

# COMPLAINT INVESTIGATION

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## Fire Control near Manning Creek

MARCH 2023  
FPB/IRC/249



**Forest  
Practices  
Board**

BC'S INDEPENDENT  
WATCHDOG FOR  
SOUND FOREST &  
RANGE PRACTICES

*In undertaking its work, the Forest Practices Board acknowledges and respects the Indigenous Peoples whose territory is the subject of this report. The Board recognizes the importance of their historical relationship with the land that continues to this day.*

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# Introduction

## The Complaint

On July 7, 2022, the Forest Practices Board received a complaint about the BC Wildfire Service's (BCWS) efforts to control the Lytton Creek wildfire near the Manning Creek Forest Service Road (FSR) between Spences Bridge and Merritt. The complainant believes that the BCWS intentionally lit a fire, known as a 'planned ignition', when it should not have. The complainant believes the planned ignition burned their dwelling and everything around it.

The Board investigated whether the BCWS complied with the requirements of the *Wildfire Act* related to fire control and whether the decision to carry out fire control in this case was reasonable.

## Background

The complainant lives in the Nicola Valley, halfway between Spences Bridge and Merritt. The rural property is situated in the valley bottom between the Nicola River and Highway 8. The property is within the traditional territories of 14 First Nations, the closest being the Shackan Indian Band whose community is four kilometres to the northwest, and the Nooaitch Indian Band whose community is about four kilometres to the southeast.

The BCWS is the provincial agency responsible for managing wildfires on both public and private land outside of municipalities and regional districts. The *Wildfire Regulation* defines fire control as "an action to contain, extinguish or limit the spread of a fire." The BCWS uses various fire control tactics to manage wildfires based on location and proximity to values such as communities or public infrastructure, fire weather, fire behavior, and available resources. The basic principle of fire control is to break the fire triangle (Figure 1). Fire-control tactics aim to remove heat, fuel,<sup>1</sup> or oxygen.<sup>i</sup>

Removal of fuel is a common firefighting tactic, as it can slow a fire's progress and cause a fire to burn out. Tactics commonly used to remove fuel include: building control lines—a direct control tactic where all fuel is removed from the ground; and conducting planned ignitions—an indirect control tactic involving burning off the majority of fuel between the fire's edge and control lines to control the spread of wildfire.<sup>ii</sup>



