

Fuel Management Pilot: PHASE II Report

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Executive Summary

Farming and ranching operations in the Cariboo, Bulkley-Nechako, and Fraser-Fort George regional districts are often surrounded by forested crown land with high wildfire risk. There is currently no program or process to address the wildfire pressures on the agriculture wildland interface (AWI). With the average farm size ranging from 188-410 ha, the farms within these regions do not meet thresholds for structure density required for funding which is focused on mitigation in areas of greater population and structure density. This project shared well-researched solution with BC Wildfire Service and licensees about opportunities to deliver cost-effective fuel management treatments in the Agricultural Wildland Interface.

Phase I of this project produced the report [Fuel Management Pilot Business Case for High-Risk Agricultural Interface Areas](#). This report defined, mapped and summarized the extent of the land base that is considered Agricultural Wildland Interface (AWI) across the three regions. This is a new concept for forest managers and government and draws attention to, and documents, the relationship between wildfire risk and agricultural assets.

During Phase I, the AWI was analyzed using local agricultural knowledge and a set of 5 main criteria was established to develop a shortlist of potential pilot sites. This shortlist was then vetted using finer filter criteria, resulting in the selection of three priority pilot sites, one in each region. The project then explored economic and adaptive approaches to fuel management for high-risk agricultural wildland interface. Potential for partnerships with timber licensees, academic partners, BC Wildfire Services, and others were explored. High level treatment plans and costing for implementation of fuel management at each site were then completed.

Phase II consisted of:

- Site visits to the pilot areas identified in Phase I
- Partner outreach with the goal of moving pilot sites into development

The three potential pilot sites are located near Prince George, Telkwa, and Williams Lake. The site visits confirmed that all three sites posed a wildfire threat to the adjacent rural farmland. These visits also confirmed each site contained enough merchantable timber that a mechanical fuel treatment could be designed with the merchantable timber removal paying for all or most of the costs of treatment. A full site report and map are available as additional documents.

Partner outreach focused on two areas: building relationships with the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) and identifying potential local logging partners.

FLNRORD outreach was with the BC Wildfire Service (BCWS) and the Forest Districts. Although these are both divisions of FLNRORD, they operate largely independently and have separate mandates. This outreach has been positive although it occurred in a timeframe beyond the extent of the original project plan. At time of report writing, discussions about pilot project potential are still ongoing with both the BC WILDFIRE SERVICE and Forest Districts.

A potential logging partner was identified for each site and initial contact was made to discuss interest/potential for fuel removal.

The recommended next steps are two-fold:

1. Continue meeting with FLNRORD representatives with the end goal of securing at least one pilot site as a demonstration fuel management project.
2. Use the findings from Phase I and Phase II to demonstrate the need for the wildfire risk reduction to rural farmland to be considered in upcoming landscape level planning.

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1.0 Acknowledgements

This report was prepared by Cabin Resource Management for the Nechako Valley Regional Cattlemen's Association and the Climate and Agriculture Initiative BC.

The project and report have been completed through collaboration and oversight provided by the Project Oversight Committee. The project was identified as a priority agricultural adaptation project by the Cariboo Agricultural Adaptation Working Group and the Bulkley-Nechako Fraser-Fort George Agricultural Adaptation Working Group.

The Project Oversight Committee included:

- Lindsay King, Regional District of Bulkley-Nechako
- Larry Garrett, BC Cattlemen's Association
- Kenna Jonkman, Regional District of Fraser-Fort George
- Stuart Larson, Cariboo Regional District
- Marisa Nightingale, Nicole Pressey, John Stevenson & Karen Tabe, BC Ministry of Agriculture, Food and Fisheries
- Janice Tapp, Nechako Valley Regional Cattlemen's Association
- Harmony Bjarnason & Emily MacNair, BC Climate and Agriculture Initiative

Cariboo Agricultural Adaptation Working Group included representatives from:

