





Ministry of
Forests, Lands, Natural
Resource Operations
and Rural Development

POLICY SUBJECT		
Selection of a Weather Station for Representative Weather Data		
EFFECTIVE DATE	RESPONSIBLE BRANCH	NUMBER
December 1, 2021	BC Wildfire Service	9.11
APPROVED		
November 30, 2021		Rob Schweitzer, Director, Fire Centre Operations
November 30, 2021		Cliff Chapman, Director, Provincial Operations

Scope

This policy pertains to the selection of a weather station from which to acquire representative weather data when carrying out high risk activities.

Purpose

Section 6(2) of the *Wildfire Regulation* requires that a person carrying out a high risk activity must determine the Fire Danger Class for the location of the activity from March 1 to October 31, unless the ground is covered by snow. The determination of Fire Danger Class relies on a determination of fire weather indices based on representative weather data, with reference to tables appended as Schedules 1 and 2 of the *Wildfire Regulation*. This policy provides guidance on the factors to consider in the selection of a weather station to acquire representative weather data.

This policy provides guidance only. The actual legislation and regulation should be referenced for the legal requirements on this topic. Legal advice may be required for specific questions about the legal requirements.

Definitions

In this policy, the following words have the following meanings, unless the context dictates otherwise:

- a) **“Act”** means the [Wildfire Act](#), S.B.C. 2004, c. 31 as it may be amended or replaced from time to time;
- b) **“Danger Region”** means one of three regions in British Columbia with similar fire danger characteristics as shown in Schedule 1 of the *Regulation*.
- c) **“Fire Danger Class”** means the Fire Danger Class as defined in section 1 of the *Regulation*;

- d) “**High Risk Activity**” means a high risk activity as defined in section 1 the *Regulation*;
- e) “**Regulation**” means the [Wildfire Regulation](#), B.C. Reg. 38/2005 as it may be amended or replaced from time to time;

Policy

The primary mandate of BC Wildfire Service is to provide leadership and expertise in wildfire response as well as wildfire planning and preparedness, prevention and mitigation, and recovery. A person carrying out a high risk activity may be at risk of causing a wildfire. The requirements set out in the *Act* and *Regulation* impose restrictions on those carrying out high risk activities when specified conditions are met.

Selection of a Weather Station

A person carrying out a high risk activity on or within 300 metres of forest land or grass land must determine the weather station that provides representative data for the area where they are working. Depending on the specific site conditions, different methods of determining the weather station that provides the most representative data may be used. A person carrying out a high risk activity who lacks the knowledge or experience to identify and assess the relevant factors should seek the advice of a professional. The rationale for selecting a particular weather station should be documented by the person carrying out the high risk activity.

The weather station from which representative weather data is acquired may be the person’s own weather station that they have deployed, a weather station established and monitored by government, or a weather station established by a third party. A weather station properly deployed at the site of the activity provides the most representative weather data. Guidelines for establishing a weather station and performing the start up calculations can be found in the Weather Guide for the Canadian Forest Fire Danger Rating System. A person carrying out a high risk activity may reference one of the BC Wildfire Service network of weather stations to acquire representative weather data however, this network does not cover all potential sites in the province. The BC Wildfire Service publishes the Fire Danger Class on its website for the network of weather stations that it manages, based on the calculation of the Buildup Index and the Fire Weather Index.

The following is a list of factors to consider when selecting a weather station to acquire representative weather data:

- Horizontal proximity (the distance from the site of the activity to the weather station);
- Vertical proximity (the elevation of the site of the activity to the weather station);
- Aspect;
- Climatic factors (on a micro, meso, and synoptic scale) including:
 - Being on the same windward/leeward side of major mountain ranges;
 - Proximity and orientation to large bodies of water;

- Valley orientation;
- Local wind exposure;
- Connectivity to large valleys and associated up and down valley winds;
 - Climatic factors may change depending on weather patterns or general flow direction.
- Vegetation and ground cover including being within the same biogeoclimatic zone.
- Within the same Danger Region.

Note that these factors are not listed in order of importance as the importance of each factor will depend on the specific circumstances.

A weather station chosen to provide the most representative weather data should remain the source of weather data for the duration of the high risk activity.

References

- [Wildfire Act](#)
- [Wildfire Regulation](#)
- [Weather Guide for the Canadian Forest Fire Danger Rating System](#)
- [Information on Obtaining BC Wildfire Service Weather Data](#)