

Meteorologist – Subsidiary 5

APS Benchmark Listings

Sub.	Bench- mark No.	Department	Working Title Job Title	Know-How				Creativity/ Problem Solving		Responsibility		Total Points
				Prof./ Cont.	Comp. Div.	H.R. Skills	Points	%	Points	Profile	Points	
Meteorologist 2 (Point Range 371 - 438)												
005	058MT01	Agriculture & Forestry	Prov. Wildfire Weather Section Head	E+	I	2	230	38	87	R1	100	417
Meteorologist 1 (Point Range 314 - 370)												
005	057MT01	Agriculture & Forestry	Prov. Weather Meteorologist	E+	I	1	200	33	66	R1	76	342

Last Review / Update: 2016-03-11

Subsidiary 5 Benchmark Evaluation - 058MT01

Identification Section

Working Title:	Provincial Wildfire Weather Section Head
Department:	Agriculture and Forestry
Division, Branch/Unit:	Forest Protection Division, Wildfire and Aviation
Reports To:	Wildfire and Aircraft Operations Manager
Levels to D.M.:	4
Job Description:	058MT01
Minimum Recruitment Standard:	See the Minimum Recruitment Standards for Meteorologist
Job Code:	058MT - Meteorologist 2

Comments on Role

The Provincial Wildfire Weather Section Head organizes, directs, supervises and participates in a fire weather analysis and forecasting program designed to provide quantitative and qualitative guidance to fire control personnel at the Provincial Forest Fire Centre and in the field for pre-suppression and fire suppression strategy and activities. This involves conducting a diagnosis and prognosis of atmospheric conditions by analyzing surface and upper air charts and interpreting and evaluating atmospheric computer models as well as radar, satellite imagery and lightning detection data. Provincial fire weather forecasts are produced on a fire control zone basis including preparation and delivery of site specific weather forecasts and fire behaviour interpretation as required. There is also analysis of long term climatic and weather trends. The position also oversees a fire weather education program which includes development of fire weather/behaviour technical courses to be delivered at provincial and national levels. This includes national and international presentations and working with other wildfire agencies.

Evaluation

Knowledge	Creativity / Problem Solving	Responsibility	Total Job Points
E+I2 230	38% 87	R1 100	417

Comments on Evaluation

- **Knowledge:**

The Provincial Wildfire Weather Section Head must have knowledge of complex atmospheric and physical science processes to interpret and apply complex meteorological data. A knowledge of complex equipment software such as lightening detection network components, remote automatic weather station network that includes site installation and maintenance is necessary. A degree related to meteorology, courses in forestry or fire behaviour and extensive related experience is required.

The Provincial Wildfire Weather Section Head leads a small team of professionals and acts as a liaison with external stakeholders and active partners in data collection networks so requires strong leadership and communication skills. The position will also lead studies related to weather effects of fire behaviour.

The Provincial Wildfire Weather Section Head has to have the knowledge and Human Relation skills to ensure that the critical component of knowledge transfer is accomplished. The weather aspect is critical in all pre-suppression and suppression activities with all staff. The Fire Weather Officer leads and ensures implementation of knowledge transfer. The role has a strong training/mentoring component, along with strong leadership requirements.

- **Creativity/Problem Solving:**

The role requires the interpretation of complex meteorological data to meet provincial fire management requirements for both operational planning and specific forecasts for wildfires and prescribed burns. Information on fire weather/behaviour must be provided to field level managers, incident command teams and executive level managers on a timely basis to influence planning and tactical decisions. There is considerable latitude to work within a broadly defined environment with clearly defined objectives.

- **Responsibility:**

The Provincial Wildfire Weather Section Head has a program delivery role in the analysis of meteorological data to meet the requirements of the provincial fire management program.

Last Reviewed:

Last Review / Update: 2016-03-11

Subsidiary 5 Benchmark Job Description - 058MT01

Identification Section

Working Title:	Provincial Wildfire Weather Section Head
Department:	Agriculture and Forestry
Division, Branch/Unit:	Forest Protection Division, Wildlife and Aviation
Reports To:	Wildfire and Aircraft Operations Manager, Manager
Levels to D.M.:	4

Purpose

(Brief summary of the job, covering the main responsibilities, the framework within which the job has to operate and the main contribution to the organization.)

The Provincial Wildfire Weather Section Head is responsible for the acquisition, analysis, diagnosis and prognosis of meteorological data to meet the requirements of the provincial fire management program. Position supervises staff who are engaged in the preparation of provincial fire weather forecasts and spot forecasts for purposes such as wildfire and prescribed burn operations. Providing for the provision of fire weather and fire behaviour briefings to fire management and other personnel and generating fire weather and fire behaviour parameters for fire suppression and pre-suppression operations are responsibilities of this position. Position conducts fire weather and fire behaviour research and installs, operates and maintains a remote automatic weather station network and lightening strike detection system.

Responsibilities and Activities

(Purpose of the job can be broken down in different responsibilities and end results. Each end result shows what the job is accountable for, within what framework, and what the added value is.)

