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The WMB Strategic Plan

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

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## Forecasts and Preparedness

A *forecast* is a prediction of future conditions and occurrences, based on systems that are currently in place (i.e. weather).

A *projection* combines a forecast with past data to determine a probable outcome. For example, if lightning is forecast for a specific zone (based on current weather conditions) and historically it strikes in a specific pattern, then a projection would indicate geographic areas of concern.

*Preparedness* is a determination of when, where and what level of resource deployments are required to meet any potential wildfire threats. So if lightning is forecast and historically we know its approximate path through certain zones, operations staff would ask for detailed information from our weather technician. Using historical data, experience and detailed information, crews and other resources are then positioned to maximize their effectiveness.

The Wildfire Management Branch relies heavily on scientific data, including fuel types, topography, the

Fire Weather Index System and the Fire Behaviour Prediction System, as well as local knowledge.

In the Coastal Fire Centre, the repositioning of crews, resources and aircraft is done in response to conditions where fire weather is projected to be “of concern.” At this point, a fire behaviour specialist may be called in to write an assessment that may include a *Fire Behaviour Advisory*, a *Wind Advisory* or (in more serious circumstances) an *Extreme Fire Behaviour Warning*.

The Wildfire Management Branch strives to use the best forecasting tools available to make the best decision possible. With the benefit of science, experience and local knowledge, officers can make solid choices when delegating crews and resources for the quickest and most appropriate response to any wildfire emergency.

## A Coastal Season

While the rest of the province may have large grass or small-fuel fires early in the spring, the Coastal Fire Centre tends to have larger fires later in the season. The largest contributing factor to this pattern is the marine climate and the type of vegetation it produces.

The Coastal Fire Centre has six microclimates with vastly different fuel types and fire danger ratings during the summer. Some areas have the same kind of fuels as the interior of B.C., with open grasslands, smaller ground fuels and well-spaced trees. Other areas have heavy brush and are rich in very large and valuable trees that grow in thick profusion.

Small fuels, especially those with no root systems (like cured grasses and forest litter) dry rapidly, but they also have the ability to absorb water from fog and mist. Larger fuels take longer to dry out, but they also require longer periods of rain to rehydrate.

Fuel types with no root stem (like large fallen logs) dry faster than those that can replenish their moisture from the ground.

So while the West Coast does have numerous smaller fires in the spring, many of its larger fires occur later in the season and can also be very difficult to put out. Fire can burn deep underground into large deadfalls and root systems, and require extensive work to dig up, break apart, wet down and re-bury those materials to smother the flames. Last year, these activities kept our crews busy into October.

## Lightning

A thunderstorm occurs when a large air mass rises quickly into the atmosphere, forming cumulonimbus clouds. The science isn't yet completely understood, but the basic idea of how lightning forms is that static electricity builds up within a cloud due to colliding “hydrometeors” (e.g. rain, hail, snow pellets). Air currents inside the cloud cause water droplets and ice crystals to collide continuously, creating friction that results in static electricity within the cloud.

Over time, positive and negative charges build up in the top and bottom sections of the cloud. When these opposing charges become intense enough, a gigantic spark jumps the gap between the cloud and the earth in the form of lightning. Thunder is a byproduct of lightning.

Given a sufficient source of moisture, atmospheric instability can lead to the development of thundershowers. Generally speaking, *thundershowers* refer to a situation where lightning will come with significant rain, while *thunderstorms* refer to a situation where much (or all) of the rain evaporates before reaching the ground.

Often, strong downdrafts associated with thundershowers can be more hazardous than the lightning itself.

To Date  
in Coastal

Fires to Date

Person  
Caused 24

Lighting  
Caused 6

Total  
Number  
of Fires 30

Hectares  
burnt 13

Number of  
Incidents  
Responded  
to 140

Fire Danger Rating  
July 5, 2013  
Predominantly  
Moderate With some  
Spots of High



Current Prohibitions  
(within WMB  
jurisdictional area)

Category 2 Open Fire  
Prohibition

## Optimum Organizations, Structure and Resources

Did you know that the Wildfire Management Branch does Preparedness Planning to meet its overall business requirements? It is a similar approach to the familiar fire preparedness planning that Wildfire Management Branch does regularly.

Much like the operational side of the Wildfire Management Branch, the business side strives to optimize its service delivery by maximizing resources and providing support tools wherever needed.

Each department creates a plan to establish current and future needs and develops a program that supplies resources and technology in a cost-effective and efficient manner. This type of preparedness is less immediate, but just as essential for fighting fires. Business assessments and analysis methods that work in conjunction with work plans and cost estimates provide details that help in fighting subsequent fires.

Simply put, knowing and evaluating what is necessary to respond to a business need (whether it is

staff training, technology and/or equipment) helps us identify what will be necessary to respond to the next business need more effectively and more efficiently.

Knowing what resources are available and what may be needed immediately helps formulate the *business forecast*. Knowing what may be needed based on the current business forecast (while taking into account historical data) provides a *business projection*.

By implementing this new business plan format and our quality management program, the Wildfire Management Branch is striving toward a new level of *business preparedness* that will align more efficiently with wildfire management and response services.

[http://BCWildfire.ca/Strategic\\_Planning](http://BCWildfire.ca/Strategic_Planning)

## Weather

**SYNOPSIS:** An upper trough embedded in a fairly dry westerly flow passes over the region today, with most areas seeing mainly sunny skies and above average temperatures. Humidity's aren't expected to lower significantly below 30% in most areas today while daytime heating supports gusty inflow or upslope winds in many areas this afternoon. Isolated showers (slight chance of isolated thundershowers) are possible over the Pemberton and Fraser zones today, then over the Fraser zone tonight and Saturday. Weak outflow winds are expected to develop overnight tonight, helping to support a warming and drying trend across the region on Saturday under mainly sunny skies.

**OUTLOOK:** A weak Pacific ridge approaching from the west supports continued warm and dry conditions across the majority of the region Sunday and Monday (inland sections of the Island and Mainland could see temperatures near or slightly above 30° with the driest humidity's throughout coastal inlets and valleys lowering to between 15% and 18%). The leading edge of a dissipating Pacific Frontal system may approach from the northwest on Tuesday bringing increasing winds and cloud to areas north of roughly Port Hardy while areas to the south likely remain warm, sunny, and dry.

## At Coastal

The tragic loss of life of firefighters in Arizona hits close to home for the Coastal Fire Centre, and it was a big loss for our international firefighting community. We extend our sympathy to all those who are affected by this event. Our thoughts are with their family and friends, as well as the entire Arizona wildland firefighting community.

The Wildfire Management Branch always promotes safe work practices and while we ensure that our staff have comprehensive training, wildfires do put human lives at risk. We need people to be very careful with fire, given that far too many fires are caused by people.

As the forecast becomes hotter and drier within the coastal region, we remind the public to be cautious with any flame or heat source that could create a wildfire.

In our weather briefing this morning, our forecaster pointed out that we have not received any precipitation in the Coastal Fire Centre since July 1 and we are not expecting to see any for the next six to seven days. Our weather technician also highlighted a shift from inflow winds on Friday to outflow winds, which will further increase the drying trend throughout the region. These conditions heighten our preparedness level and the anticipation of fire starts.