Many of B.C.’s forest and grassland ecosystems have historically been shaped and influenced by wildfires. In fact, the health, diversity and productivity of B.C.’s forests prior to 1800 are due in part to the role that wildfires played in maintaining forest and grassland ecosystems.

Wildfires periodically burned through forests and rangeland, eliminating accumulations of flammable materials and creating a patchwork of diverse areas that varied in terms of species composition and the age of the trees. These wildfires also left behind areas containing less fuel, so when wildfires occurred in later years, they were less likely to burn unchecked across the landscape.

In addition to wildfires caused by lightning, many First Nations traditionally used fire as a forest stewardship tool. Some First Nations used fire to burn meadows, thin out forests and eliminate fuel build-ups in the spring or fall to help avoid aggressive summer wildfires in areas that were important to them. First Nations also used fire to remove vegetation around their communities to safeguard themselves from attacks and to enhance forage for the game they depended on for sustenance.

The role of wildfires in shaping forest ecosystems began to change significantly when activities such as livestock grazing, roadbuilding, railway construction and logging began on a large scale.

Livestock grazing reduced the amount of grass and surface fuels that helped wildfires spread along the ground, and this often reduced the effect that wildfires had on the landscape. Roads and railways further prevented the spread of wildfires by creating fire breaks on the landscape that hadn’t existed previously. Early logging often targeted the oldest and largest trees, which sometimes had survived centuries of wildfire activity. In many cases, removing these large trees allowed smaller trees to grow more densely in their place. Because they were younger and had thinner bark, the smaller trees were often more vulnerable to fire damage.

These activities (as well as a historical focus on fire suppression rather than fire management) caused a decrease in the amount of land burned by wildfires and reduced their role in shaping forests and grasslands. In areas where fires had historically been common, this often led to accumulations of surface litter and to forests that were older than they would be naturally.

In some ecosystems, the exclusion of wildfires has also changed the dominant tree species, and increased tree density and the amount of “ladder fuels” (e.g. branches and shrubs that allow a fire to move from the ground to the tops of trees). Such changes can increase the risk of a high-intensity wildfire occurring and also increase the incidence of forest health issues such as pests and diseases, which can harm or kill trees and make them more vulnerable to fire.

It’s clearly not beneficial to exclude all fire from forest and grassland environments, but it is necessary to protect communities, infrastructure and natural resources from unwanted wildfires.
Factors such as a changing climate and increased settlement in Wildland Urban Interface areas (where homes or structures are adjacent to forests or other wildlands) also add to the complexity of fire management plans in both the long and short term.

Part of the solution includes allowing some lightning-caused fires to burn naturally without suppression, under the right conditions. Each year, the BC Wildfire Service looks for opportunities to designate fires that are burning in remote areas (with appropriate weather and forest conditions) as “monitored” or “modified response” fires. This allows wildfires to help restore specific sections of forests to a more natural state.

However, fuel management isn’t just for Crown land — it’s also an important tool for supporting forest health and helping protect values from the threat of wildfire elsewhere, such as on local government land and privately owned land.

If you are interested in a perspective on wildfire’s role in landscapes in the western United States and how this has changed over history, check out this TEDx talk: [https://www.youtube.com/watch?v=edDZNkm8Mas](https://www.youtube.com/watch?v=edDZNkm8Mas)

The link below is to a video from the Forest Fire Management Victoria (Australia) illustrating a benefit of prescribed burning: [https://www.facebook.com/FFMVic/videos/2051451228206677/](https://www.facebook.com/FFMVic/videos/2051451228206677/)

### Modified Response

The wildfire is managed using a combination of suppression techniques, including direct and indirect attack, and monitoring to steer, contain or otherwise manage fire activity within a predetermined perimeter (to minimize costs and/or damage and to maximize benefits from the fire).

### Monitored

The wildfire is observed and assessed to determine the appropriate response option to minimize social disruption and/or significant impacts on values and resources, while achieving beneficial ecological, economic or resource management objectives.

Another part of the solution is conducting fuel management treatments that mimic the effects of naturally occurring wildfires. These treatments can include activities such as prescribed burning and mechanical thinning.