Figure 1. The Fire Triangle

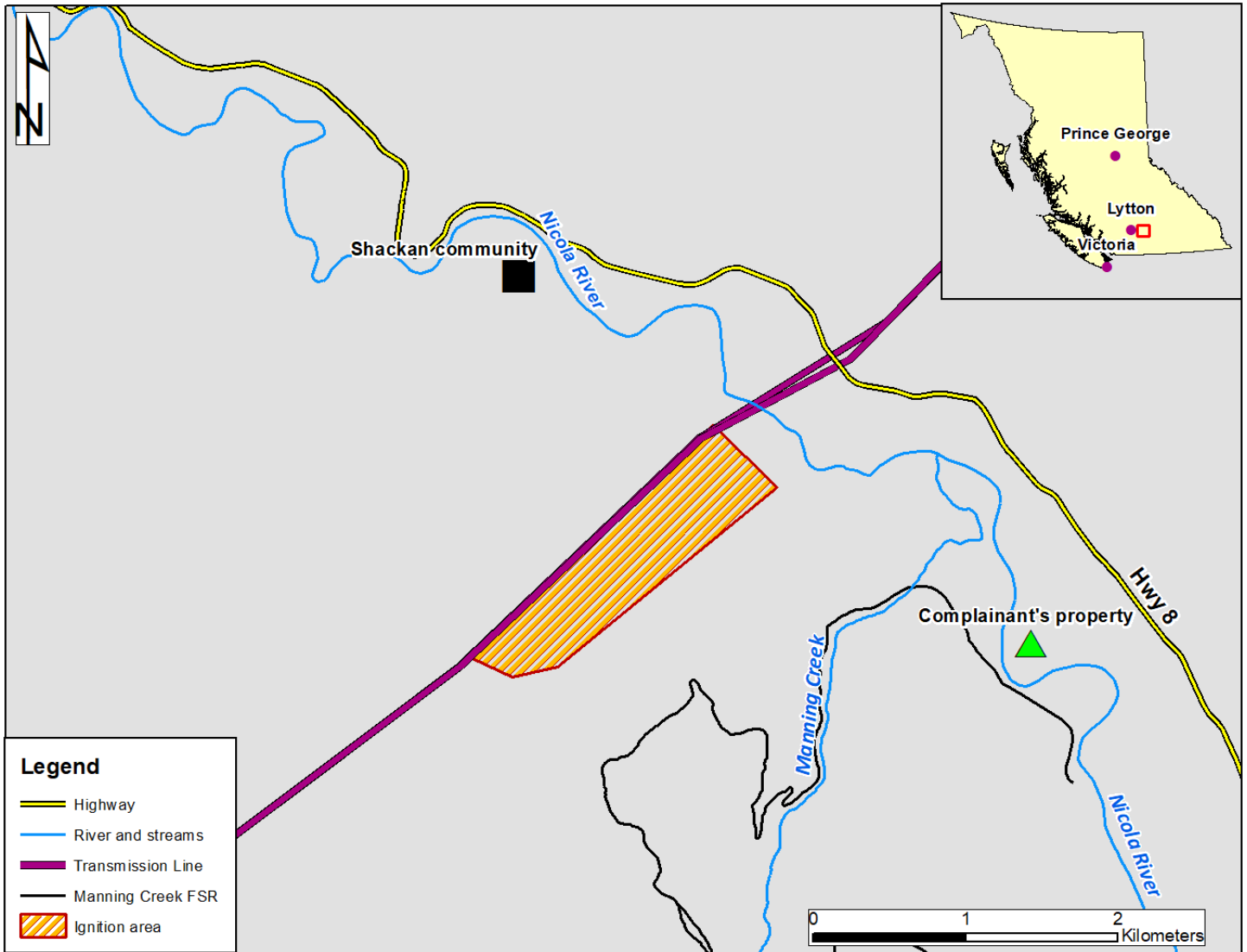
In an attempt to protect human life and infrastructure during large and extreme wildfires, such as those experienced in 2017, 2018, and 2021, the BCWS has increasingly found that using planned ignition is the only effective tool for removing fuel between the wildfire and values at risk.

The Lytton Creek wildfire (the wildfire) was discovered on the afternoon of June 30, 2021. The wildfire destroyed the Village of Lytton, making international headlines. The wildfire was out of control, burning to the east of Lytton in rugged and steep terrain. The BCWS had difficulty controlling the wildfire perimeter, except where the fire came down to grass lands and valley bottoms. Due to the limited availability of resources, the operational priorities on the wildfire were to protect public safety and critical infrastructure.

<sup>1</sup> The BCWS defines fuel as any organic matter, living or dead, in the ground, on the ground, or in the air that can ignite and burn.

