

Public Information Sheet - FAQs

To support further understanding of the harvesting and fuel management treatments that are being planned in the Logan Lake Trails area.



Date: April 23, 2021

The following information is provided to support a deepening understanding of the forest harvesting and fuel reduction treatments that are being proposed in the Logan Lake Trails.

The Logan Lake Community Forest (LLCF), where a majority of the proposed treatment overlaps, has been in discussions with HVOA for the last 3-4 years, including presentations to the HVOA membership, meetings with HVOA leadership and field visits with designated HVOA individuals. This engagement was used to building the plan, incorporating input and adjustments to the proposed activities over time. More recently, input from the public has been received and a variety of efforts have been implemented to continue this dialogue. Discussions are ongoing with the District of Logan Lake (DoLL), Highland Valley Outdoor Association (HVOA) and members of the public regarding the proposed treatment. Additional information may also be provided in the future as these discussions continue and the treatment prescriptions are finalized.

The following questions have been generated from questions and comments that we have received from a variety of sources. They do not represent an all-inclusive capture of all of the topics that have been discussed nor all the adjustments that have been made to the plans not the conclusion of ongoing discussions, but are designed to provide context and answers to many of the questions that have been raised.

The plans/prescriptions have not been finalized. The current state of the proposed treatment has been informed by the conversations with HVOA over the last number of years and the public input, both input and discussions that are continuing. Changes to the prescription and what is being described here are still likely. Please continue to pay attention to our website at www.loganlakecommunityforest.com for the most up to date information as well as adjustments to this FAQ document if there is a need for such.

THE PLANNED TREATMENT

What is being proposed and why does this need to be done?

Summary – a harvesting treatment followed by a fuel treatment is being planned in a portion of the trails area (see map of the proposed areas on the LLCF website)

- **Harvesting** –40% of the timber volume would be removed from the site targeting smaller diameter trees, with the remaining 60% of the volume retained in larger diameter trees. This treatment is intended to increase canopy spacing to reduce the potential for an active crown fire to start in or spread through the area.
- **Fuel Treatment** - the follow-up fuel reduction will clean up remaining surface and ladder fuels. This work is currently slated for funding by the Forest Enhancement Society of BC.

Prescription Objectives – the objectives for the treatment are multi-faceted, with the three key objectives described as follows

- **Recreation** – The Logan Lake Trails represent a significant asset for the town of Logan Lake, both for local residents as well as overall as a generator of recreation and tourism activity. This value is recognized and a significant consideration and influence in the context of the proposed treatments. The key objective of the treatment is to create an environment that reduces the potential for all of the forests in and around the trails being lost due to wildfire. Strategies are also being implemented to reduce the short-term visual impact to trail users.
- **Wildfire** – The forest conditions within the trails area are artificially overgrown with elevated fuel levels, as a result of 1) fire exclusion over the last 100 years, followed by 2) the forest health impacts such as Mountain Pine Beetle. A thinning of the canopy within this context is designed to return the forest to a more natural state for these fire maintained ecosystems, and one that will be more resilient to disturbances such as wildfire. The current fuel loading represent a significant hazard that could result in the significant loss of the forests in and around the trails (impacting the trail user experience) or impacts to the community of Logan Lake (human life and infrastructure) in the case



of a wildfire in this area. The proposed removal of trees/fuels is designed to reduce the wildfire hazard. The hazard could be further reduced with a more aggressive treatment but at this time the strategy is dialed back to account for the significant recreational values, and concerns raised.

- **Fibre** – The Logan Lake Trails area is a part of the Logan Lake Community Forest tenure and the area contributes timber volume to the overall harvesting planned across the community forest. The proposed harvesting recognizes this, while implementing significant adjustments to “typical partial cut harvesting” in response to the recreational values in the area and proximity to the community.
- **Other values** – in addition to these objectives, the planned work also considers a wide range of values and objectives as directed by the provincial government and our First Nation Partners, including biodiversity, wildlife (including species at risk), range, cultural resource values, archaeological resources, scenic quality, etc. The LLCF’s Forest Stewardship Plan references most of these management strategies and can be found on the LLCF website.

What is the treatment actually going to involve?

The treatments units have been categorized into two main treatment types (see overview map on the website for locations).