1. Organize and conduct the fire weather analysis and forecasting program to provide quantitative and qualitative guidance o fire control personnel.

- Ensure operational output conforms to the needs and objectives of the division.
- Diagnose and provide prognosis of atmospheric conditions by analyzing surface and upper air charts.
- Interpret and evaluate computer models as well as radar, satellite imagery and lightening detection data.
- Generate provincial fire weather forecasts on a fire control zone basis including the preparation and delivery of site specific weather forecasts and provide fire behaviour interpretation.
- Provide aviation forecasts for aircraft operations when required.
- Brief fire management, media and other personnel.
- Provide direct input of present and forecasted weather parameters.
- Manage and ensure quality of fire weather index calculations.

2. Oversee and administer fire weather analysis and forecasting unit.

- Supervise professional and technical staff, and formally evaluate performance.
- Recruit new staff and oversee employment contracts.
- Manage the financial requirements of the division's weather-related needs including preparing and administering an annual budget.
- Provide guidance to technical staff in the retrieval and preparation of weather data.
- Administer equipment maintenance and computer program development contracts.
- Evaluate, specify and purchase technological equipment supporting weather forecasting program and weather observation network.
- Act as a liaison with external stakeholders and active partners in data collection networks

such as the lightning detection network. These partners include major utility corporations, the national parks and the provincial flood forecasting unit.

3. Lead studies related to weather effects on fire behaviour.

- Suggest appropriate topics for investigation.
- Participate in research studies and arrange the publication of results.
- Participate in national and international symposia.

4. Oversee a fire weather education program.

- Direct and develop fire weather/behaviour-related technical courses to be delivered at provincial and national levels to fire management staff. Training also conducted at post secondary institutions including university level programs.
- Conduct presentations on fire weather/behaviour issues to public stakeholders such as municipal fire departments and community groups.

5. Assist with the installation, operation and servicing of automatic weather stations and lightning detection equipment.

Scope

(Illustrates what internal or external areas the job impacts, and the diversity, complexity, and creativity of the job.)

Position applies knowledge of complex atmospheric and physical science processes to manage the acquisition, analysis, diagnosis and prognosis of meteorological data to meet provincial fire management requirements. Oversees a unit that prepares provincial fire weather forecasts and spot forecasts for wildfires and prescribed burn operations. Fire weather forecasts generated by the unit influence planning and tactical decisions of provincial and national fire management personnel for protection of life, communities, watersheds and soils, natural resources and infrastructures. Position is a working supervisor performing roles similar to its subordinates.

Contacts

(Main contacts of this position and the purpose of those contacts.)

In addition to providing guidance and direction to a professional and technical staff, position also provides fire weather/behaviour guidance/input to field level fire managers, incident command teams and executive level managers.

Knowledge, Skills and Abilities

(Most important knowledge factors, skills and abilities including knowledge about practical procedures, specialized techniques, etc.; analytical and conceptual skills and abilities; and skills needed for direct interaction with others not only diplomas and degrees. Specific training if it is an occupational certification/registration required for the job.)

- Requires knowledge of complex atmospheric and physical science processes to effectively provide diagnosis and prognosis of complex meteorological data. Must have a fundamental understanding of computer programming and various software applications. Position requires the ability to lead a small team and effective public speaking skills.
- Position typically requires a degree related to meteorology, courses in forestry or fire behaviour and extensive related experience.

Organization

(Working titles of positions reporting directly to this position.)

Position has full supervisory responsibility for three meteorologists and two technologists.

Last Review / Update: 2016-03-11

Subsidiary 5 Benchmark Evaluation - 057MT01

Identification Section

Working Title:	Provincial Weather Meteorologist
Department:	Agriculture and Forestry
Division, Branch/Unit:	Forest Protection Division, Wildfire and Aviation
Reports To:	Provincial Wildfire Weather Section Head
Levels to D.M.:	4
Job Description:	057MT01
Minimum Recruitment Standard:	See the Minimum Recruitment Standards for Meteorologist
Job Code:	057MT - Meteorologist 1

Comments on Role

The Provincial Weather Meteorologist acquires, analyses, diagnoses and prognoses meteorological data in support fire management for the province. The results are fire weather forecasts, spot forecasts and fire weather advisories/warnings for wildfire and prescribed burn operations.

Evaluation

Knowledge	Creativity / Problem Solving	Responsibility	Total Job Points
E+I1 200	33% 66	R1 76	342

Comments on Evaluation

- **Knowledge:**

Due to the technical requirements of the role, a degree related to Meteorology is required along with considerable experience in its application to fire behaviour. In order to effectively diagnose and prognosticate complex meteorological data, an extensive knowledge of complex atmospheric and physical science processes is necessary.

The HR skills reflect the requirement for technical transfer of specific information to clients as requested. The position is involved in knowledge transfer, through training and mentoring. Training may occur through formal course instruction or less formal situations such as the question and answer period during involved weather briefing given to staff.