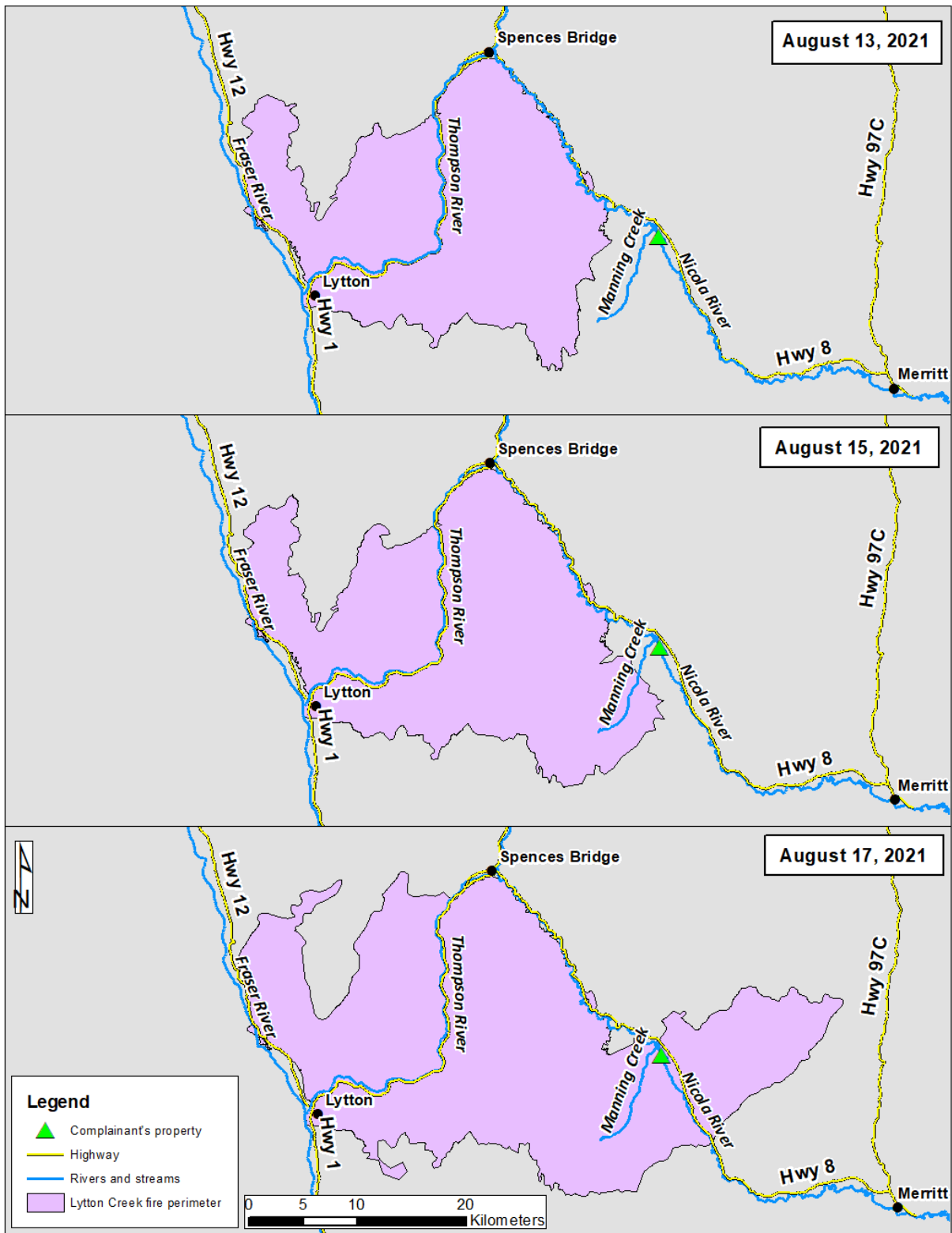
By August 13, the wildfire had grown to over 55 500 hectares and was approaching communities and private dwellings along the Nicola River, including the Shackan and Nooaitch Indian Reserves. An evacuation order was put into effect on August 14. The BCWS predicted extreme fire behaviour for August 15, due to low relative humidity levels, high temperatures, and southwest winds gusting to 55 kilometres per hour.

On the afternoon of August 15, the BCWS began aerial ignition operations within the Shackan Indian Reserve, to burn off fuel between the community and the approaching wildfire. The ignition area was approximately two kilometres northwest of the complainant's property, on the west side of the Nicola River and Highway 8 (Figure 2).



**Figure 2.** Location of ignition area and complainant's property

By August 17, the wildfire had grown to over 85 000 hectares, running 18 kilometres to the east of the Nicola River (see Figure 3). On August 18, the complainant returned home and discovered that their dwelling, outbuildings, fences, electrical services, and personal possessions had been destroyed by the wildfire. The complainant believes it was the ignition operation carried out on August 15 that led to the destruction of their home and property.