Harvest Treatment Area: Within the Harvest Treatment Area, a thinning of the mature tree layer will be completed to the specifications below:

- **Retain** 95% of trees over 40 cm diameter,
- **Retain** 50% of trees 27.5-39.9 cm diameter
- **Retain** 25% of trees 12.5-27.4 cm diameter

Additional parameters for mechanical thinning:

- **Retain** all live ponderosa pine over 12.5 cm diameter, and
- **Retain** all deciduous, live or dead.

This will result in approximately 40% volume removal mainly consisting of smaller diameter trees, and 60% volume retention mainly consisting of larger diameter stems. The trees to be removed during the harvesting treatment currently amount to approximately 7,000 m³ of fibre or 140 logging truck loads. Once harvesting is complete, a post-harvest hand and small machine fuel management treatments will be completed to the specifications below.

Hand and Small Machine Fuel Treatment Area: Certain areas have been identified within the treatment units that are being reserved from harvesting, and will only be subject to understory hand and small machine treatments. These areas include trail management buffers (10 m on either side of mountain bike/hiking trails, and 20 m on either side of cross country ski trails), outside of select designated trail crossings. There are additional no harvest zones as requested by HVOA (such as the ‘Million Dollar View’ in the southern end of LLT2), and several areas of cultural importance identified by First Nations field reviews.

Hand Treatment: A secondary fuel treatment will be completed across the “Harvest Treatment Area” using hand crews (small machinery such as mini excavators may also be considered) to target understory stems and fine fuels not possible to treat with equipment. Hand treatments could include

- spacing (of non-merchantable stems <12.5 cm DBH not cut by harvest equipment),
- pruning of branches (up to 3m to the lowest hanging branch),
- surface fuel cleanup,
- debris piling, and
- open burning and/or chipped and removed

Healthy Regeneration Patches: Where there are health patches of regeneration, these are to be mostly retained where they are located at least 1 m outside of the dripline of retained trees.

When is the treatment going to occur?

The original plan for the treatment was to initiate the harvesting component during the fall of 2021. Discussions with HVOA are ongoing and the timing of the treatments has not been finalized. Although not urgent, per se, it is important for the community and the trail system that the current wildfire risks are mitigated to the greatest extent possible as soon as possible.

One approach that is being discussed is the implementation of the proposed work over a 2-3 year period. This does increase overall costs, and extends the amount of time that activities are ongoing in and around the trails area, but is an option that some have suggested, and that the LLCF is looking into and will be discussing further with HVOA.



Regardless, the treatments will not be initiated without the full and advanced awareness of the District of Logan Lake, HVOA and the public.

What machinery is going to be used?

Will large machinery be used?

In order for the wildfire risks in this situation to be mitigated, even at a lower level as has been proposed, a significant reduction in fuels is needed. Completing this without the use of machinery will be prohibitive for two reasons

- the inability to remove the fuels (logs) without the help of machinery (size of material, amount of material).
- the need to remove the volume rather than burn it on site (site impacts, smoke impacts, carbon implications, tenure obligations, etc.)

In order to both address the size of the material and our need to avoid burning, machinery is needed and hauling of the fibre is needed to the greatest extent possible.

The proposed work would be tendered out through a Request for Proposal type process, in order to ensure fair market value and also to ensure the objectives and specifications in the prescription are met. The specifications in the prescription will be clear for the operators (limits to ground disturbance, protection of retained trees and regen, protection of trail buffers, practices when on or crossing trails, etc). These specifications will be a part of the prescription and the resulting contract and will be monitored and managed by the LLCF to help ensure the end result aligns with the prescription.

The LLCF continues to talk to contractors and our First Nation partners regarding the range of machinery that could be utilized to implement the treatments. The machinery that is eventually used will be identified through the discussions between the LLCF and the successful contractor. Given this, the type of machinery that will be used to complete the treatment has not been confirmed. Regardless, the LLCF will manage to the commitments and specifications in the prescription regardless of the size of the equipment.

Machinery is required for the harvesting treatment. It may or may not be required for the follow-up fuel treatment in all areas, depending on the fuel conditions post-harvest. It is likely that the fuel treatment will only involve a small excavator and hand crews, although there may also be an opportunity for additional fibre to be removed during the fuel treatment in order to reduce burning/smoke. In the past, the LLCF has also facilitated, albeit on a small scale based on need, the chipping of fibre to support HVOA use on and around the trails – this may also be possible through the fuel treatment.