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*Photo Corner*

The unique geography of the Coastal Fire Centre means that crews and support staff often have to travel across bodies of water to get to the fire zone or wildfire they’re being deployed to. Unit crews are a provincial resource, meaning they can be deployed anywhere in the province based on need, but the BC Wildfire Service utilizes the ‘best closest resource’ approach when considering deployments, so in a busy fire season on the coast, it’s common for Coastal Fire Centre unit crews to be deployed around their own fire centre to suppress wildfires closer to home. The above photo is of part of the Salish Unit Crew, based out of Pemberton, travelling to Vancouver Island.

Photo credit: Noreen O’Hara
Fuel management on Crown land

Fuel management is defined as “the planned manipulation and/or reduction of living or dead fuels for forest management and other land-use objectives.” The BC Wildfire Service undertakes proactive fuel management projects to reduce wildfire hazards in areas where dangerous levels of fuels have built up. Priority is given to Wildland Urban Interface areas, where homes or structures are adjacent to forests of other wildlands.

Once an area has been identified that contains hazards and would benefit from a fuel management project, a plan is developed that contains one or more fuel treatments. A fuel treatment is “any manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.” A fuel treatment plan — or prescription — may include pruning, chipping, thinning, piling or burning, or a combination of any or all of these activities.

The BC Wildfire Service works with the landowner/manager to determine: objectives; options to meet those objectives; timelines; and costs. Once the initial meetings have been completed and the desired outcomes identified, it may be determined that a prescribed burn should be part of the overall plan. At that point, a detailed Prescribed Fire Burn Plan will be developed.

A prescribed fire burn plan is extremely detailed and takes into account:

- a project overview (who is involved, the location of the project, etc.)
- a general description of the area, including information about the slope and elevation, and a description of fuels that are present (including the duff depth, soil texture, fuel loading, etc.)
- a list of objectives and how they will be achieved (this section also includes the weather conditions needed to achieve the desired outcome)
- values at risk
- public communication plan
- pre-burn preparations
- Costs
- monitoring of the burn

The final burn plan is a comprehensive guide that must be approved by both the landowner/manager and the BC Wildfire Service before work can proceed. A prescribed burn will only go ahead if site and weather conditions are favourable. If they’re not, the prescribed burn will be postponed until conditions are more favourable.

Prescribed burning can be an important part of some fuel management plans because prescribed fires mimic the effects of naturally occurring fires, but in a controlled way. They can be used to achieve a variety of objectives, including (but not limited to) the following:

- reducing surface fuel build-ups that can lead to high-severity fires
- restoring grassland areas by eliminating encroaching trees
- eliminating diseased areas of forest while reducing the population of forest pests that caused the disease
- improving wildlife habitat

Prescribed burns are also beneficial because they help increase the resiliency of the forest to unwanted fire, by reducing the intensity of future wildfires that may occur in the area. This often makes it easier to control a wildfire and creates a safer working environment for firefighters.
Local governments and fuel management

Local governments (such as municipalities, regional districts and First Nation governments) can help reduce wildfire risks by carrying out fuel management activities on land within their jurisdictions.

Each community has unique attributes that guide the nature of a fuel management project, but many activities done during fuel management treatments may be similar to what a homeowner does to reduce the threat of an aggressive wildfire spreading into a particular area: spacing trees, removing accumulations of surface waste material and removing ladder fuels.

Given that fuel management projects on local government land are much larger than FireSmart projects undertaken by individual homeowners, these projects may create strategic fuel breaks around a community and use other strategies to efficiently mitigate fire hazards over a large area.

Local governments may also help with wildfire prevention in their community by getting involved with planning wildfire prevention activities on private land. Beginning in 2004, the B.C. government and the Union of British Columbia Municipalities provided assistance to local governments to do this work through the Strategic Wildfire Prevention Initiative. This was a suite of funding programs to support communities as they mitigated wildfire risks in the Wildland Urban Interface.

In light of the recommendations of the BC Flood and Wildfire Review that was completed after the 2017 fire and flood seasons, the Strategic Wildfire Prevention Initiative has been replaced by the new Community Resiliency Investment (CRI) program. This program will fund a broader suite of eligible activities that align with the FireSmart program’s seven disciplines. To learn more, visit the Union of B.C. Municipalities website at: https://www.ubcm.ca/EN/main/funding/lgps/community-resiliency-investment.html

Rural stratas: harnessing the power of a group

People often think that stratas only apply to high-rise buildings or gated communities of some sort, but strata councils can also govern vacation properties and rural residential areas.

