Specialist

Requested Class

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

Reporting to the Provincial Fire Behaviour Specialist, the Fire Behaviour Specialist will provide advice, expertise and technology transfer to division staff in support of prevention, pre-suppression and suppression activities.

A comprehensive understanding of wildland fire behaviour principles is essential, because almost all action taken on a wildfire depend on how it 'behaves'. Fire behaviour is the foundation for models and knowledge used in prediction, planning and training, and understanding fire behaviour is critical to safe and effective firefighting operations.

Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

1. Provide specialized products and services to branch level decision-makers that incorporate sound fire behaviour principles to support planning, decision documents, and strategic direction

Activities:

- Act as link between Fire Weather Program, Wildfire Operations Officers, Wildfire Prevention Officers and Wildfire Management Specialists regarding the design and implementation of systems and tools
- Make recommendations to managers and executive regarding incorporation of new systems and tools including the implications of their use, and how they might affect policies, directives and guidelines
- Document and analyze fire behaviour on major incidents, and prepare and present case studies

- Represent Ministry as expert witness in court proceedings including preparation of reports and evidence and delivering expert opinion testimony

- Provide ad hoc analyses, studies and reports as assigned

2. Facilitate knowledge and technology transfer to division staff

Activities:

- Audit, analyze and report on sustainability, efficiency and effectiveness of decision support systems and tools

- Liaise with research community including participating in research advisory groups, conferences and workshops

- Deliver training in division and national courses

- Provide mentoring in use of decision support systems and tools

3. Oversee the development of Alberta's wildland fuel type layer that classifies the provincial area into Fire Behaviour Prediction (FBP) fuel types, which is used as a basis for fire behaviour forecasting and modelling at multiple scales and in different contexts

Activities:

- Develop processes, tools and services for field and operational users to accurately identify FBP fuel types

- Direct the development of algorithms for models that convert data into FBP fuel types (e.g. AVI2FBP)

- Validate FBP fuel types and make adjustments where necessary

- Work closely with Wildfire Geospatial Team, Remote Sensory Analyst and Wildfire Management Specialists in Forest Areas

4. Participate in Fire Behaviour Service Centre Coordinator roster, which provides detailed information on current and forecast fire danger, fire behaviour and significant fire activity to fire managers and Incident Management Teams to support strategic and tactical decision-making

5. Participate in incident management roles on wildfires and prescribed fires as required

Problem Solving

Typical problems solved:

- Provide advice and expertise to government staff, other government agencies, research institutions, the private sector and the public related to fire behaviour

Types of guidance available for problem solving:

- Standard Operating Procedures, Business Rules, and guidelines

- Applications

- Products

- Forms and templates

Direct or indirect impacts of decisions:

Decisions and recommendations are complex, time-sensitive and often based on incomplete information where the impact of poor decisions include threats to firefighter and public safety, resource losses and/or environmental damage

- Stakeholders impacted include oil and gas industry, timber industry, agricultural and ranching community, recreational users, Indigenous groups, special interest groups, other government agencies, local governments and the public

Key Relationships

Major stakeholders and purpose of interactions:

INTERNAL:

- Regular involvement with most levels of divisional staff from field staff to the Executive Director

EXTERNAL:

- Other Ministries (e.g. Agriculture & Irrigation, Environment & Protected Areas)

- Other Jurisdictions (e.g. Parks Canada, BC Ministry of Forests, US Forest Service)

- Research organizations (e.g. Canadian Forest Service, FP Innovations, Canada Wildfire)

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Bachelor's Degree (4 year)	Science		

If other, specify:

4 years related experience

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

EXPERIENCE:

- Certified Fire Behaviour Analyst on Type 1 Incident Management Team
- Spatial fire growth modeling including competent in use of Prometheus

TECHNICAL COMPETENCIES:

- In-depth knowledge of Fire Weather Index (FWI) and Fire Behaviour Prediction (FBP) sub-systems of the Canadian Forest Fire Danger Rating System (CFFDRS)
- Working knowledge of AWARE (Alberta Wildfire Anticipation Readiness Engine), PPS (Pre-Suppression Preparedness System) model, and FIRES (Fire Information Resource System)
- Strong verbal and written skills to communication technical and scientific information
- Strong organizational skills to maintain efficiency in fast-paced work environment
- Ability to deal with rapidly changing workload priorities
- Ability to lead and work effectively within interdisciplinary groups

TRAINING:

- Wildland Fire Behaviour Specialist
- I-300 Intermediate Incident Command System

CERTIFICATION:

- Certified Fire Behaviour Analyst (FBAN)
- Class 5 Driver's License
- Defensive Driving
- WHMIS and TDG (Air and Ground)
- Standard First Aid

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Systems Thinking	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Considers inter-relationships and emerging trends to attain goals:</p> <ul style="list-style-type: none"> • Seeks insight on implications of different options • Analyzes long-term outcomes, focus on goals and values • Identifies unintended consequences 	<ul style="list-style-type: none"> • Provide specialized products and services to branch level decision-makers that incorporate sound fire behaviour principles to support strategic and operational decision-making

Creative Problem Solving	○ ○ ● ○ ○	Engages the community and resources at hand to address issues: <ul style="list-style-type: none"> • 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 	·Audit, analyze and report on sustainability, efficiency and effectiveness of decision support systems and tools
Drive for Results	○ ● ○ ○ ○	Works to exceed goals and partner with others to achieve objectives: <ul style="list-style-type: none"> • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations 	·Deliver training and mentoring in use of decision support systems and tools
Develop Networks	○ ○ ● ○ ○	Leverages relationships to build input and perspective: <ul style="list-style-type: none"> • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships 	·Create FBP fuel type layer from multiple data sources for use in different contexts ·Liaise with research community

Benchmarks

List 1-2 potential comparable Government of Alberta: [Benchmark](#)