

KALESNIKOFF

TIMBER INSPIRES



North Selous Wildfire Risk Reduction Harvest Plan Information and Feedback Form December 1, 2020

Introduction: Wildfire Risk is Prompting Collaboration Between Government, Stakeholders, and Forest Tenure Holders

Significant efforts have been underway for a number of years to assess and mitigate the wildfire threat to the communities and citizens of British Columbia. Because most of BC's ecosystems are naturally affected by wildfire to some extent, the issue is complex in nature and broad in scope, without quick or easy solutions. An unfortunate reminder of the scale and urgency of this issue came when the province experienced two of the worst wildfire seasons on record during 2017 and 2018. The 2017 fire season saw an unprecedented (in recorded history) 1.2 million hectares burned, and the subsequent 2018 season broke that record with 1.35 million hectares burned. Tens of thousands of people were evacuated from their homes each summer, and fire suppression costs exceeded \$600 million each year. The following is a link to the BC Wildfire Service (BCWS) Wildfire Season Summary web page:

<https://www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-history/wildfire-season-summary>

While wildfire is a natural agent of change in our forests and has been for millennia of British Columbia's history, there is a clear and growing need to mitigate the potentially catastrophic effects on our society. Furthermore, predicted changes to our climate are expected to make matters worse over time. There is a broadening realization that in order to effectively reduce these risks, forest tenure holders will need to participate by working to reduce forest fuels near communities, and by promoting forest conditions that are resilient to wildfire and other climate-induced stresses. Accordingly, Kalesnikoff has been working collaboratively with the Regional District of Central Kootenay (RDCK) and others to treat an area near the City of Nelson. This document is intended to provide the public with information and an opportunity to give feedback regarding the resulting plan.

Background: Why is this Project Important, and Who is Involved?

There is a growing consensus amongst leading wildfire experts, local and provincial governments, forest professionals, and ecologists that many of BC's forests are increasingly in a state that can pose a considerable wildfire threat to communities, especially given predicted climate change variables which most agree will likely exacerbate the problem over time. Recent fire seasons have impacted residents and the province in a number of ways, and highlighted our society's vulnerability to this natural hazard. The City of Nelson has been identified by one expert as being the most vulnerable city in BC of over 10,000 inhabitants based on the surrounding forest cover. A 2018 article in the Nelson Star covered this topic, and the link is included below:

<https://www.nelsonstar.com/news/wildfire-nelson-most-endangered-in-bc-towns-over-10000-expert-says/>

The sentiment was reiterated recently, in another article published by the Nelson Star. Several other consultants were reached for comment and cited here:

<https://www.nelsonstar.com/news/nelson-at-highest-risk-for-wildfire-expert-says/>

With the increased recognition of this potential threat to our communities has come corresponding agreement that fuel reduction treatments in strategic areas can help to reduce the risk of catastrophic effects, and are likely one of the more effective methods to do so. As is always the case when dealing with natural ecosystems, the inherent complexity of exactly what to do requires a great deal of forethought followed up by careful implementation in order to balance values and avoid unintended consequences. As such, the North Selous proposal has been created through a collaborative planning effort with invaluable advice and input from a number of leading local experts. It is important to acknowledge the efforts of these people and their contributions to the planning process. A few of the key contributors to this plan are listed below:

John Cathro, Cathro Consulting – John has been working under contract with the RDCK for several years as a leading local consultant on community wildfire protection. He has an impressive portfolio of experience in the natural resource management field in general, and has completed extensive work on numerous Community Wildfire Protection Plans (CWPP's) and fuel management prescriptions throughout the region.

Erik Leslie, Leslie Resource Consulting – Erik has an extensive background in forest management in the West Kootenays. He is currently the Forest Manager for the Harrop-Procter Community Co-operative (a Community Forest Agreement (CFA) tenure holder), and spent time as the President of the BC Community Forest Association. Erik has applicable experience in planning and implementation of fuel treatments, both in the Harrop-Procter area and alongside local leaders in this field at the Slocan Integral Forestry Cooperative (SIFCo).

Greg Utzig, Kutenai Nature Investigations Ltd. – Greg is a well-known local professional with extensive experience in a number of natural resource fields including forest ecology, terrain stability, and climate change. Greg is unquestionably one of the leading local experts in climate change science, and has completed advanced adaptation and analysis of larger-scale climate change models to make predictions that are regionally relevant to the West Kootenays.

Joel Hamilton, Regional District of Central Kootenay – Joel is the Wildfire Mitigation Supervisor with the RDCK, and has extensive experience in prescribed burning and wildfire management. Joel is a key member of the RDCK Emergency Management team, and leads the local FireSmart program.

