

General information

The Wildfire Threat Analysis component of the 2019 Provincial Strategic Threat Analysis (PSTA) and its accompanying maps use the latest available science and historical data to provide an overall snapshot of potential wildfire risks throughout British Columbia — at a provincial scale.

The Provincial Strategic Threat Analysis offers valuable information and guidance to landowners, local governments, First Nations, industry personnel and other stakeholders to help them plan fire risk mitigation activities at the local level.

The 2019 PSTA will replace the 2017 version of the PSTA. It incorporates many improvements to the accuracy of the data to ensure that it shows the actual wildfire threat¹ on the landscape.

Improvements made to the 2019 Provincial Strategic Threat Analysis

The following key improvements have been made to the 2019 PSTA:

Weather

- The length of the weather record that used in the analysis was shortened from the complete available weather record (1950-2016) that was used in the 2017 analysis to just 25 years (1993-2018) in the 2019 analysis. This was done to better reflect climate changes experienced over the past decade.
- The number of weather stations used in the analysis was filtered to only include stations that meet the criteria of the Canadian Forest Fire Weather Index (FWI) system. This was done to ensure that the PSTA includes the most reliable sources of weather information.

Fuel Typing

- A new process was developed to map the impact of beetle attacks (e.g. mountain pine beetles) on landscape fuels in British Columbia. The ratio of dead stems contributed to a higher threat rating in areas with significant insect activity. The assignment of fuel types was based on fireline observations of wildfire impacts in affected stands.
- In areas where the Canadian Forest Fire Behaviour Prediction (FBP) fuel typing system was used (mainly in coastal B.C. and in BC Parks), the C-1 (Spruce Lichen) and C-2 (Boreal Spruce) classifications were converted to C-5 (Mature Red/White Pine) and C-3 (Mature Lodgepole Pine) respectively. This was done to reflect the actual fire behaviour observed in these areas.

Wildfire burn classification

- The Vegetation Resource Inventory (VRI) used Burned Area Reflective Classification (BARC) mapping (completed post-wildfire) to classify forest attributes, based on burn severity. This included ground surveys to calibrate this process.
- Although the 2018 BARC mapping has been completed, it was not available for the 2019 PSTA. Several areas impacted by the larger 2018 wildfires² had their PSTA threat values adjusted, using

¹ Wildfire threat is defined the likelihood of the occurrence of an event. In terms of wildfire, it includes the threat of forest fuels to ignite and contribute to the spread and intensity of a wildfire.

² The 2018 wildfires with adjusted threat levels are: Shovel Lake (R11498), Nadina Lake (R21721), Verdun (R11796) and Alkali Lake (R91947).

a GIS analysis, to reflect the threat seen on site. Staff expertise and photos (aerial and ground) were used to calibrate this process.

The BC Wildfire Service continues to gather data and review these processes to ensure that the PSTA threat levels closely match the actual wildfire threats seen on the landscape.