Coastal Fire Centre

ISSUE 4 | 19.06.2020

IN THIS ISSUE

CURRENT STATISTICS

Fires to-date: 31

Hectares burned: 236

Human-caused: 31

Lightning-caused: 0

BANS AND PROHIBITIONS

Campfire: No Ban

Category 2: No Ban

Category 3: No Ban

Forest Use Restrictions: No Ban

Prohibitions section of bcwildfire.ca for full details.

Lifting of Prohibitions—Category 2, Category 3 and Resource Management

Effective at noon, Friday, June 17, 2020, all open fires will again be permitted throughout the Coastal Fire Centre's jurisdiction.

This rescind means that campfires, Category 2 and 3 open fires and Resource Management Burning are permitted everywhere in the Coastal Fire Centre's jurisdictional area. Local governments may still have their own burning restrictions in place, so people should always check with local authorities before lighting any fire of any size.

The following fire-related activities are now allowed:

- the use of burning barrels and burning cages
- the use of air curtain burners
- the use of binary exploding targets
- the use of sky lanterns
- the use of fireworks, including firecrackers

With the cooler and wet spring that most of British Columbia has experienced there is a reduction in the risk of human caused fire from open burning in many fire centres.

It should be noted that the Ministry of Environment and Climate Change Strategy has not extended their high smoke sensitivity zone burning restrictions past June 15th, 2020, which were primarily in place for smoke control reasons. In many parts of the province, the case counts and risk of infection with COVID-19 continue to decline. This has triggered a review of the current BCWS enacted prohibitions.

⇒ Check with local government authorities to see if they have any other restrictions in effect before lighting any fire. The Wildfire Regulation requirements do not apply within municipal boundaries or regional districts that have open fire bylaws.

⇒ Anyone who lights, fuels or makes use of a Category 2 or 3 open fire must comply with the Environmental Management Act and the Open Burning Smoke Control Regulation. The regulation requires individuals to check local venting conditions prior to ignition and ensure that no air quality burning bans are in place. For more information, see www.bcairquality.ca/regulatory/index.html or call your local Ministry of Environment office.

Wildfire Preparedness Planning – From the Bottom Up

Many believe that the BC Wildfire Service has a top down structure and all activity is directed from a central body. The reality is that when it comes to preparedness planning, the local zones play a major role in determining the number of resources needed during a preparedness period, where these resources are based.

At the Zone Level – Prep Levels 1 to 6

The Zone Wildfire Coordination Officer (ZWCO) is responsible for helping determine the Preparedness Level of their Zone.

The RWCC Forecaster inputs all the forecasted weather data into the HFI workbook, which determines the prep level for each zone and recommended resources required based off information from the Preparedness Resource Guide. This information is reviewed by the RWCO or Operations Officer then sent out to the zones for further review. The ZWCO will then indicate if they require more resources and provide rational to why the zone needs deviate from the Prep Resource Guide. This is done twice weekly and is generated using a formula that consists of the average Head Fire Intensity (HFI), forecasted daily fire starts and forecasted weather.

The ZWCO reviews the HFI Calculator, individual representative weather station Intensity Group, and the Mean Intensity Group for the planning area, and then forecasts Daily Fire Starts. This is done using historical fire start data (minimum 10-year sample size), projected fire starts due to forecasted lightning (as advised by Regional Wildfire Coordination Centre (RWCC) Forecaster), and local events that may influence preparedness needs such as a public gathering that could increase the likelihood of human caused starts.

Head Fire Intensity - is the predicted intensity, or energy output, of the fire at the front or head of the fire. It has become one of the standard gauges by which fire managers estimate the difficulty of controlling a fire and select appropriate suppression methods. It is measured in kilowatts per metre of fire front and is based on the Rate of Spread and the Total Fuel Consumption.

The ZWCO then takes part in a Preparedness Meeting with the RWCC, where all Zones present their findings and discuss the preparedness level. The Regional Wildfire Coordination Centre Officer (RWCO) may question their findings when there appears to be an anomaly but generally accepts the determinations for preparedness by the Zones.