Will clear-cutting be used?

Clearcut harvesting is not being planned. Significant levels of tree retention is being planned. Exactly what this looks like will be depending on what trees exist in a given area – there will be some variability as the current forest is variable. What is being proposed is generally described as a “thin from below”, removing more of the smaller trees than the larger trees but this over generalizes the actual treatment. Please refer to “What is the treatment actually going to involve?” discussion above.

What new roads and landings are planned?

How could these impact the trails area?

As the treatment work will be tendered out, the machinery that will be used has not been finalized. Given this, the exact road and landing specifications have not been confirmed.

The location and width of the roads and landings will be finalized once the treatment contractor has been selected. The LLCF will lead, in coordination with HVOA, the layout of the final road and landing locations as needed, including widths/sizes, including vegetation clearing widths, so as to minimize this footprint to the extent possible.

The construction of new roads is being minimized. In some cases, access to the areas for both harvesting and fuel treatment will be facilitated via the current trails (generally where these are located on old roads/skid trails) vs creating new access structures. The location of the access, overlapping some of the trails, has been discussed with HVOA and in some cases this was identified as more desirable than establishing additional road access. Please also refer to discussions below under “Trail Conditions” and the recognition of and commitments that the LLCF is making to the post-treatment trail conditions.

The proposed new temporary road section in LLT2 (see accompanying map) has been of key interest by some members of the public and HVOA. Specific attention to this road location, minimizing clearing width and rehabilitation will be implemented in collaboration with HVOA. The concept of a “25m wide road” has been



a part of the discussions. This width is not the designated width of the road, but the corridor in which the road will be located. The LLCF is committed to specific layout of this road section, with HVOA if they are interested, to ensure that concerns on this location, reducing the trees that will be removed to facilitate access, and how it interacts with the trails it crosses are managed appropriately.

Although there is interest from a wildfire suppression point of view (suppression access in the case of a wildfire) to maintain this road, the LLCF is proposing full deactivation and rehabilitation (decompaction and re-establishment of herbaceous plants and trees), including the re-establishment of the trails that crossed this road section to the approval of HVOA.

A number of landings are proposed to support the processing and loading of logs. The exact location of and size of these landings would be finalized once the treatments are contracted out and the equipment that the approved contractor is using, is confirmed. We expect that this item will involve discussions and input from HVOA. Related to this and in response to feedback received from HVOA and the public on the placement and size of the landings, the LLCF is currently looking at the options of

- Locate as many of the landings as possible away from the trails themselves,
- Identifying and laying out the landings in the field to ensure optimum location including reduced association with trails and reduced area/footprint overall while maintaining safety, and
- Feasibility of the rehabilitation of all of the landings that are associated with/connected to the trails

The results of these investigations and associated options will be discussed further with HVOA.

Will the activity open up the trails to motorized access?

The Logan Lake trails area is a designated non-motorized recreation use zone. The proposed access is designed to respect this and to reduce the risk of increasing motorized access. The following measures would be implemented to support this:

- The proposed access is from Highway 97D just east of town, a control point that is highly visible and easily monitored.
- The access from the Highway into the trails area will be closed when operations are not underway in the following ways:
 - o Temporarily when operations are underway but not active at the time.
 - o Semi-permanent - Closed when operations are not active (i.e. during the winter season). Semi-permanent closure would involve the rebuilding of the fence along the highway to exclude all traffic, and the use of blocks or boulders to re-enforce this closure as needed.
- The new road proposed in LLT2 does not create any new access points from outside the trails area for motorized vehicles access the trails area.
- The western portion of LLT2 was identified as a key barrier to motorized vehicle access to the Trails area from the west. This has been placed into a Hand and Small Machine treatment area (i.e. no harvesting) with an elevated retention level. Additional site specific opportunities to reduce the potential for motorized access will be assessed during treatment. Strategies could include both physical barriers and/or signage and education. Ongoing planning is looking into this issue.

How will Douglas-fir Bark Beetle be managed in the area?

The LLCF has completed a survey of the proposed treatment area for Douglas-fir beetle. Although it is currently present in the stand, this presence is currently not significant. The LLCF will be developing a Douglas-fir Beetle monitoring and management strategy post-harvest. The LLCF will continue to actively monitor the presence of Douglas-fir beetle in the trails area and respond accordingly.