Art Westerhaug, BC Wildfire Service – Art is the Wildfire Officer for the Kootenay Lake Fire Zone. He is a Nelson local who has extensive experience in prescribed burning and operational wildfire suppression in the West Kootenays and other parts of the province.

Len MacCharles, City of Nelson – Len is the Fire Chief & Director of Emergency Management for the City of Nelson, and has been a strong supporter of community wildfire protection initiatives and emergency management planning in general. He has been instrumental in terms of promoting a collaborative approach and helping to reach the public with the broader message of fuel management on both public and private lands.

Who We Are:

About Kalesnikoff:

Kalesnikoff Lumber Company is a local, fourth-generation family-owned company based in Thrums, B.C. We have lived and worked in the west Kootenays for 80 years and care about our local communities and our employees, contractors and suppliers who we consider extended family.

We create our plans and make decisions based on local knowledge of our forests, environment, communities, and on evolving best practices in sustainable forestry. We live here, and our forestry and business practices reflect our ongoing pride in our legacy of taking care of the land and people in our area. We are committed to making the most of every tree we plant, harvest and process — striving to create the most benefit for our employees, the community and our customers.

We're trying to improve how we work with local communities in advance of harvest operations to better understand their priorities, concerns and interests, and we develop our final harvest plans based on community input as well as technical, regulatory and environmental considerations.

Our Commitment:

Kalesnikoff will:

- a) adhere to government regulations and guidelines when planning and conducting harvesting activities.
- b) adhere to the results and strategies described within our approved Forest Stewardship Plan, available on our website, at <https://www.kalesnikoff.com/>
- c) carefully consider the various risks of our harvesting activities and seek the advice of third-party Qualified Registered Professionals as necessary throughout our planning process.
- d) utilize the most up-to-date imagery and technology available to help draft operational plans.
- e) prepare detailed drainage plans where necessary.
- f) use modern road building practices with attention to maintaining natural drainage patterns.
- g) use environmentally sound timber harvesting practices.
- h) carry out monitoring and maintenance of roads and structures on a regular basis to avoid issues that may be caused by weather events or improperly functioning drainage structures.
- i) carry out reforestation of harvested areas in a timely fashion, with an appropriate species mix which considers site-specific conditions and climate change variables.
- j) operate in a manner that limits environmental impact, prevents pollution, and protects the health and safety of our employees, contractors and the public.
- k) incorporate scientific discovery, government direction, public feedback, and local knowledge to reduce our environmental footprint and help further the public interest by continuously improving the sustainability of our operations over time.
- l) engage with indigenous peoples, local communities and the public in an open and transparent manner.

How this Public Referral Document Works:

In collaboration with the RDCK and other key contributors listed above, Kalesnikoff Lumber Company has developed a proposed harvest plan within our Selous Creek operating area. This plan will include one or more cutting permits (CP's) that will be applied for under our forest license (FL A30172), which provides timber rights on provincial Crown lands. The timber harvesting phase of the plan will selectively remove tree species which represent the highest risk for a damaging wildfire, while retaining significant numbers of drought and fire-resilient trees, creating conditions for subsequent fuel removal work that will reduce the wildfire hazard. We are sharing this plan with indigenous peoples, stakeholders and the local community to provide information about key factors we've identified and considered, the proposed fuel reduction treatment areas and other identified forest values, and to seek your input on other information you believe should be considered in our plans.

Please review the proposed harvest plan and related information in this document, then feel free to provide your input in the section marked "FEEDBACK FORM" by **January 29, 2020**. This document and the Feedback Form can also be accessed through the Forest Stewardship page of our website at the following address: <https://www.kalesnikoff.com/sustainable-forest-stewardship>. It can be completed and emailed to referrals@kalesnikoff.com, mailed to PO Box 3000 Hwy 3A, Thrums BC, V1N 4N1 or a hard copy dropped off at our main office at 2090 Hwy 3A in Thrums. You can also share your input by simply emailing comments or questions to the same address or by calling our office at 1-250-399-4211, extension 231 for Gerald Cordeiro, our Forest Development Manager.

If you'd like to receive email updates regarding this proposal and plan, or any of our other activities in your specific area of interest, please provide your email address and contact info in the Feedback Form, or email it to referrals@kalesnikoff.com. Please tell us briefly who you are, and advise if you hold a water license or other tenure rights on Crown land, plus any other information you think could be important. Thank you

About the Proposed North Selous Harvest Plan:

Strategic Importance of this Location:

The Community Wildfire Protection Plan update completed in December of 2016 for RDCK Area E identified North Selous as a high priority treatment area. CWPP's for the Regional District can be found at the following address: <https://rdck.ca/EN/main/services/emergency-management/community-wildfire-protection-plans.html>

The Selous Creek north area has strategic importance for wildfire hazard mitigation for a number of reasons, including the following:

- Its proximity to the City of Nelson and critical infrastructure, including public waterworks and the Selous Creek watershed. A wildfire in this area could have the potential to threaten areas within the City due to an advancing fire front or by creating an ember shower that could cause significant damage well beyond the fire front.
- Its proximity to the Great Northern Rail Trail, a popular recreation feature. Historic trestle bridges along the trail would be vulnerable to damage in the case of a fire. This high-traffic feature could also be a potential zone for human-caused ignitions.
- Forest fuel types identified during CWPP field investigations and verified further by subsequent field work which are conducive to aggressive fire behaviour.
- The existing road infrastructure in this area gives an opportunity to create a fairly large-scale fuel break which would give firefighters anchor points and safe travel corridors for direct or indirect fire suppression operations. With some additional access roads, the ability to suppress either a wind-driven fire advancing from the south or a slope-driven fire advancing uphill can be increased, and a significant area covered by fuel treatments. No new roads are required within the Selous Community Watershed, nor is any harvesting proposed within it.

The Collaborative Planning Process – How We Arrived at this Point:

Wildfire risk reduction work has been the subject of collaborative planning efforts in the West Kootenays for some time now. In 2016 The Forest Enhancement Society of British Columbia (FESBC) was formed and funded by the provincial government. FESBC has a mandate to enhance BC's forests in several ways, including by improving our resilience to wildfire. A link to the FESBC website is provided below:

<https://fesbc.ca/index.html>

Later in 2016, collaborative planning meetings in the Nelson area began with a focus on wildfire resilience and how to effectively access FESBC funding. These meetings consisted of representatives from provincial and local governments, forest licensees, the City of Nelson, BC Parks, and the West Kootenay EcoSociety. There was general consensus that forest licensees have an important role to play in terms of wildfire risk reduction, as they have the tenure rights and means to complete much of the work prescribed by the CWPP's and subsequent fuel management prescriptions (FMP's) for high priority treatment areas on Provincial Crown lands.

Given the recognized importance of the Selous treatment unit, the RDCK sought funding from FESBC to write prescriptions for the area. Once funding was secured, planning efforts involving the RDCK, Kalesnikoff, and several local experts resulted in an operational plan to conduct extensive partial cutting, creating a 'shaded fuel break' intended to reduce aggressive fire behaviour and to allow suppression crews to safely access the area. The shaded fuel break stand structure reduces the ingress of young conifers and maintains space between larger fire-resilient trees, such that re-treatment is possible at a reduced cost in the future. The operational plan has now been funded by FESBC for enhanced fuel reduction activities to occur concurrent with and post-harvest in order to reduce fuel loading in the area to an accepted level.

More recently, FP Innovations, a private not-for-profit R&D organization has been engaged to assist with this project in a research capacity, with the intent to help guide and inform future wildfire risk reduction efforts of this type. The Selous project is an important leading step in our collective understanding of how we can come together as a society to safeguard our communities against wildfire.

General Planning Considerations for Wildfire Risk Reduction in the West Kootenays:

The operational fuel reduction plan for the Selous treatment area generally involves using various techniques to strategically reduce overall fuel loading while targeting fuels that are most likely to contribute to wildfire spread and aggressive behaviour. Several key characteristics of forests are considered when assessing wildfire risks and hazards. The following are some of the main elements that have been identified in this proposal:

Tree Species and Forest Composition – Some tree species create a higher level of threat compared to others, or have other characteristics that make them more or less susceptible to wildfire. Examples include bark thickness, branching habit, average moisture content, flammability of foliage, natural regeneration tendencies, and expected climate change resilience. In the case of the Selous area, the general order of preference for coniferous trees to be retained on the landscape with respect to climate change and fire resilience is as follows: Ponderosa pine, Western Larch, and Douglas-fir. These species are adapted to fire-frequented landscapes and generally have thick bark, fewer low branches, and good drought resilience.

White pine is additionally preferred as a leave tree species where it occurs due to its drought tolerance and ability to regenerate after a fire. Large diameter Grand fir can also be fairly resilient as its bark thickens with age. Species most favoured for removal are: Western hemlock, Western red cedar, Lodgepole pine, and Engelmann spruce. Each of these species has thin bark and a low tolerance for surviving fires. While some of these species may naturally regenerate after a fire, they generally tend to have overall low thresholds for climate change resilience, branching patterns which can increase the potential for a ground fire to move up to the crown ('laddering'), or regeneration patterns which may result in an elevated fire threat in the future (high density young coniferous stands can create a hazard in certain scenarios). In general, all deciduous species are preferred to be retained, as they have a relatively low risk for aggressive fire behaviour. Douglas maple can create a problem if overly abundant as it has a tendency to remain standing for some time after dying, resulting in very dry and hot-burning fuels.