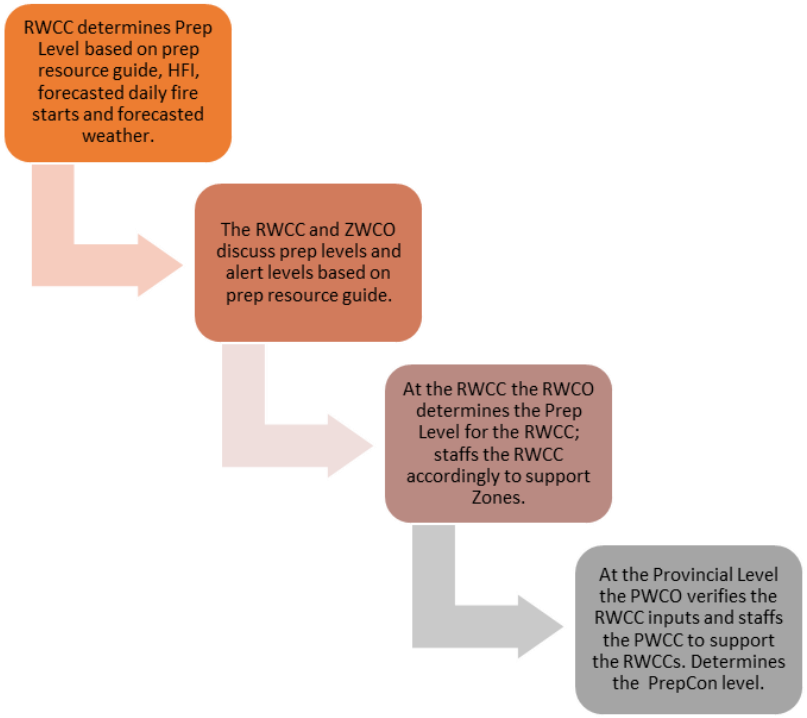
At a Prep Level of 3 or higher the Zone may begin discussions with the RWCC around importing crews from other Zones (importing crews may occur at a lower Prep Level to cover off staff who may be taking time off or working on other projects as well).

At the RWCC Level – Prep Levels 1-6

The RWCO meets with the Zones where the ZWCOs present their findings including staffing and other anticipated needs (this may include water tenders, increased support from office staff, etc.). The RWCO may suggest additional resources, may question the ZWCOs as to the level of standby, or determine if trainees have been considered.

Wildfire Preparedness Planning – From the Bottom Up cont'd

Once the discussions have been held the RWCO will determine Prep Level for the RWCC. This will guide decisions around the number of RWCC staff needed to support the anticipated level of activity. For example, will the Zones need more Logistical, Plans or Information support, how many Dispatchers need to be scheduled or on standby, or should contractors such as Danger Tree Fallers be placed on standby?



At a Prep Level of 3 or higher the RWCO may begin discussions with the PWCO around importing staff from other RWCCs to support the Coastal RWCC. The RWCO is responsible for meeting preparedness objectives for their Zones as well as supporting the Provincial Wildfire Coordination Centre (PWCC) in provincial resource mobilization.

At the RWCC there is also a Preparedness Condition. This indicates the level of preparedness in relation to the forecasted conditions.

Provincial Preparedness Condition (PrepCon) – 1 to 5

The Provincial PrepCon represents anticipated provincial wildfire response activity and resource capacity across the province. Each RWCC reports their Preparedness Level and any anticipated needs to the Provincial Wildfire Coordination Centre twice weekly. Other Provincial Sections which take part in this call include: Provincial Warehouse, Air and the Provincial Airtanker Centre (PATC). Upon completion of the Preparedness Call, any resource requirements are filled with available resources.

The PWCO determines staffing levels at the Provincial Wildfire Coordination Centre (PWCC) and the PrepCon. There are five Preparedness Conditions ranging from PrepCon 1 (Exporting) to PrepCon 5 (Importing).

Podcast called 'World on Fire' from CBC:

https://www.cbc.ca/radio/podcasts/world-on-fire/index.html

Wildfire NEWS

How Fires Burn and How Crews Respond

Three elements must be present to ignite and maintain a fire: fuel, oxygen, and heat.

1. Fuel is any organic matter in or on the ground, living or dead, that can ignite and burn. The quantity and type of fuel in the path of a fire influences how quickly a fire might spread. Forest fuels can range from dry grasses to downed trees.
2. Oxygen exists in the air we breathe and makes up 21% of the Earth's atmosphere. By depriving a fire of oxygen, it can be extinguished. Similarly, if oxygen is added to an existing fire by way of heightened wind activity, fire intensity can increase.
3. In a forest environment, heat is introduced to the equation either naturally by way of extremely hot conditions and/or lightning strikes, or via human activity.

Fire suppression is performed according to this fire triangle principle, which is that if these elements made up the sides of a triangle and you removed one side, then the triangle would collapse. Therefore, the implementation of firefighting tactics aims to remove or rather limit one of these elements so a wildfire will eventually exhaust itself.