**Figure 3.** Growth of the Lytton Creek Wildfire K71086 between August 13 and August 17, 2021

Sections 9(4) and 9(5) of the *Wildfire Act* enable the government to compensate an owner or tenant of private property if fire control occurred on and damaged the private property. On October 1, 2021, the complainant submitted a claim for compensation to the BCWS for damages sustained to their property. On March 31, 2022, the BCWS concluded “the damages sustained to the complainant’s private property were not caused by ‘fire control carried out by the government’, and thus do not meet the eligibility requirements for compensation.”

To gain a better understanding of what happened, the complainant submitted a Freedom of Information (FOI) request to the provincial government. While the complainant received some information, much was withheld. The complainant submitted this complaint to the Board on July 7, 2022, the day after being told there was no more information forthcoming from the government.

## Applicable Legislation

The objectives of the *Wildfire Act* are to ensure that all users of BC's forests are aware of and understand their responsibilities with respect to fire use, prevention, control, and rehabilitation; to guarantee the safety of people and that that consideration remains paramount; and to aid in the establishment of policies and priorities to ensure the most efficient use of firefighting resources.<sup>iii</sup>

Section 9(1) of the *Wildfire Act* sets out the reasons why the government may carry out fire control.<sup>2</sup> There are numerous designated officials within the government who can make this type of decision, ranging in level from the superintendent of fuel management to an individual fire crewmember. This broad delegation of authority enables the BCWS to effectively carry out fire control in emergency response situations.

### **Government may carry out fire control**

9(1) The government may enter on any land and carry out fire control if an official considers that a fire on or near the land endangers life or threatens forest land or grass land.

## The Investigation

The investigation considered two questions: 1) did government comply with section 9(1) of the *Wildfire Act*; and 2) was the decision to carry out fire control in the vicinity of the complainant's property reasonable?

### Did government comply with section 9(1) of the *Wildfire Act*?

Section 9(1) permits government to enter any land to carry out fire control if an official considers that a fire on or near the land endangers life or threatens forest land or grass land. The investigation considered whether an official adequately considered if the fire endangers life or threatens forest land or grass land.

From the moment the wildfire was discovered, decisions were made by designated officials to carry out fire control because the wildfire threatened life and land. The wildfire destroyed the town of Lytton on the first day and resulted in the loss of life.

The formal assessment of wildfire risk is documented in a Fire Analysis. When initial attack fails, the incident commander and the land manager prepare a Fire Analysis. A Fire Analysis is reviewed by the plans officer, the senior wildfire officer for prevention and operations, and then approved by the fire center manager or another designated person. The Fire Analysis guides the decision-making process on a fire, to balance the values at risk with fire control expenditures. The Fire Analysis is governed by policy of the BCWS.<sup>iv</sup>

In this case, the BCWS determined that the wildfire endangered life and threatened forest land or grass land in the Fire Analysis. The Fire Analysis identified the general incident objectives, including:

1. Work to protect human life and safety, and

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<sup>2</sup> Note that section 18 of the *Wildfire Act* also provides for government use of fire—where government may introduce fire onto Crown land to accomplish certain objectives, similar to the criteria set out in section 9.

2. Work to protect property including public infrastructure and concentrated areas of residences facing imminent threat.

The Fire Analysis included the option to use planned ignition tactics for indirect fire control. A government official with the appropriate designated authority under section 9(1) of the *Wildfire Act* approved the Fire Analysis.

## Finding

Government complied with section 9(1) of the *Wildfire Act*. An official adequately considered that a wildfire endangered life and threatened forest land or grass land.