Tree Canopy Closure and Forest Density – The concept of a 'shaded fuel break' relies on a significant amount of standing timber to remain, giving shade to the ground below and reducing wind velocity. This has the two-fold effect of maintaining lower surface temperatures/higher relative humidity and suppressing the regeneration of a dense conifer understory. A dense understory can burn readily, and enhances the ability of a fire to move upward into the crowns of larger trees. Residual overstorey trees should be dense enough to provide shade, reduce the ability of wind to penetrate to the forest floor, maintain ecological values such as habitat and biodiversity, provide a seed source for an appropriate rate of forest succession, and maintain visual quality. This density is balanced against the requirement to achieve some space between tree crowns such that a wildfire will not readily jump from crown to crown. Additionally, in steep terrain such as some parts of the Selous area, operational and especially safety constraints do not permit easy single-tree selection harvesting techniques. A careful balance is required to achieve the desired results.

Surface Fuels Before and After Harvesting – The volume, distribution, moisture content, species and size of woody surface fuels has been proven to play a major role in determining wildfire behaviour. Forests with abundant dry, elevated surface fuels can support an intense and fast-moving ground fire which has the ability to both work its way below the surface and create the heat and drying necessary to initiate and sustain an active crown fire. Removal of currently-existing heavy fuel loads where they exist, and post-harvest residual fuels is paramount to the reduction of potentially aggressive fire behaviour in the residual stand. In the Selous treatment area, a combination of FESBC support for the removal of fibre which does not meet sawlog size or quality specifications and delivery to secondary manufacturers (in this case, most likely to the local pulp mill), and support from the BC Wildfire Service to conduct prescribed burns of unusable harvest residues will reduce surface fuel loading to acceptable levels.

Anchor Points and Safe Access for Suppression Crews – Forest fuel treatments are intended to minimize aggressive fire behaviour and allow suppression crews to work safely to extinguish fires before they can affect communities, but they cannot stop fires from occurring. Given predicted changes to the local climate, wildfires are still likely to occur, and are expected to occur with greater frequency over time. There is no feasible mechanism to stop ignitions, so fuel treatments of this type are aimed more at forest resilience and an ability to manage fire on the landscape over time rather than to stop it entirely. Fire suppression efforts require safe spaces from which to work. These 'anchor points' or fuel free areas where a fire guard or back burn may be initiated are critical to the success and safety of suppression efforts. These may

include bodies of water or wetlands, roads, large rock outcrops, and other natural or man-made fuel free zones. The existing road network in the Selous area along with several new proposed roads will form the access infrastructure and anchor points for future suppression activities. The shaded fuel break retention system with a low level of surface fuel will allow firefighters and aerial support to more safely and effectively attack a fire either directly or indirectly.

Other Planning Requirements and Considerations for the North Selous Area:

While wildfire risk reduction and community resilience are the primary drivers behind this project, many factors must be considered when planning any timber harvest operation on Crown land in British Columbia. Careful consideration must be given to other values across the landscape, and a balance struck between wildfire risk reduction and myriad societal benefits derived from Crown forest lands. The following are some of the main planning considerations specific to the Selous area:

Climate Change – One of the principal concerns with respect to wildfire risk in the West Kootenays is how expected climate change impacts will likely increase the threat over time. Warmer temperatures coupled with deeper summer droughts can lead to more aggressive fire behaviour and a longer annual fire season in general. Additionally, climate-induced stresses can lead to forest health issues such as insect infestations, drought kill, and windthrow, which all contribute to the amount of dry fuel available to burn if/when an ignition occurs. Local expert Greg Utzig, P.Ag. has been able to provide some guidance through his extensive research over the past decade or so in this field. Mr. Utzig and his associates' work arguably represents the most comprehensive and up-to-date body of climate change science available which is directly related to the West Kootenays. A large portion of this work is hosted on the Kootenay Resilience website, found at the following link:

<http://www.kootenayresilience.org/>

Additionally, Kalesnikoff commissioned Mr. Utzig to perform a literature review of available research articles relating to fuel treatment efficacy where treated areas have subsequently been tested by wildfire. His report summarizes the findings of a number of studies and makes some recommendations specific to the Southern West Kootenays. This report has been used to help inform decisions around retention levels and mitigation techniques for North Selous based on an extensive review of a large number of case studies. Mr. Utzig's report is available on the Kootenay Resilience site and also on our website at the following address:

<https://www.kalesnikoff.com/sustainable-forest-stewardship>

Kalesnikoff is also proposing a pilot project to utilize agroforestry/agroecology principles as a climate change adaptation strategy and to promote local food sustainability while maintaining areas of Crown land adjacent to communities in a state of long-term fire resilience. More information regarding the Selous in Bloom initiative is included later in this document.