As noted, a fire can effectively be suppressed by eliminating one or more of the three factors required to start and maintain a fire: fuel, heat and oxygen. Operational tactics are carried out according to this basic principle, thus effectively stopping a wildfire in its tracks.

The quantity and type of fuel in the path of a fire influences how quickly a fire might spread. Fuels range from cured grass, fallen leaves and small twigs to duff, roots, shrubs, stumps, tree seedlings and dead-downed rounds, just to name a few. A key tactic that is used in wildfire suppression is the removal of fuel sources. Firefighters do this by creating a fuel free which is a buffer zone between the fire and adjacent unburned fuels. The fire's size and topography, as well as the observed and predicted fire behaviour, determine the extent of fuel free necessary to be successful in restricting the spread of the fire. You may have also heard a fuel free be referred to as:

- a fireguard (any human-made control line),
- a hand guard (small trench dug by firefighters that is roughly half a metre in width and dug down to mineral soil),
- a machine guard (created using heavy equipment, such as cats, dozers or excavators, and is typically 15-30 feet in width), or
- a control line (a combination of human-made fireguard and/or natural fire barriers, such as pre-existing roads or bodies of water).

How Fires Burn and How Crews Respond Cont'd.

Once a control line is established, a burn operation may be conducted to remove additional unburned fuel from a fire's path. Ultimately, the goal of conducting a burn operation is to remove all available fuel between the fire perimeter and the pre-determined control line. Thus, removing fuel from a fire's path to ensure that the fire has less chance of reaching or breaching the pre-determined control lines. Before commencing a burn operation, hazards are identified, assessed and mitigated. The greatest priority is always the safety of personnel, the public, equipment, and all adjacent values.

When it comes to cooling and removing heat from a fire, water is an invaluable tool. Ground crews draw water from natural or artificial water sources to suppress wildfires, using a network of water pumps and hoses. Generally, a hoselay starts at a body of water and works its way along a pre-determined control line to deliver water to a fires edge. In the absence of a natural water source, trucks, known as water tenders, transport water to a fires edge where it is stored in a water bladder. A water bladder can hold 1,500-5,000 gallons of water and can be set up on any reasonably flat surface.

When road access is limited, helicopters are used to transport water. Helicopters transport water using bambi-buckets (collapsible buckets suspended below the helicopter) to fill water bladders that have been pre-established by ground crews. As can be seen in this video from August 2019, a bambi-bucket fills a water bladder at the base of a wildfire.

A wildfire can also effectively be suppressed by removing or limiting the oxygen supply to the fire. On the ground, firefighters may engage directly with a fire and use a combination of hand tools and water to snuff it out. If fire behaviour is aggressive, airtankers will support ground crews by dropping fire retardant, foam or water on or near a fire to slow down the spread of the fire. Water-soluble fire retardant is commonly used in fire suppression because of its long-lasting affects. These types of retardants contain ammonium salts, which affects the burning process of forest fuels. The release of these gaseous fuels within logs and debris cause a reaction that cools and suffocates the fire.

How Houses Burn: FireSmart Home Ignition Points

Wildfires can quickly spread from the forest to a community, becoming what is known as an "interface fire". In the interface, where the wilderness and urban development meet, it is crucial that home owners take the time to FireSmart their properties.

If a wildfire presents an imminent threat to structures, such as homes, BC Wildfire Service's Structure Protection Specialists will assess the structures to determine if they are "defendable" or not. Structural Protection Units (SPUs), consisting of sprinkler systems specifically designed to defend structures, may then be deployed to the incident. These sprinklers, essentially, create a "humidity bubble" (streams of water) around the structure. The water streams moisten roofs and other surfaces on and around a structure. This application of water is also effective in extinguishing airborne sparks and embers from a wildfire.

It's more likely that an SPU will be set up on a structure if the structure is on a property that has been "FireSmarted". If a structure and the surrounding property looks FireSmart, it will take less time to set up the necessary sprinklers needed to cover the structure. With less time needed to deploy structural protection units on such properties, more homes can be protected in the limited time available.

Structural Protection Unit Trailer and sprinkler system deployed on a structure.