The existence of a strata in such cases can depend on whether there is some form of “common” land present. If there is a strata, B.C.’s Strata Property Act defines the powers, duties and activities of specific strata councils. The structure of councils make stratas unique and useful when it comes to wildfire prevention.

Many strata vacation properties are in remote areas that can only be reached via natural resource roads. Some strata vacation properties include buildings, which range from very simple structures that are only used periodically to more elaborate homes that are used as primary residences.

Since the Strata Property Act requires a strata property to establish a council, elect officials and keep owners informed of significant developments, the council can be invaluable in ensuring that owners are updated about any nearby wildfires.

Because the strata already has an organization in place, it is also relatively easy for it to support FireSmart activities on common land that will benefit the community as a whole. Strata properties are already configured in such a way that the owners could support a FireSmart community project and help each other protect their rural properties from the threat of wildfire.

If you own property that is part of a strata and are interested in making your community more resilient to wildfires, reach out to the strata council to see if there is anything it can do to help unite the community in wildfire prevention activities.
Fuel treatments conducted on private land can help interrupt a wildfire’s spread from the forest to structures. Many FireSmart activities are forms of fuel management. Learning about FireSmart “priority zones” can help you plan FireSmart activities on your own property.

Priority Zone 1 includes the structure you’re interested in protecting and a 10-metre circle around that structure. When conducting FireSmart activities, it’s recommended that you begin working in this zone first and then work outwards from there. In this zone, keep your lawn mowed, remove dead leaves and debris, and remove all coniferous and flammable vegetation.

Your home can still be FireSmart if you keep some plants in Priority Zone 1, provided that those types of plants are not susceptible to catching fire and are not densely spaced. FireSmart Canada has a “FireSmart Guide to Landscaping” manual that can help you choose appropriate plant species for your property. It’s available on the FireSmart Canada website at www.firesmartcanada.ca

Priority Zone 2 is within 10-30 metres of the home or structure. In this area, the fuel management focus is on thinning and pruning vegetation and trees. Trees should be at least three metres apart, tree limbs should be pruned up to a height of two metres from the ground and accumulated surface fuels should be removed. If you’re going to be planting trees, choosing to plant deciduous trees (instead of coniferous ones) will also help protect your home or structure.

Many homeowners will find that some of the priority zones on their land overlap with their neighbours’ zones. If this is the case for you, do as much work as you can on your own land and consider engaging your community to complete FireSmart activities as a group. FireSmart Canada grants “Recognized FireSmart Community” designations to communities who complete a process to identify and mitigate wildfire hazards.

Reducing fuel loads within 30 metres of your home (and further reductions up to 100 metres) can make a big difference. If a wildfire occurs in the area, the fire intensity will decrease as the wildfire burns into areas where fuel management activities have been completed. This can result in lower-intensity fires that sometimes remain on the ground — as opposed to hot and intense crown fires.

Many of the FireSmart risk mitigation methods used to modify vegetation can result in a landscape that mimics how a forest would appear if we allowed wildfires to burn. So if we want to help keep wildfires away from our homes, we need to understand the changes that naturally occurring wildfires can produce.

For more information about the FireSmart program, visit gov.bc.ca/firesmart or check out the FireSmart Canada website at www.firesmartcanada.ca
Submitted by Eileen Brader, Post Creek resident

I live in the tiny community of Post Creek. The community is tucked into an incredibly beautiful area with the Chilliwack River running along its southern boundary, and it is surrounded by treed mountains with Chilliwack Lake Provincial Park two kilometres of easy walking to the east. Thirty-seven kilometers on a constant downhill slope to the west lies the city of Chilliwack with no homes from the 30-kilometre mark upwards. Heaven, paradise, recreational and country living at its best.

So what is the problem? The potential for fire! That is the problem. More and more folks want to camp in the bush and more and more folks are spending time in provincial campgrounds or at smaller lakes surrounding us higher in the mountains. This has led to more and more folks leaving campfires unattended or abandoned and still smouldering. We are high and very dry in the summer at 2,400 feet. Logging debris is everywhere throughout the various valleys that join with our east/west valley. Strong thermal winds occur as the valley heats up.