Domestic Use and Community Watersheds – The City of Nelson relies principally on three Community Watersheds to supply clean drinking water to residents, and wildfires can pose threats to water quality, quantity, and timing of flow. This proposal does not include any harvesting within Community Watersheds; however, watershed integrity is a primary consideration for all timber harvest operations. The North Selous fuel treatment area lies between the Selous Creek and Anderson Creek Community Watersheds. As such, this proposal does not have direct implications with respect to impacts for City water supply. Existing access roads in the area will be upgraded, allowing easier access for potential fire suppression activities

which could help to stop wildfires in the area from encroaching on the Community Watersheds. Ward Creek, a short distance to the north of the fuel treatment area, is another important domestic use watershed. No harvesting is proposed within this catchment either. There are several small licensed waterworks in the vicinity of this proposal, located at springs originating on the face between the Community Watersheds. Kalesnikoff has engaged in consultation with the licensed water users in order to ensure no detrimental effects occur to those sources.

Visual Quality – The identified visual quality objective (VQO) for the North Selous landform is ‘Retention’. Due to the City of Nelson’s high level of tourism and appreciation for all things natural, this VQO limits the amount of visible alteration from forestry activities to those which are difficult to see, small in scale, and natural in appearance. Visible alterations should generally not exceed 1.5% of the perspective view of the landform from a significant public viewpoint. While the proposed shaded fuel break treatment will see significant retention throughout the harvest areas, it will not be practicable to meet this requirement entirely. Steep slopes requiring overhead cable harvest systems will necessitate the removal of narrow strips of trees, leading to visible alterations of the landform. In order to proceed with this proposal, Kalesnikoff will need to satisfy the local District Manager for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) that all appropriate efforts have been made to mitigate the visual impacts of the project, and that the result is an acceptable compromise. Examples of Kalesnikoff’s strategy to achieve the desired result are:

- 1) Pre-harvest visual design, including:
 - Avoidance of rectilinear boundaries and geometric block shapes
 - Extensive in-block retention, to the extent practicable with respect to worker safety
 - Strategic location of reserved timber to mitigate the visual impact of roads and harvested areas
- 2) Utilization of LiDAR data and 3D modelling software to accurately predict the visual impacts from harvesting and road construction. Simulations are created for several significant public viewpoints and are used to improve on potential problem areas before harvest occurs and to ensure the post-harvest condition is consistent with expectations.
- 3) Prompt re-planting of harvested areas where applicable and grass-seeding of road cut and fill slopes to promote the fastest possible green-up of visible alterations.

Below is a recent photo of the North Selous landform, and an image of the initial simulation showing the expected post-harvest condition as viewed from Highway 3A. As a comparison, more trees will be retained in the new harvest areas than were in the nearby existing cutblocks visible in the photo.



Recreation – The North Selous landform is a well-visited recreation area for multipurpose trail use, including the very popular Salmo-Troup Great Northern Rail Trail, Stanley Trail, and The Vein downhill mountain bike trail. While there will be some temporary closures required for the safety of trail users, long term impacts to existing trails are expected to be minimal. Considerable efforts will be required in the vicinity of The Vein trail to avoid excessive drying of the trail bed due to the more open canopy in the residual stand. The significant removal of surface fuels as a result of this project may also create opportunities to expand and enhance the trail system in this area, since much of the work to remove the woody debris will already be completed. The intended result of this project is a fairly open forest type dominated by large trees and with a relatively clean forest floor. We believe the long-term effect can be to actually enhance recreational opportunities in the area.

Terrain Stability – Like many areas around the West Kootenays, North Selous has variable terrain with some steep slopes and a disturbance history which includes fires, mass wasting events, logging and mineral exploration. These factors can contribute to increases in the risk of further mass wasting in the form of debris slides, debris flows, and rock topple. To ensure elements at risk such as private land, water quality and infrastructure, recreation trails, and

Highway 6 are not adversely affected by terrain hazards, a detailed terrain stability field review (DTSFR) was undertaken to identify any potential risks which could be increased by this project. The DTSFR identified several areas of interest, and highlighted pre-existing and potential future areas of instability. Areas where timber harvesting and/or road construction could significantly exacerbate the existing terrain hazards will be removed from this proposal. Additional field work to confirm drainage patterns and to more thoroughly assess elements at risk will be undertaken during snow-free conditions in the field season of 2020 to ensure the appropriate areas are removed where warranted. The full assessment report will be available on our website along with the other supporting information referred to in this document.