- BC Forage Council
- Cariboo Cattlemen's Association
- Cariboo Growers
- Kersley Farmer's Institute
- Cariboo Regional District
- BC Ministry of Agriculture, Food and Fisheries

Bulkley-Nechako and Fraser-Fort George Adaptation Working Group included representatives from:

- Bulkley Valley Dairymen's Association
- Eaglet Lake Farmers' Institute
- Nechako Valley Regional Cattlemen's Association
- Prince George Cattlemen's Association
- Regional District of Bulkley-Nechako
- Regional District of Fraser-Fort George
- Skeena Regional Cattlemen's Association
- Smithers Farmers' Institute
- University of Northern British Columbia
- BC Ministry of Agriculture

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2.0 Phase II Summary

A full report from Phase I titled “Fuel Management Pilot: A Business Case for High-Risk Agriculture Wildland Interface” is available at climateagriculturebc.ca. Phase I identified that there is currently no program or process to address the current wildfire pressures on the Agriculture Wildland Interface (AWI).

As part of Phase I, three potential fuel management sites adjacent to rural farms were selected for field assessments:

| Site Name | Natural Resource District | Geographic |
|-------------|---------------------------|--------------------------|
| EAGLET LAKE | Prince George | 50km NE of Prince George |
| KERR ROAD | Skeena Stikine | 20km SE of Telkwa |
| SPRINGHOUSE | Cariboo-Chilcotin | 25km S of Williams Lake |

The initial cost estimate for fuel treatment work was:

| | LOCATION | AREA (Ha) | TREATMENT COST | COST W. PARTNER |
|-------------|----------|-----------|----------------|-----------------|
| EAGLET LAKE | RDFFG | 184.4 | \$772,800 | \$41,400 |
| KERR ROAD | RDBN | 92.6 | \$364,800 | \$19,200 |
| SPRINGHOUSE | CRD | 36.6 | \$199,600 | \$10,800 |

During Phase II site visits were conducted to confirm site viability. The site visits gave no reason to adjust the estimated treatment costs.

A potential logging partner has been identified for each site but even with the majority of fuel treatment costs being offset by removal of merchantable timber, additional budget/in-kind support will be necessary to complete treatments for finer fuels. Official support or endorsement from FLNRORD/BC WILDFIRE SERVICE would greatly improve the success of these pilots – either through support for fine fuel removal, enhanced fuel break design or improving social license.

If external funding/in-kind support is not available it is possible to proceed with mechanical treatment alone. The mechanical treatments, if well designed, will mitigate the wildfire threat to the adjacent properties. This would reduce the project costs to the cost of performing outreach with adjacent farms, potentially developing farm FireSmart plans, and coordinating with the logging partner.

The objectives of the site visits were to:

- Confirm wildfire hazard to adjacent properties
- Assess viability of sites for treatment operability including merchantable timber recovery and logistical feasibility

Partner outreach was to occur concurrently with the site visits to obtain project support from government agencies. However, outreach to adjacent farms was delayed until there is stronger likelihood of projects moving ahead.

2.1 Eaglet Lake

The Eaglet Lake site is located approximately 50 kilometers north-east of Prince George. The site visit confirmed the stand poses a high wildfire threat to adjacent farms. A maximum estimated 44,558m³ of chip & saw and pulp volume is present. However, in order to maintain a shaded fuel break, an estimated 26,841m³ would be removed from site; the final number depends on the fuel treatment design. A comprehensive reconnaissance report detailing the site viability is available.



Approximately 30% of the Eaglet Lake site overlaps with an area-based Tree Farm License tenure controlled by Canadian Forest Products – “CanFor”. This tenure gives CanFor exclusive access to merchantable timber. As a result CanFor was the primary contact for a potential partner.

Initial conversations with CanFor staff were productive and indicated support for this project. However, this site requires several creek crossings and the actual project size may be greatly reduced.