Can't the LLCF use their funds to do the treatment?

Why is revenue from the logs being used to partially fund the treatment?

Although the LLCF has significant reserves that have been built over the last 10 + years of operations, a majority of these reserves are related to:

- Specific liabilities and obligations that the LLCF has related to legal road and reforestation obligations as well as overall Community Forest Tenure requirements
- Business contingency to ensure that the organization is on solid footing in a challenging forest management environment and cyclical log/lumber market place.

The LLCF Board of Directors has allocated some funds to “strategic projects” that could involve either recreation and/or wildfire related investments in the landbase, but these funds have been set up as a source for “seed money” that could be used to secure additional outside funds for the completion of activities. These funds are not significant enough to undertake projects of this magnitude.



In general, the more that can be facilitated through a harvest that generates some log-related revenue, the more work can be completed to mitigate wildfire risks. Each situation is different, but funding for hand treatments is limited and generally provincially funded. Funding agencies are also not inclined to fund small machine/hand treatments that are “too expensive” given the amount of volume that needs to be processed in order to meet wildfire behavior goals post treatment. In addition funding sources usually require proponents to maximize the wood fibre that is not burned, but processed for other purposes, so as to both reduce smoke, reduce the related immediate carbon emissions and generate additional economic activity related to the fibre.

In this specific case, if revenue from the logs was not factored in, then the amount of ground that could be treated would be either much reduced or excluded from treatment as funding agencies are not likely to fund the work. If this were to happen, then trails, the community and the community forest would continue to exist within a known and elevated wildfire risk situation with limited options to bridge the gaps.

Please also see the discussions below under “Wildfire/FireSmart” that speaks to the significance of the fuel loading in the Logan Lake Trails area.

Why has there not been a public meeting about the proposed activities?

The LLCF has historically, and until spring 2019, implemented an Open House every spring as the starting point for public engagement on all of our activities and would generally be the mechanism for this type of engagement. These sessions have always been well attended and they have been a great launching point for ongoing engagement. This project was presented initially at the 2019 LLCF Open House at its current stage of development. Due to Covid-19, this annual event has now been cancelled two years running. We are continuing to adjust and look for ways to fill this gap in the interim.

The LLCF has been in discussions with HVOA regarding the planned harvesting and fuel management treatments for the last 3 years. Although HVOA does not represent the general public, per se, this has provided a key mechanism through which we have been engaging and collaborating on the design of the overall approach for the project.

We have appreciated the suggestions by the public for more robust engagement in the overall plans and have been continuing to get information out and hear from the public in a variety of ways. This has included the following:

- Presentation to the District of Logan Lake Mayor and Council (a second presentation is being planned as an update)
- Community webinar regarding the project
- Increased presence and information on the LLCF website and the LLCF Facebook page
- Communicated our openness to any one-on-one conversations with the LLCF management team
- “One-on-One” Covid-friendly meetings in Maggs Park over four consecutive Thursdays in March/April
- Ongoing discussions and engagement with HVOA (see additional details throughout this FAQ document)
- Email correspondence with numerous members of the public both from inside and outside the community

We are currently looking at additional approaches to engage with the public in the coming months, as permitted under orders from the Public Health Office, including the possibility for field reviews of some of the planned treatment areas. Nothing has been scheduled at this time.

Although there may not be unanimous agreement with the proposed treatment regardless of how it is finalized, the LLCF continues to engage with the public, share information on the proposed treatment as it develops and continue to inform our work with the perspectives that are shared. The LLCF website includes contact information for any further interest in the public regarding the proposed treatments. We will continue to use the LLCF website as the key mechanism for communication of the progress of the overall. We will also be connecting periodically with the public through other mediums (Buzz, posting board, LED sign, etc.) as has been the case to date.



Wildfire Risk/FireSmart

As outlined above, the current fuel loading in and around the Logan Lake Trails represent a significant hazard to

1. The forests themselves, in and around the Logan Lake Trails
2. The community of Logan Lake
3. The broader Community Forest landbase.

This is in part due to both the exclusion of fire from the landscape (compared to historical conditions that were in part managed by indigenous peoples, where fire was a more regular part of the landscape

Can't we just do "lighter touch" treatments in the trails area?

Given the significance of the fuel problem in the trails area, and the related wildfire risks, an approach that is limited to a manual or small machine approach would not be practical in all areas. This approach is being proposed for the trail buffers as well as the specific portion on the western final of LLT2.