## Was the decision to carry out fire control in the vicinity of the complainant's residence reasonable?

Even though the BCWS had the authority to enter onto land and carry out fire control in these circumstances, the Board considered whether the decision to conduct fire control, specifically the ignition operation in the vicinity of the complainant's residence, was reasonable. The standard the Board uses to evaluate the reasonableness of discretionary decisions is not whether, in the Board's opinion, the decision was the best decision. Rather, the Board considers whether the decision is consistent with sound forest practices, achieves the intent of the legislation, and is based on an adequate assessment of available information. These elements are discussed below.

### Consistency with sound forest practices

The investigation found that the decision to carry out fire control in the vicinity of the complainant's residence was consistent with sound forest practices. The use of planned ignition is a generally accepted practice in emergency situations, and the decision was made by a qualified person who demonstrated a clear understanding of the land base, the values present, and the potential risks to public safety and the environment.

The BCWS' Ignition Operations Manual (the manual) sets out the technical requirements for ignition operations, including the training and certification requirements needed for implementing and supervising all ignition operations. The manual defines ignition operation levels based on the complexity of the operation and describes what type and number of personnel, qualifications, and approval processes are required to plan and implement the different levels. A certified ignition specialist conducted the August 15 ignition operation and followed the approval process as set out by the manual.

The ignition operation was informed by an approved Fire Analysis that defined the general objectives of protecting human life and safety, and critical infrastructure. The Fire Analysis describes what environmental hazards exist, such as unstable terrain, as well as values at risk including:

- life and safety,
- environmental (e.g., community watersheds, habitat for species at risk),
- cultural,
- infrastructure (e.g., transmission lines, cell towers, dams, or highways),
- legal rights-holders (e.g., water, trappers, or range),
- parks and protected areas,
- research installations,
- recreation, and
- timber.

Furthermore, public safety was addressed by an evacuation order issued by the Thompson-Nicola Regional District on August 14 for all residences along Highway 8, including the complainant's residence.

## Achieves the intent of the legislation

The investigation found that the decision to carry out fire control aimed to achieve the intent of the legislation. One of the objectives of the *Wildfire Act* is to hold public safety paramount. The Fire Analysis clearly described the fire control objectives as the protection of human life, safety, and communities. The fire was burning out of control and was approaching the Nicola Valley including rural properties and the communities of Shackan and Nooaitch.

## Adequate assessment of available information

The investigation found that the decision to carry out fire control was based on an adequate assessment of available information. The ignition specialist considered the information provided in the Fire Analysis and an Incident Action Plan, which is a plan prepared each day by the incident commander to provide tactical objectives and direction to the section chiefs. The ignition specialist developed an Ignition Mission Plan and made the final ignition decision based on the best available information available at the time of ignition. The ignition specialist updated the Ignition Mission Plan after the work was complete, to reflect how it varied from the plan.

The fire control objectives, strategies, and tactics were set out in the Fire Analysis, which included indirect control using landscape and constructed features to limit threats to communities, critical infrastructure, and transportation corridors.

The Incident Action Plan included a daily fire behaviour prediction, which incorporated a weather forecast, fire weather indices, and a description of fire behaviour expected in the various fuel types. This information is based on government weather stations, trained forecasters, and the Canadian Forest Fire Danger Rating System, the primary fire management decision aid in Canada.<sup>v</sup>

The ignition specialist worked with the fire behaviour specialist to create an Ignition Mission Plan, which was designed to stop or limit the fire spreading on slopes above the Nicola River and to protect values at risk including the two First Nation communities of Shackan and Nooaitch. This was considered an advanced ignition operation, as it was an aerial ignition with challenging weather, terrain, and fire behaviour conditions. The Ignition Mission Plan set out:

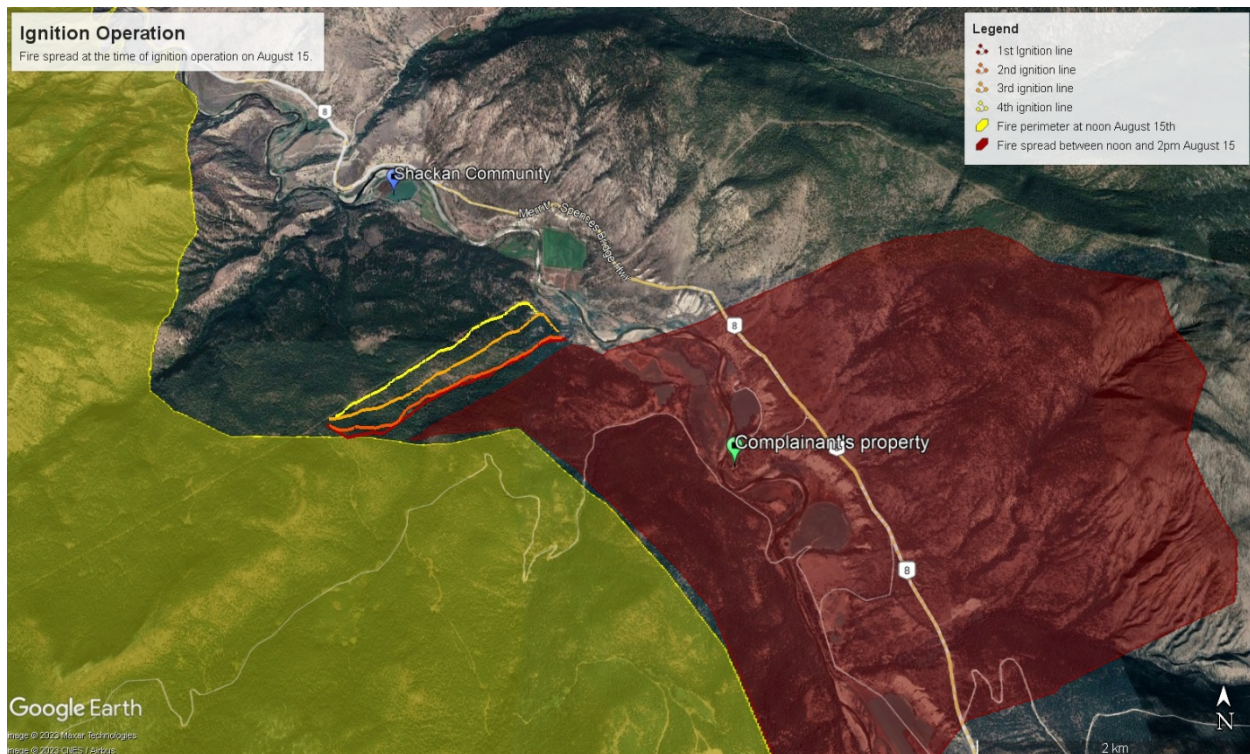
- The objective and strategy for the ignition – to prevent continued fire growth east toward communities and Highway 8 by burning out fuel between the highway and the height of land.
- The fire behaviour parameters required – fire intensity class, relative humidity, wind speed and direction, fine fuel moisture code, and timing.
- The support resources needed – helicopter, firefighters, crew resources for spot mop up, and resources for community suppression support.
- Any hazards or special concerns and mitigation measures – communication plan, spotting potential, and pre-burn tactics.
- The prep work required – machine guard completed, crews in place, wetting of fuels outside ignition area, community evacuation complete, and road closure.
- A map of the planned ignition area and pattern.

On August 15, the ignition specialist completed a checklist to ensure the requirements of the Ignition Mission Plan were met. They knew that public safety had been addressed by an evacuation order in the valley. There were existing fire control measures, such as sprinklers, hoses, and machine-built fire guards in place along the transmission line and Manning Creek forest service road, in place to protect critical infrastructure. The forecasters said the day would be “problematic” because of winds and dryness, so the ignition specialist and their assistant completed a test flight up the drainage to see if it was safe to conduct aerial ignition and to measure wind speed and direction. The ignition specialist considered the wind speed affecting the ignition area, the slope of the terrain, the fuels, and what control lines were in place. The ignition specialist considered their previous two weeks of direct observation and control work on the Lytton Creek wildfire. They considered the values at risk, a detailed weather



forecast, and a current fire behaviour analysis. The Ignition Mission Plan included a map to describe the planned ignition area, containment line locations, and ignition pattern.