2.2 Kerr Road

The Kerr Road site is located approximately 20km SE of Telkwa. The site visit confirmed the stand poses a high wildfire threat to the adjacent farms. A maximum estimated 19,148m³ volume is present, primarily pulp. However, in order to maintain a shaded fuel break an estimated 11,019m³ would be removed from site; the final number would depend greatly upon the fuel treatment design. Due to the large percentage of pulp a patch cut design would likely be the fuel break design.



This site is entirely within BC Timber Sales operating area. This allows BCTS to refuse cutting permits requested within the operating area. As such, BCTS was the only potential partner contacted for this site. BCTS is supportive of this project, but in order for them to participate it would be necessary to have the endorsement of BC Wildfire Service.

2.3 Springhouse Road

The Springhouse Road site is located 25km South of Williams lake. The site visit confirmed a high wildfire threat to the adjacent farms – this area did not burn during the 2017 fire season. This is the smallest of the three sites - a maximum estimated 9,845m³ of chip & saw and pulp volume is present, however in order to maintain a shaded fuel break an estimated 4,922.5m³ would be removed from site.



This site is under a legal order to manage for ungulate winter habitat. However, with support from the local forest district office, a fuel treatment can be designed that still supports ungulate habitat.

A local forestry company, Tolko, expressed willingness to work on this project. They are aware of the ungulate habitat constraints.

2.4 Partner Outreach

Partner outreach during the project was focused on government agencies and private logging companies. It was determined at the start of Phase II that outreach to adjacent farms should be postponed until there is a clear path forward for fuel removal. If these projects occurred, it would present an ideal opportunity to assist in developing FireSmart plans for all adjacent agricultural properties.

The outreach to government agencies has been promising and was still ongoing at the time of project completion. While there is some momentum building for a Phase III collaboration, at the time of writing, there have been no formal commitments for collaboration on a fuel management project in the AWI. As such, it is unlikely that Phase III would be completed in 2021 (but could be initiated within the calendar year).

Initial conversations have taken place with BC Wildfire Service to explore opportunities for collaboration on a Phase III on-the-ground pilot. The pilots will be most successful with endorsement/support from FLNRORD/BC Wildfire Service and if possible, BC Wildfire Service would be the project lead. Conversations with local staff at the Prince George, Cariboo and Northwest Fire Centres will continue through spring 2021.

Information about the potential pilot has been shared with the licensees in all three pilot areas. Follow-up with licensees will occur pending the outcome of discussion with BC Wildfire Service.

3.0 Next Steps

The next step for the identified pilot sites is continuing communications and relationship building with BC Wildfire Service and Forest Districts. These partnerships are critical to project continuation.

The ideal outcome is for BC Wildfire Service to adopt one, or more, of these sites as a pilot “Wildfire Risk Reduction” project under the [Crown Land Wildfire Risk Reduction program](#). In this scenario, the pilot site would receive funding to develop the site-level project plan as well as a supervisor from either the BC Wildfire Service or the local Forest District.

An alternative route might be to seek funding from the [Forest Enhancement Society of British Columbia](#). The next funding deadline and program criteria has not been announced. The 2020/2021 program was limited to projects that increased the utilization of fibre and rehabilitated damaged or low value stands. The 2020/2021 program criteria and funding application was announced in September of 2020 (similar timing is likely for 2021).

Regardless of the progress of these pilot sites, this project demonstrated a need to address and mitigate wildfire risk to rural producers at the landscape level. The province is moving towards landscape level planning that incorporates assessment of wildfire risk.

It will be valuable to incorporate the findings from Phase I and II into this landscape level planning. Specifically that:

1. Wildfire risk mitigation for rural producers is overlooked in the current process
2. Options exist to mitigate this risk at, or below, cost through merchantable fibre recovery

The Phase II site visits can be used to demonstrate the viability of mitigating wildfire risk in a cost-effective manner.