The use of small machinery (i.e. a mini-excavator) and/or a "lighter touch" treatment is not practical for a series of reasons, generally related to the following:

- **Cost** – significantly higher costs to implement compared to a project utilizing a combination of harvest equipment and hand/small machines, and there would remain an issue with how to dispose of the volume of fuels/fibre that is being removed. Provincial funds have been allocated to this work as a follow-up fuel treatment once the trees have been removed through a separate process.
- **Treatment Efficacy** – an approach of only hand crews and small equipment is limited to understory surface and ladder fuels, and is unable to address an overly dense mature tree layer (as the removal of full size logs requires larger equipment). If these larger trees are not removed, then this leaves the crown fuels intact and produces a much less effective fuel treatment. Reducing the canopy density is a critical objective of fuel management work as this reduces the potential for crown fire establishment and spread. For this reason, a partial harvest is being proposed along with follow-up hand crews/small machine treatment.
- **Timelines for Completion** – an approach utilizing hand crews and small equipment would take much longer to complete the 130 ha identified for treatments. Given the alarming fire seasons we are seeing in a short number of years in BC, expediting wildfire risk reduction work around Logan Lake is a key objective of the LLCF, as is demonstrated by the significant amount of work that is being done in other parts of the landscape surrounding the community.
- **Ecosystem Resilience** – The historic state of dry southern interior forests in BC is a patchwork of open forest, grasslands, and mature tree clumps. The exclusion of wildfire from the Logan Lake Trails area for the past 80-100 years has resulted in an artificial buildup of mature trees. A partial harvest in this context is ecologically appropriate surrogate to return the area to its historic fire-adapted state. The resulting condition is being designed to be more resilient to both wildfire as well as other disturbances including forest pests.

What do the 500m and 2 km FireSmart zones around the community represent? How do these relate to the Logan Lake Trails area and what is proposed?

In general, there is a 500m Wildland Urban Interface (WUI) zone around the community that is the first priority for fuel treatments in order to reduce this hazard to the community (albeit second to what individual land owners can do on their properties).

Historically, the District of Logan lake has had a range of treatments from fuel gathering to thinning to clearcut harvesting within this 500m zone including

- hand treatments with hand tools completed by our local highschool kids
- small machines/excavators and professional contract hand crews doing treatments
- industrial harvesting operations with feller bunchers, skidders and log removal for mill processing

A range of treatments have also been implemented in the last 10+ years in the 500m to 2 km zone, including clear-cutting, partial cutting and thinning treatments. In some cases the harvesting is followed up with small machine/hand treatments similar to what is being proposed for the Logan Lake Trails area. This current approach is being implemented in 2021 across 70 ha within the 500m to 2 km zone around the community (outside of the Logan Lake Trails area).



Previous treatment units within the 0-500 m zone were each prescribed based on site-specific factors (i.e. access, terrain, fuel loading, and forest composition) which influenced decisions around treatment methods. Some of the areas involved hand crews/small equipment only and others utilized harvesting (as described above). The treatment in the Logan Lake Trails area has been prescribed in the same way – consideration of site-specific conditions, values and goals. Based on the objectives of the proposed work, a partial harvest treatment followed by hand/small machine treatments was determined as the best overall approach.

Beyond the 2km zone, the LLCF is also looking at ways to design our roads, harvesting and reforestation to meet both landscape resilience and community resilience goals.

Will grass increase following treatment and just make the problem worse?

It is likely that the herbaceous cover within the treatment area will respond to the treatment and we are likely to see grass respond (increase) specifically. Although this will have some benefits (habitat and range benefits via forage, for example) it will also support the potential wildfire spread under the canopy. This reality points to the fact that as it pertains to forest management and wildfire risk management, there is a need for ongoing monitoring and adaptive management in response to changing conditions.

The overall prescription is being designed to reduce the potential for a wildfire in the area being in the crowns of the trees, regardless of the grass levels that may develop, as a crown fire is more likely to result in the negative impacts that we are trying to avoid. Having said that, the fuels (both grass and other fine fuels) will need to be monitored over time in order to support the objectives for the area. The LLCF will monitor this fuel loading, potentially in coordination with HVOA, to ensure that the range of objectives for this area continue to be supported.