- **Creativity/Problem Solving:**

The position is required to analyze complex meteorological data and produce practical information to meet provincial fire management requirements. This position functions as part of a professional team of fire weather meteorologists reporting to a Fire Weather Supervisor on site. The work consists of primarily analysis with few recommendations.

- **Responsibility:**

There is a strong program delivery component to the role in terms of producing information that can be used for planning and tactical decisions of provincial and national fire management personnel.

Last Reviewed:

Last Review / Update: 2016-03-11

Subsidiary 5 Benchmark Job Description - 057MT01

Identification Section

Working Title:	Provincial Weather Meteorologist
Department:	Agriculture and Forestry
Division, Branch/Unit:	Forest Protection Division, Wildfire and Aviation
Reports To:	Provincial Wildfire Weather Section Head
Levels to D.M.:	4

Purpose

(Brief summary of the job, covering the main responsibilities, the framework within which the job has to operate and the main contribution to the organization.)

The Provincial Weather Meteorologist acquires, analyzes, diagnoses and prognoses meteorological data in support of provincial fire management. Position produces professional work of fire weather forecasts, spot forecasts, fire weather advisories/warnings for wildfires and prescribed burn operations at provincial and national levels in a timely manner. Provision of fire weather and fire behaviour briefings to fire management and internal/external personnel and generation of fire weather and fire behaviour parameters for fire suppression and pre-suppression are responsibilities of this position. Position conducts fire weather and fire behaviour research and installs, operates, maintains and quality controls a remote weather station network and lightening detection system. Position supervises operational technical staff and contract meteorologists as required. Participates in provincial and national fire weather/fire behaviour educational training at provincial, national and university levels through preparation and delivery of course.

Responsibilities and Activities

(Purpose of the job can be broken down in different responsibilities and end results. Each end result shows what the job is accountable for, within what framework, and what the added value is.)

- 1. Participate in a fire weather analysis and forecasting program to provide quantitative and qualitative guidance to fire control personnel at provincial and national levels.**
 - Diagnosis and prognosis of complex atmospheric conditions by analyzing four dimensional meteorological data under operational time constraints.
 - Interpret and evaluate atmospheric computer models, and remote sensing equipment (radar, satellite imagery and lightning detection data).
 - Produce daily fire weather forecasts on a fire control zone basis including preparation and delivery of site specific weather forecasts, fire behaviour interpretations and fire weather advisories/warnings under operational time constraints.
 - Interpret and brief fire weather forecasts for forest protection and incident command personnel at national and provincial levels.
 - Input present and forecast weather parameters for fire weather calculations and analysis.
 - Manage and ensure the quality of fire weather index calculations including spring moisture code values.
 - Organize and provide on site forecasting duties in support of incident command teams during major wildfire conditions.

- 2. Assist with the maintenance, operation and quality control of fire weather observations and remote automatic weather station networks.**
 - Operate complex equipment software including lightning detection network components and remote automatic weather station network.
 - Inspect stations for site suitability, instrument performance, and operational procedures.
 - Ensure quality of meteorological data.

- 3. Other related responsibilities.**
 - Supervise permanent and seasonal technical staff and contract meteorologists on an

operational basis.

- Participate in provincial, national and university fire weather and fire behaviour training through preparation and delivery of courses using latest meteorological forecasting science.
- Conduct fire weather and fire behaviour research and studies.
- Attend and participate in national and international symposia dealing with weather effects on fire behaviour.
- Develop and deploy computer systems to integrate new streams of meteorological data for forecasting and briefing utilization.

Scope

(Illustrates what internal or external areas the job impacts, and the diversity, complexity, and creativity of the job.)

Fire weather forecasts generated influence planning and tactical decisions of provincial and national fire management personnel for protection of life, communities, watersheds and soils, natural resources and infrastructure. Position applies knowledge of complex atmospheric and physical science processes for the acquisition, analysis, diagnosis and prognosis of meteorological data to meet provincial fire management requirements. Production of provincial fire weather forecasts, spot forecasts and fire weather advisories/warnings for wildfire and prescribed burn operations are responsibilities.

Contacts

(Main contacts of this position and the purpose of those contacts.)

Fire prevention positions also present lectures at provincial, national, and university institutions. Positions maintain contact with experts on atmospheric issues within the province, nationally and internationally to exchange information. Positions provide scientific advice and specialized information as department representative to industry and the public by making presentations, serving on work groups, attending international symposiums and responding to questions from the public, industry and other governments.

Knowledge, Skills and Abilities

(Most important knowledge factors, skills and abilities including knowledge about practical procedures, specialized techniques, etc.; analytical and conceptual skills and abilities; and skills needed for direct interaction with others not only diplomas and degrees. Specific training if it is an occupational certification/registration required for the job.)

- Requires extensive knowledge of complex atmospheric and physical science processes to effectively provide diagnosis and prognosticate of complex meteorological data under operational time constraints.
- Requires a degree related to meteorology and considerable experience in its application to fire behaviour.

Organization

(Working titles of positions reporting directly to this position.)

Position provides operational supervision as 'Duty Meteorologist' of permanent and seasonal technical staff and contract meteorologists.

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