Ecosystem Function and Forest Health – Due to the relatively large scale of this project, an important planning principle is to ensure natural ecological processes and ecosystem function are maintained throughout the area. This includes considerations for interactions between plant communities, maintenance of wildlife habitat, hydrological functions, and forest succession. The overarching goal in this respect is the long-term maintenance of an adequate amount of mature forest cover. A number of factors are considered, including the following:

- 1) Expected climate change outcomes of increased summer temperatures and decreased available soil moisture during periods of drought will likely lead to a general decline of species such as cedar and hemlock at lower elevations. As these trees die off over time, they will likely contribute to an elevated fire hazard.
- 2) If fire return intervals become shorter as expected, a fire resilient ecosystem is desired. In this case, the goal is to facilitate a persistent ecosystem with a forest canopy comprised of large fire-resilient species that can withstand more frequent low intensity burns and still maintain forest cover.
- 3) Insect infestations are likely to become more common, and the West Kootenays are already experiencing greatly elevated levels of Douglas-fir bark beetle. The North Selous area hosted a major outbreak that was significantly reduced by sanitation harvesting only a few years ago. While decreasing the numbers of other selected tree species should generally allow the remaining Douglas-fir to thrive in an environment with less competition, significant efforts to monitor the area for further infestation will be required, and targeted management strategies will be employed in an attempt to maintain populations at an endemic level.

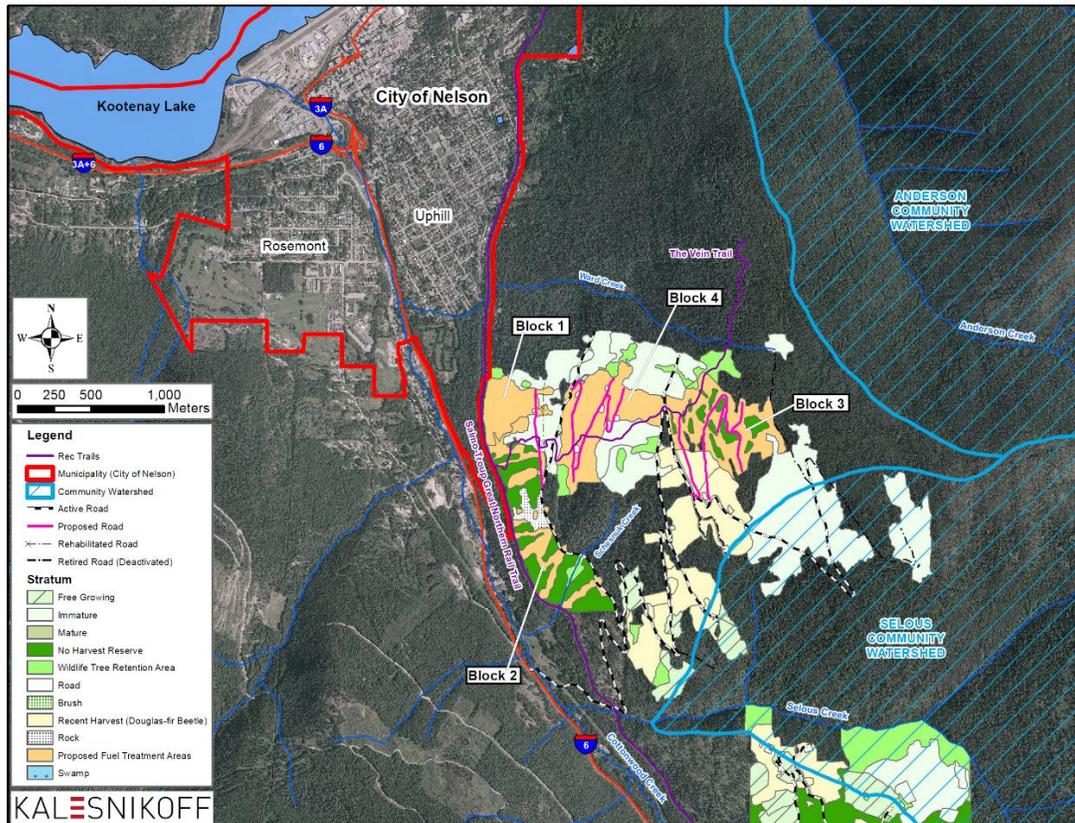


Adult Douglas-fir beetle, measuring approximately 6mm in length

- 4) A longer-term plan for forest succession needs to be recognized. While short-term benefits of fuel treatments such as this are realized in reduced fire hazard, forests are dynamic ecosystems that change over time. The intent is to promote conditions that will allow for large older trees which will eventually die to be replaced at a suitable rate that will neither unduly increase the fire hazard nor unduly reduce forest cover over time. A combination of replanting an appropriate tree species mix and density where needed along with potentially some form of maintenance or re-treatment program will likely be required over the longer term to meet this objective.

Block Summaries:

This section of the document gives specific details for each proposed block. Please see the referral map below for a visual reference to each block described here. One or more Cutting Permits (CP's) will be applied for under Kalesnikoff's Forest License (FL) A30172 in order to acquire cutting authority from the provincial government to conduct the harvesting phase of the project.