The LLCF will be developing a post treatment monitoring plan for the area that will include, amongst other things

- Forest fuels - to ensure the fire behavior objectives continue to be met in the treatment area over time
- Forest health – to ensure the health of the forest is managed including forest pests
- Invasive Plants – see section on this topic
- Other factors as identified in collaboration with HVOA

Through funding from the Community Resiliency Initiative, the LLCF also investigated options around targeted grazing within fuel reduction treatment areas around the town of Logan Lake, including promising conversations with the local ranchers. More planning around this initiative is needed as well as discussions with HVOA on the applicability (or challenges) related to this strategy within the trails area.

Wildlife/Biodiversity

What about the impact of the treatment on the forests/ecosystems in and around the trails area?

As mentioned above, the forested ecosystems in the project area are generally more in-grown with significant fuel loading when compared to historic conditions. The ecosystems in this area have been impacted by over 100 year policy around fire exclusion, coupled with a more recent Mountain Pine Beetle epidemic. First Nations likely had a role for millennia in the application of fire in these landscapes. Changes we are starting to see and can expect in the future related to climate change are expected to exacerbate the situation.

Given the current condition of the stand, its resilience under disturbance is limited, most specifically to wildfire (given fuel loading, continuity of fuels and risk of significant crown fires). In addition, inter-tree competition for resources has been noted and we expect will increase in light of climate change. We expected to see improved growth and health in the retained stems following treatment.

The forest in its current state is not resilient and the likely result will be catastrophic loss of the stands around the trails to wildfire (along with the potential impacts to the community and the surrounding forest land). Evidence of this condition and the potential impact of these conditions can be seen in the 2017 Elephant Hill fire where significant tracks of old forests and specifically large/old Douglas-fir trees were lost, due in part to the significantly high fuel loads related to fire exclusion and/or Mountain Pine Beetle.



The proposed treatment will change the forest ecosystem and the dynamics within it. Having said that, the resulting stands are expected to be variable, both related to the trail buffers that have been proposed but also because of the inherent variability in the stand pre-treatment. The treatment will leave it in a more resilient condition, more like what we would have expected pre-colonization, and one that will be more likely to withstand future disturbance. This more resilient stand will then be able to support a wide range of species over the long term.

What will the future structure of the forest be? Are you planning for this?

The long-term trajectory of the stand needs to be a consideration in any and all forest management decisions.

The planned treatment should be seen as the first of ongoing entries into the stand so as to ensure it is resilient and continuing to provide the values that are expected from it over time. A range of factors will influence what subsequent entries into the area may look like, including things such as

- How it responds to the treatments.
- How recreation values change or develop in the area.
- How the community develops and grows.
- How climate change develops over time, including drought, tree growth/mortality, etc.
- How disturbance may impact the stand in the future.

It is not likely that there will be additional entries into the area for many years following this treatment. It does depend, however, on the changing conditions on the landscape and the changing societal expectations over time. See reference elsewhere in this document to post-treatment monitoring that is being planned.

There are a range of possible follow-up treatments within the stand that could be used to support a range of different values, from wildlife to timber to range to wildfire (e.g. planting - brush species, deciduous or otherwise, snag establishment to support biodiversity goals, further tree removal to create open pockets where regeneration will better establish, etc.). Key first step is to ensure the overall resilience of the stand in the presence of wildfire or other disturbance agents, which is the key focus of the proposed treatments. The LLCF would monitor conditions within the treatment area and partner with HVOA in the implementation of any of the proposed activities, given our overlapping tenures.

How were wildlife considered in the design of the treatments?

Wildlife and wildlife habitat is considered by LLCF throughout all of our operations, in a number of different ways, all of which are relevant to the planned treatment in the Logan Lake Trails area.

Biodiversity is managed at two different scales

- **Stand Level** – biodiversity is considered and managed at a stand level through Wildlife Tree Retention in the form of either dispersed retention or in designated Wildlife Tree Patches that are retained. In addition wildlife trees are also flagged for retention where worker safety is not compromised. Coarse woody debris retention is also managed.
- **Landscape Level** – biodiversity is considered and managed at a landscape level in part through the designation and retention of Old Growth Management Areas. Some of these areas (generally reserved from harvest) are located across the Logan Lake Trails area.