The ignition specialist also considered the balance of risk, that is, whether the risk to values was greater than if the ignition is not carried out. It was evident to the ignition specialist, due to the fire behaviour on August 15, that the current on-the-ground resources and existing control measures were inadequate to protect the community of Shackan. Prior to ignition, the BCWS held a final safety meeting in the community of Shackan. While that meeting was underway, the wildfire jumped across Highway 8, affecting lands in and around the valley between the complainant's property and Shackan. The ignition specialist determined that a small portion of the planned ignition could still play a role in protecting the community of Shackan by working to limit the fire spread on the upper slopes of the Nicola River. Therefore, at 2:00 pm on August 15, they proceeded to carry out a small portion of the Ignition Mission Plan (see Figure 4).



**Figure 4.** Location of the ignition operation relative to the fire spread on August 15, 2021

The ignition specialist noted on the plan that the fire had escaped into the Nicola Valley prior to the ignition, and that where the actual ignition did occur, it was successful in preventing the main fire from advancing toward the community of Shackan.

In summary, the ignition specialist adequately assessed the available information. They used their local knowledge, training, and available information when making the decision to carry out the ignition operation. Although the wildfire moved quickly and compromised the original plan, the ignition specialist determined that it was still possible to save the community of Shackan from the wildfire. The actual ignition area treated was much smaller than originally planned, and the treatment was successful in preventing the wildfire from spreading to the community of Shackan.

## Finding

The decision to carry out fire control in the vicinity of the complainant's property was reasonable. The decision was consistent with sound forest practices, intended to achieve the intent of the *Wildfire Act*, and based on an adequate assessment of available information.

# Conclusions

Government has broad discretion regarding use of fire control; it can enter onto any land to protect life, forest land, or grass land. Any fire crewmember that reasonably believes that a fire is threatening life, forests, or grass lands can carry out fire control. The BCWS complied with section 9(1) of the *Wildfire Act*. It had the authority to carry out fire control as the fire endangered forest land and grass land. The decision to carry out fire control in the vicinity of the complainant's property was reasonable, because it was consistent with sound forest practices, achieved the intent of the legislation, and was based on an adequate assessment of available information.

The damage caused by the wildfire was catastrophic, and it is extremely unfortunate that the complainant and many others experienced devastating losses.

## ENDNOTES

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<sup>i</sup> Province of British Columbia. Public Safety and Emergency Response: Wildfire Service: Wildfire Response. [November 30, 2022]. Available at: <https://www2.gov.bc.ca/gov/content/safety/wildfire-status/wildfire-response/management-strategies?keyword=fire&keyword=control#suppression>

<sup>ii</sup> Province of British Columbia. Public Safety and Emergency Response: Wildfire Service: Wildfire Response. [November 30, 2022]. Available at: <https://www2.gov.bc.ca/gov/content/safety/wildfire-status/wildfire-response/management-strategies?keyword=fire&keyword=control#suppression>

<sup>iii</sup> Hansard. 2004 Legislative Session: 5<sup>th</sup> Session, 37<sup>th</sup> Parliament, April 20, 2004 –Second Reading. EnviroFor.

<sup>iv</sup> BC Ministry of Forests. BC Wildfire Management Branch. April 7, 2009. Provincial Standard Operating Guideline – Fire Analysis initiation, tracking, monitoring, and updating process.

<sup>v</sup> Natural Resources Canada. The Canadian Forest Fire Danger Rating System. [January 10, 2023]. Available at: <https://www.nrcan.gc.ca/our-natural-resources/forests-forestry/wildland-fires-insects-disturban/forest-fire-danger-rating-tool/14470>



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