Block 1 – This block is the closest to the City of Nelson, and lies above the Salmo-Troup Great Northern Rail Trail. The forest consists of what we generally call a low elevation ‘Kootenay Mix’ which includes significant components of Douglas-fir, Cedar, and Hemlock, with minor amounts of Larch, Grand fir, White pine, Birch, Aspen, and Lodgepole pine. Ponderosa pine is occasionally found here as well in very small numbers. The terrain is moderately steep, so most of the block will require an overhead cable harvest system. The strategy for this block is to remove the majority of the species which are not resilient to fire, while leaving sufficient forest cover to maintain a shaded fuel break. Where insufficient numbers of fire-resistant species are available, Cedar will be the next choice for retention. Block 1 is adjacent to the Rail Trail along the bottom, and the trail will need to be temporarily closed during harvest operations for safety reasons. Because of the high recreational use in this area, the intent is to maintain the existing footpath trail system above the Rail Trail and enhance opportunities for potential additional rec trails in the future. Stand-level biodiversity will be maintained by retaining significant numbers of mature trees in a relatively even distribution, plus a wildlife tree retention area (WTRA) at the north end of the block. This block also includes the site for the proposed Selous in Bloom agroecology pilot project which will be described in more detail below.

Block 2 – This block occupies the area above the Rail Trail to the south of Block 1. The forest type here transitions from the ‘Kootenay mix’ to being more dominated by Douglas-fir growing on relatively steep, dry, and rocky slopes. There is still a significant component of Cedar in the stand, as well as a scattered representation of other tree species. Due to the steep topography an overhead cable harvest system will be employed. This area has seen one large Douglas-fir beetle infestation and a number of small infest sites over the last several years. As the expectation here is that there will continue to be at least some beetle presence, coupled with the potential for Cedar dieback from drought conditions, maintaining forest cover over the long term may prove to be a challenge. The strategy is to harvest small portions of the area, creating openings that will not support an active crown fire. The remainder of the block is reserved from harvest. The openings will create a reforestation obligation for Kalesnikoff which will see those areas planted with a suitable species mix for the expected future climatic conditions. These young stands will aid in forest succession if the large retention patches die off over time. A number of exceptionally large Douglas-fir trees will be retained within the harvest areas, as well as some smaller Douglas-fir, cedar of varying sizes, and other fire-resistant or fire-adapted species such as Larch, Ponderosa pine and White pine where they occur. These leave trees will help to maintain biodiversity, shade, and a seed source for forest succession. Stand-level biodiversity will be primarily maintained within the large reserve network as well as in a WTRA. The Vein trail runs through this block. Additional retention will be concentrated near the trail to the extent possible, and efforts will be made to ensure smooth transitions where the trail crosses the new road. Some small areas will be removed from this proposal to mitigate a potential rock-fall hazard identified in the geotechnical review of the harvest plan. The full geotechnical report will be made available on our website.

Block 3 – This block is located at the upper end of the proposed treatment area, and contains a mix of species typical of transition zones of the middle elevations in the West Kootenays. Douglas-fir starts to give way to Larch, and species such as Lodgepole pine, Engelmann spruce, and Subalpine fir become present in the stand. The Lodgepole pine in this block was heavily affected by Mountain pine beetle some time ago, so there is a fair bit of dead timber laying on the ground in some areas. The terrain is relatively flat, allowing for a conventional ground-based harvest system. This will make individual tree selection for harvest and retention easier. The strategy for this block is to retain patches of intact forest in a mosaic that mimics a natural disturbance such as wildfire, leaving gaps which will not support an active crown fire. Between the retention patches, fire resistant species such as Douglas-fir and Larch will be reserved in significant numbers where they exist. Dead timber will be salvaged to the extent possible, and surface fuels will be reduced around reserve patches to protect them from damage by broadcast burning. The new road system will form a series of fire guards and allow suppression crews access to much of the treatment unit in the case of a subsequent wildfire. Stand-level biodiversity will be maintained within the numerous patch reserves and large number of individual leave trees within the harvest area, as well as a WTRA at the north end of the block. The Vein trail runs through this block, and additional retention will be concentrated near the trail. Due to geotechnical hazards associated with pre-existing conditions, some portions of this block will be removed from the proposal. A thorough inspection in snow-free conditions will confirm the areas to be removed. The full geotechnical report will be available on our website.

Block 4 – This block lies between Blocks 1 and 3. The forest canopy is generally dominated by Douglas-fir, with significant volumes of other species mixed in. The area hosted a significant Douglas-fir beetle infestation several years ago, and there is still an active beetle population within the block, albeit at a smaller scale than before. The terrain is moderately steep with relatively flat benches in some areas. A combination of cable and ground-based harvest methods will be utilized. The strategy for block 4 is to remove the majority of the non-resilient species and to retain the majority of the resilient species.