Habitat for **regionally important wildlife** as identified in the Kamloops Land and Resource Management Plan and entrenched in our Forest Stewardship Plan are considered, but not identified by the province as a priority for special management within the treatment area. If it were present, specific assessment and management practices would be implemented as outlined in our Forest Stewardship Plan

Designated **Species at Risk** are specifically considered through a range of practices that include the training of our staff on species at risk, development of habitat models from ecosystem and individual tree inventory data to support field assessment. Where species at risk are made known (e.g. noted in the Conservation Data Centre) or identified as present during pre-treatment field assessments, practices would be adjusted to reflect their presence and conserve the species accordingly. No Species at Risk were noted during the field assessments that have occurred in the project area. Where species at risk presence is noted during treatments that are underway, activities would be halted to the extent necessary to conserve the species, with plans adjusted accordingly. Specialists within the Ministry of Forests Lands and Natural Resource Operations and Rural Development would also be notified.

The potential presence of **migratory birds** within the project area will influence the timing of operations. This is reflected in the prescription.



One additional item that is currently being investigated is the use of coarse woody debris piles (known by some as “critter piles”) that provide a range of habitat value to various species. The benefits of these debris piles needs to be balanced with the elevated fire behavior that could result in the case of a wildfire, that could them have more significant impacts on the stand overall. The presence of these piles would need to align with BC Wildfire requirements around fuel hazard post treatment. In addition, these piles represent opportunities for errant individuals who may decide to light them. In all three cases, these issues can be managed to a large degree by the placement of the piles and also the number and size of the piles. The LLCF will be looking at the incorporation of these structures across the projects area, with the specific design and outcomes captured in the finalized prescriptions.

A broad goal of the proposed treatment is to support the development of a forest and landscape that is resilient to disturbance, so that it will be able to continue to support a range of wildlife species.

Will you be retaining the wildfire trees or snags?

Wildlife trees and snags represent a significant biodiversity value within the forests within the treatment area. The proposed treatment will retain identified the high value wildlife trees/snags. These will be identified and marked by LLCF prior to treatment. Due to safety concerns, there may need to be machine free zones implemented around these trees that would then have follow-up fuel treatments to clean up surface fuels within them in order to meet overall prescription objectives.

Will the treatment increase the spread of invasive plants?

Invasive plants have the potential to spread following the planned treatment. In response to this, prior to treatment, and in coordination with HVOA and their responsibilities around invasive plants, the LLCF will be completing an Invasive Plant Inventory and Management Plan that will address the management of this hazard before, during and following treatment.

The scope of the practices that will be implemented will be dictated by the inventory and how the presence of invasive plants could be influenced by the proposed treatment.

Also noteworthy is the requirements the LLCF has within our Forest Stewardship Plan to manage for Invasive plants. This will be augmented by the specific strategies that will be included in the Invasive Plant Management Plan that will be developed prior to the treatment commencing.

Trails Conditions

How is the immense value of the trails to the town of Logan Lake being recognized and fostered?

The LLCF recognizes the importance of the Logan Lake Trails Area as well as the presence of trails in and around the town. We have supported a range of groups and initiatives related to trails (motorized and non-motorized) including the following

- Development of trail maps for the Logan Lake Trails area (for HVOA)
- Supporting discussions between HVOA and local indigenous groups to support future interpretive trail signage
- In-kind investments and funding to support the establishment of the Mimi Falls Trail
- Grant applications, seed money and management services to support Off-road vehicle Development on the broader landscape around Logan Lake
- Engagement with local equestrian interests in trail establishment, facilitating the supply of post/rail material
- Sponsorship of local trail events to support economic development goals for the community
- The Strategic Plan of the LLCF includes the recognition of the recreation and trails specifically including the support for District’s development of a trails strategy for the region. We continue to support the DoLL in moving this initiative forward.
- The LLCF is developing an Operational Agreement with HVOA to address the operational implementation of the proposed treatment. The agreement is currently being drafted but is likely to include safety, signage, communications, monitoring and inspections, etc.



How will the treatment impact ski-trail conditions?

The LLCF has been consulting with HVOA regarding this topic. There is a concern for this in some cases and a sense that it may not be as big of an issue in other areas. Having said that, the implementation of “alternative management” buffer zones along each side of the trails was in part developed to address this concern.

Pre-works with the contractors that secure the harvesting and fuel management contracts will be carried out in coordination with HVOA to discuss this concern and how it will be managed through the treatment activities.