I saw a short documentary film on “FireSmart” during some training I was doing. It seemed like a great idea and then Lynn Orstad, BC Wildfire Service representative for FireSmart, came to our once-a-year ratepayers meeting and gave a presentation. She had great ideas and we all left feeling enthusiastic and ready to do something. Then, after the weekend, the recreational cabin owners left and we forgot until the fires of 2016. A small group of us became serious and called Lynn. She came out and reminded us about the simple, logical things we could do to help ourselves and to take responsibility. We chose to live in this unprotected environment and now choose to protect ourselves, our investments and the community by looking around our properties and thinking “fire hazards!”

Just take a look! Gutters full of leaves, pine cones and needles, a shake or asphalt roof covered in moss, the dry woodpile stacked under the eaves against the cabin, that pile of “stuff” from the cabin you meant to get rid of and haven’t, the skinny, tall and partly dead lodgepole pine trees in amongst the other healthy ones. Geez, you even let the salal and underbrush grow right up to and against the cabin. And guess what? You have no running water. It is just a recreational cabin, after all. No sprinkler system, no rain barrel and you never bothered to buy a fire extinguisher.

We got busy! Cutting the branches off the lower parts of “ladder” trees, named because fire uses those branches as a ladder to the top. Once at the top, the fire becomes much harder to control. Clearing away shrubs and debris close to the cabins, moving woodpiles away from cabins, getting the gutters cleaned regularly and even bringing water barrels in (and where possible, sprinkler systems) and surprise, surprise! We became “FireSmart”. What this small group started attracted others to do the same. Not everyone, of course, but we have hopes and in the meantime we can be proud of knowing we have taken responsibility for where we chose to live and are doing our best to protect ourselves against the possibility of fire. The value of our properties has increased dramatically over the years and loving where we live means protecting where we live to the best of our abilities.
Recent precipitation, cooler temperatures and higher humidities have contributed to a decrease in the fire danger rating across the Coastal Fire Centre and to a decrease in fire behaviour on the active fires in the centre. As of September 14, there are only four fires considered to be ‘Out of Control’ in the Coastal Fire Centre, all of which are ‘Modified Response’ wildfires.

Since April 1, 2018, there have been 291 wildfires in the Coastal Fire Centre, 158 of which were lightning-caused and 133 of which were human-caused. Compared to the 10-year average, there have been approximately twice as many lightning-caused fires and slightly more human-caused wildfires this year than average. The total amount of hectares burned to date is 174,995 hectares. Most of this is due to lightning–caused wildfires. For comparison, the 5-year average for lightning-caused wildfires is 6226 hectares burned to date.

The return to fall weather conditions has also allowed for changes to the burning prohibitions throughout the Coastal Fire Centre. Check the side panel of this page and www.gov.bc.ca/wildfirebans for more information. While Category 2 and 3 open fires remain prohibited in most areas, fall is an ideal time to conduct FireSmart activities around your home and property. The intense wildfire activity across the province this year is a reminder of the importance of removing flammable materials from around your home to create defendable space. Check out this website for more information: http://www.firesmartcanada.ca/

**About Coastal-September 14, 2018**

**SYNOPSIS:** An upper trough maintains cool and cloudy conditions across the region today with scattered showers that should increase in intensity, frequency, and coverage through the afternoon. Good chance of the odd isolated thundershower embedded within the stronger rain showers today, favouring (but not limited to) Haida Gwaii. Rather than showers, some upslope areas in a westerly or southwesterly flow will see periods of rain today, favouring some western sections of the North Island and Sunshine Coast zones. The general cool, cloudy, and showery pattern continues tonight. An upper low/trough remains in control Saturday for another mainly cloudy and cool day with scattered showers or occasional rain. The main bands of rain & showers should shift south of roughly Gold River – Toba Inlet (favouring upslope areas for the greater amounts) with less frequent and generally light showers to the north.

**OUTLOOK:** The upper low/trough should linger over the Coast on Sunday to maintain mainly cloudy skies & cool temperatures throughout all but Haida Gwaii with scattered showers or rain (possible thundershowers) favouring the southern half of the region. An additional 50mm is possible in some upslope areas of the south on Sunday. The main bands of moisture should exit the region Monday and Tuesday resulting increasing sun throughout each zone. Temperatures could rebound to 20 degrees away from the water by Tuesday afternoon while recent rains and onshore winds prevent humidities from dipping much below 35%. Winds should remain generally light each day.