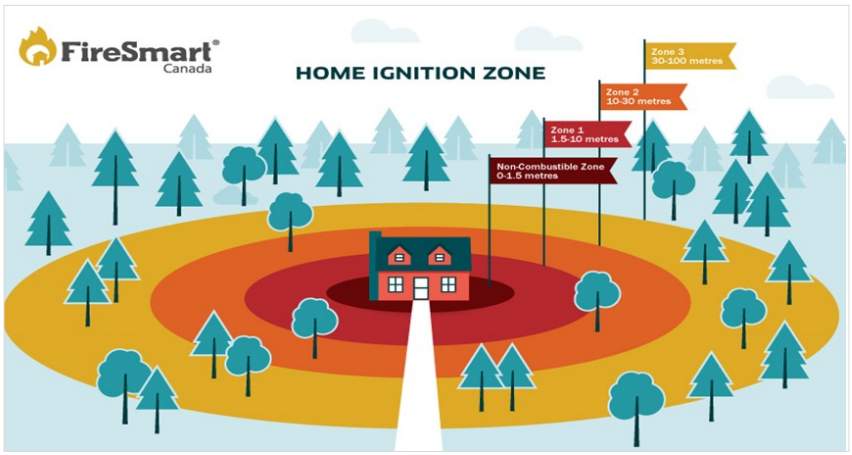
A major reason why a particular structure may not receive sprinkler protection is because FireSmart principles have not been used on the property, which increases the time to set up enough sprinklers to sufficiently protect it. These types of decisions are difficult to make and are often made quickly when a wildfire is approaching. If homeowners have prepared their property by using FireSmart principles, they have a much higher chance of receiving structural protection than a property that isn't FireSmart.

How Houses Burn: FireSmart Home Ignition Points Cont'd.

Simple measures, such as focusing on the three priority zones of FireSmart, can make a significant difference to the survivability of a home and property. This includes:

Non-combustible Zone (0 to 1.5 metres from a structure or home)

- Removing combustible material down to the mineral soil in this zone.



Priority Zone 1 (1.5 metres to 10 metres from a structure or home)

- Avoid planting flammable plants in this zone, such a cedar, juniper, pine, tall grasses and spruce trees.
- Keeping lawns well-watered and mowed and clearing needles from gutters.
- Moving firewood piles, construction materials, storage sheds, and other combustible structures into Priority Zone 2.

Priority Zone 2 (10-30 metres from a structure of home)

- Measuring the distance between the outermost branches of trees to ensure a minimum of 3 metres between trees in this zone. Small coniferous trees that act as a "ladder" to allow fire to move into the treetops should also be removed from this zone.
- A surface fire can climb up into trees quickly. Remove branches within 2 metres from the ground in Priority Zone 2 will help stop surface fires from moving into treetops.
- Clean up fallen branches, dry grasses and needles from the ground to eliminate the potential surface fuels in this zone as well.

Wildfire NEWS

Fire Weather Forecast

For June 19: By Saturday, more widespread cloud and showers is expected throughout the Fire Centre as an incoming upper trough finally manages to impact the coast behind the departed ridge. Temperatures don't shift much for the next few days although will fall somewhat noticeably for the south, with humidity trending upward into tomorrow.

A risk of lightning exists south of the border over Washington Friday, and may drift northward. For Saturday, the risk lies near central regions of the Fire Centre, along with near eastern borders. Anything that does develop is likely to do so later in the day, and could persist overnight.

OUTLOOK (Sunday - Tuesday): Sunday sees an improving trend as the flow shifts drier, and there is the potential for some isolated afternoon thundershower activity. Stronger inflows are also expected to develop as the pressure gradient packs along the coast. Monday sees more sunshine and climbing temperatures as the drier flow continues however it looks like another incoming system will start to impact the north, with Tuesday being a repeat of Saturday as the upper trough moves in and allows some shower activity to spread southward.

Prohibitions & Fire Starts

Fire Starts in the Coastal Fire Centre have been low in the past two weeks. Cool and damp conditions are helping to keep the forest well hydrated.

The Coastal Fire Centre lifted it's Open Fire Prohibitions on Friday, in response to the low fire danger. However, we ask the public's help to ensure they are very careful with any open burning they choose to do. While our crews have adapted their fire response protocols to help keep themselves safe during the COVID epidemic, every call out comes with a risk to our staff. Please do your part to help keep our crews COVID free.

Coastal News

Crews have been doing project work. These photos were taken near Little Qualicum Falls where crews are abating windfall debris.

Contact Information

Report a Wildfire: *5555 on a cell or 1 800 663-5555

Wildfire Information Line: 1 888 3FOREST

Burn Registration Number: 1 888 797-1717

Information Officer Phone Number: 250-951-4209

Information Officer Email: BCWS.CoFCInformation@gov.bc.ca