As discussed with HVOA, the LLCF will also be taking direction from them for the select removal of trees adjacent to the ski-trails (within the treatment area) that are a hazard to trail users and a challenge for ski-trail maintenance (grooming and/or ice).

How will the impact of the treatment on the trail surface be managed?

The LLCF is keenly aware of the significant care and attention that HVOA volunteers have invested in trail surface maintenance in order to support cross country skiing activities overall and specifically in low snow conditions.

As noted above, a number of the current trails will be used as access for harvesting and hauling of wood. In addition, designated crossing of some of the trails will be established to facilitate the treatments.

The LLCF commits to the following as it pertains to the trail conditions

- The LLCF will work with the HVOA to locate the designated crossings of the trails
- Review the trail conditions with HVOA pre-treatment and ensure that the trail conditions are returned to a state that will not negatively impact their on-going use. It is understood that if treatments are carried out over multiple years, that trail remediation may be required multiple times (e.g. each year, pre-snow)
- Install a number of culverts on the current trail network as previously identified by HVOA to support long-term trail maintenance and usability in spring/summer/fall
- Other trail improvements as identified by HVOA that could be captured during operations.

As previously discussed with HVOA, the LLCF will take guidance from HVOA on where we could use the machinery that will be present on site to fix or improve the trails across the treatment area if desired.

In addition, and pre-treatment, LLCF will make sure that the additional HVOA assets and investments on the landscape in and around the treatment area have been identified to ensure protection during operations (i.e. light poles, cable, caches, etc.)

How will the treatment be managed to reduce the visual impact to trail users?

In response to input from HVOA, buffers along the trail systems have been implemented that represent modified treatments within these corridors. See detailed treatment details included above. This approach was designed in part to provide some visual buffering between the trail users and the treatment.

The treatments in the forests in and around the trails will be noticeable from the trails – more or less across the trail length. The changes will be more noticeable within the first year or two from treatment and fuels (branches/needles) and ground vegetation adjusts to the changed conditions. Because the harvest treatment will be followed by a fuel treatment, the noticeable components of the treatment, generally related to post-harvest slash and debris, will be minimized.

Due to the trail buffers (alternate treatment zones) and the inherent variability in the stand, it is expected that the view from the trails will be variable. The modified landscape will provide a different user experience, more so where the treatment is more visible. The resulting user experience will change over time, both in response to the treatment but also over the longterm as the ecosystems continue to develop and change.



Next Steps

Public Engagement - As of the date of this submission, the LLCF is continuing conversations as initiated with the public and we are working to organize a spring field review - pending Covid limitations as per the Public Health Office.

HVOA - The LLCF is also working to continue discussions with HVOA regarding both

- The proposal overall, including scope, approach, timing. These discussions will continue to work to address, to the extent possible, the ongoing concerns and questions. See "Ongoing Planning" below.
- Operational details around the proposed activities, including what LLCF is specifically committing to, how HVOA and LLCF will communicate, etc. Work on the operational agreement will address a number of the detailed concerns that have been raised as well.

Ongoing Planning - The LLCF is continuing to look for ways to respond to the items raised and the ongoing discussions with the public and HVOA. A few of these items are as follows (in addition to adjustments already made)

- **Timing of Operations** – LLCF is investigating ways that could allow the proposed activities to be implemented in a staged fashion (e.g. LLT1 first?) through which the treatment and the end result can be demonstrated prior to further treatment being implemented.
- **LLT2** – grappling with the concerns related to the proposed road in this area, within the context of the fuel hazards and the need to remove volume through a treatment
- **Landing Locations** – possible locations away from roads, laid out in advance of treatment, etc.
- **Road Locations** – lay out the road centerline and ROW specifically to reduce impact to larger trees and support rehabilitation
- **Operational Agreement with HVOA** – to deal with all of the details so that there is common understanding between LLCF and HVOA on how activities would proceed once prescription is finalized, in specific commitments by LLCF to HVOA regarding these details.
- **Machinery** – continuing to have discussions with local operators including First Nations to understand local capacity, machine configurations, etc. in order to inform the overall discussions

Thanks for taking the time to review this package and for the overall interest in this project. Please do not hesitate to reach out further as desired with additional questions, comments or ideas.

<http://www.loganlakecommunityforest.com/fuel-management-in-the-logan-lake-trails/>

