

FIRE BEHAVIOUR ADVISORIES & WARNINGS

Applies to	Personnel employed by the Ministry of Forests and Range and involved in field work including projects, fire suppression operations and use of aircraft.
Purpose	<p>To provide a safe work environment and to meet WorkSafe BC's Occupational Health & Safety Regulations.</p> <p>Continuously monitoring, updating and distributing weather and fire behaviour forecasts and feedback from on-site personnel can help predict potential fire behaviour. Strategies and tactics must be adjusted to ensure crew safety.</p> <p>The BC Wildfire Management Branch will have Safe Work Standards that constitute safe methods, conditions and requirements for workers involved in fire line suppression operations.</p>
Critical Safety Statement	Wind and Fire Behaviour must be anticipated and forecast wind and fire behaviour must be communicated to workers who may be at risk due to wind or fire behaviour.
Exceptions	If conditions call for deviation from these standards, an amending written practice will be developed to address the specific situation and ensure the safety of personnel. The appropriate Fire Centre Manager or the Director must approve this practice.
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DEFINITION(s)**Weather Warning**

A weather warning is issued when forecast weather conditions could increase working condition hazards, for example;

- Burning off and backfiring operations
- Utilization of aircraft in suppression operations
- Transportation of workers in aircraft
- Fireline operations where wind throw of trees is possible
- Weather conditions that could cause fire "blow up conditions"

A weather warning can include;

- Severe turbulence, downbusts and strong winds
- Hail and severe lightning
- Very low Relative Humidity values
- Unstable air masses

Weather warnings may be issued in the absence of aggressive fire behaviour.

Fire Behaviour Advisory	A Fire Behaviour Advisory is issued when intensities in excess of Intensity Class IV for a particular fuel type are forecast. These fire behaviour characteristics in excess of 4000kW/m will likely challenge direct suppression efforts.
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Extreme Fire Behaviour Warning	<p>An Extreme Fire Behaviour Warning indicates that fire behaviour is expected to exceed Intensity Class IV for a particular fuel type. And conditions may escalate rapidly in association with one of the following: passage of a cold front; significant change in wind direction (> 90 degrees); severe localized thunderstorms and downdrafts; and development of low-level jets.</p> <p>An Extreme Fire Behaviour Warning is issued independently of any other advisory. These conditions pose the greatest threat to worker entrapment.</p>
PROCEDURES	
Responsible Parties	<p>It is the responsibility of operational and key administrative staff (such as dispatchers) to be aware of potential threats to personnel and air operations. It is the Regional Wildfire Coordination Officer's responsibility to ensure adequate Advisories and Warnings are issued. When personnel are dispatched to an area for which an Advisory or Warning has been issued, the dispatch information must include the Advisory or Warning. Incident Commanders or project leaders must confirm their understanding of the situation and provide the dispatch centre with feedback on actual conditions.</p>
Notification	<p>When a Weather Warning or an Extreme Fire Behaviour Warning is issued, ALL affected resources WITHIN and ADJOINING the AFFECTED AREA will be advised by the most expeditious means. Radio Operators and Dispatchers transmitting these Warnings must obtain acknowledgement from all intended recipients that the transmission was received and understood. An applicable Warning MAY NOT BE IGNORED.</p> <p>When a Fire Behaviour Advisory is issued supervisory personnel must ensure that ALL affected resources WITHIN and ADJOINING the defined area are advised. Resources to be deployed to an area under an Advisory must also be advised.</p> <p>Where a Fire Behaviour Specialist is deployed to an incident, only Fire Behaviour Advisories and Extreme Fire Behaviour Warnings issued by that Specialist are to be heeded by resources on that incident unless otherwise advised by the Specialist. Weather Warnings will continue to be issued by the Fire Weather Forecaster or by an incident Fire Behaviour Specialist in consultation with the forecaster.</p>
Key Components	<p>Every Advisory and Warning must include:</p> <ul style="list-style-type: none"> ▪ type of Advisory or Warning; ▪ date and time of issuance; ▪ applicable geographic area (simple geographic description of the specific area affected); ▪ expected arrival time and duration of disturbance; ▪ description of conditions expected; ▪ Who should receive it and how it is to be distributed (e.g., radio, telephone, or fax to all ZWCs, bases, active Fires, PATC, PWCO and neighboring Regional Wildfire Coordination Offices).

Weather Warning	<p>A Weather Warning is issued to alert personnel that forecast conditions may present hazards to air operations, fireline or project operations. A Weather Warning must include:</p> <ul style="list-style-type: none"> ▪ type and intensity of disturbance (e.g., outflow winds gusting to 50 km/h).
Fire Behaviour Advisory	<p>Issuing Offices must adopt a format that highlights the period during which forecast conditions are expected to exceed Intensity Class IV. A Fire Behaviour Advisory must include:</p> <ul style="list-style-type: none"> ▪ relevant fuel type(s).
Extreme Fire Behaviour Warning	<p>An Extreme Fire Behaviour Warning must include:</p> <ul style="list-style-type: none"> ▪ intensity of disturbance (e.g., generating 70 km/h winds); ▪ expected effect on fire behaviour (e.g., change in spread direction or fire intensity); ▪ relevant fuel type(s); ▪ if extreme fire behaviour is imminent, all personnel must be fully prepared to follow any specific instructions issued by the Incident Commander.
Issuance	Three levels of the organization can initiate an Advisory or Warning: Provincial Wildfire Coordination Centre (PWCO), Fire (IC) and Regional Wildfire Coordination Centres (RWCO).
Response	<p>Suppression strategies and tactics must be adjusted accordingly to ensure personnel safety is not jeopardized.</p> <p>Staff should report actual on-site weather conditions and fire behaviour characteristics to the Dispatch Centre to confirm or correct forecast information. Updates can then be passed on to others. The issuer should provide an explanatory note when forecast conditions do not occur. Advisories and Warnings must be retracted if forecast amendments mitigate the situation.</p>

If in doubt — back out!

FAQ's

- Q1. What do I do if the forecast advisory or warning does not occur on my fire?
- A1. Provide feedback to the issuing office and take the opportunity to find out why it didn't occur at your fire.

Approved

Approval Date: April 10, 2010



Brian Simpson
Director
BC Wildfire Management Branch

*This is a **Provincial Standard**. It is in the best interest of safety and safety alone.*

Updated: May 2010