Douglas-fir which has been killed by insects or which contains live insect broods will be removed as well. A walkthrough prior to harvest will be conducted to mark infested trees for removal. Stand-level biodiversity will be maintained by the large number of leave trees within the harvest area in addition to a WTRA at the north end of the block.

Selous in Bloom Project – Agroforestry/Agroecology as a Wildfire Risk Reduction and Local Food Security Climate Adaptation Strategy:

The North Selous project is in several ways a climate adaptation strategy. The primary intent is to reduce the potentially catastrophic effects of a wildfire on the City of Nelson and its neighboring communities. Wildfires are expected to increase in frequency and intensity due to deeper summer droughts, and forest cover is expected to become more difficult to maintain at lower elevations of our region for the same reasons. An additional proposal within this plan is to explore agroforestry/agroecology as an available tool to assist in our adaptation to the expected future climate in the West Kootenays, and more broadly, throughout British Columbia.

The concept is to integrate appropriately selected agricultural elements into an ecosystem such that the area can support some level of production of food and/or botanical products while maintaining natural elements of ecosystem function. In our context, the project aims to integrate climate change expectations and wildfire resilience to achieve multiple benefits to society. Essentially, the idea for our site is to create an integrated agricultural system that contains elements of a natural Kootenay forest and valuable crops that will enhance local food security and provide a valuable incentive to maintain the area in a state of wildfire resilience. We believe this pilot project can benefit the community in a number of ways:

Wildfire Resilience – The intended outcome is an area that will not support a vigorous ground fire or active crown fire. This can serve as an anchor point for suppression work if necessary. An added benefit could be on-site water storage available for fire suppression if needed.

Food Security – This project is unique in that it will allow for food production on Crown (public) lands. As real estate becomes ever more expensive and difficult to access for would-be young farmers, if successful this pilot could lead to a new category of food production on Crown rather than private land. This could be an important step toward increased availability of locally-grown products.

Reconciliation with Indigenous Peoples – We believe there can be significant benefits from projects like this for our indigenous communities in BC. The agroecology concept can benefit from traditional ecological knowledge (TEK) to help guide what crop species to utilize, particularly which ones will thrive in a given area and which support traditional cultural practices. We support the creation of a new forest tenure that would allow our indigenous communities to access these benefits from Crown land in their traditional territories. For example, an agroecology license adjacent to a remote community could provide wildfire protection, locally sourced food and relevant traditional-use botanical products, local employment, economic opportunity, and community-building benefits.

Opportunities for Sustainable Economic Development – If successful, this project can help to create economic opportunities that are in line with the principles of ecological responsibility. Direct job creation, scientific research potential, agritourism, and ongoing annual revenue opportunities are all possible under this model. By working with the specific ecosystem for the site, biodiversity and ecological function can be maintained in a sustainable way while creating a new revenue stream for British Columbians.

Opportunities for Collaboration and Community Building – The Selous in Bloom proposal has merit as a scientific and practical pilot project and as a community building opportunity. Kalesnikoff is keen to collaborate on this project with First Nations, not-for-profit societies, local governments, and eager individuals who can help elevate the achievements and positive outcomes far above what we would be able to do on our own. The proposal is still in its infancy, and we welcome engagement with folks who are interested in making this a resounding success story for the West Kootenays. Please help us to be innovative leaders in Crown forest land management by submitting your feedback, questions, and proposals to participate in this project to our referrals email, referrals@kalesnikoff.com. Thank you.

Summary and Further Reading:

Public Engagement Summary:

Kalesnikoff is committed to communicating with and engaging indigenous peoples, local stakeholders and residents throughout the planning, road construction and harvest operations, and silviculture phases of our woodlands program. We will share updates on our website and by email with those who provide their contact information. While engagement and referral periods for individual projects will have dates specified in order to receive timely feedback, the public is welcome to contact us at any time with questions, concerns, or comments related to our activities. We will strive to respond to individual queries in a prompt and comprehensive manner.

Further Reading, Links, and Related Information:

- **Regional District of Central Kootenay Community Wildfire Protection Plans**
<https://rdck.ca/EN/main/services/emergency-management/wildfires/community-wildfire-protection-plans.html>
- **Forest Enhancement Society of BC Website**
<https://www.fesbc.ca/>
- **FireSmart BC Website**
<https://firesmartbc.ca/>
- **Kalesnikoff Website, Public Stakeholder Engagement Page**
<https://www.kalesnikoff.com/sustainable-forest-stewardship>
- **Kootenay Resilience Website**
<http://www.kootenayresilience.org/>
- **FP Innovations Website**
<https://web.fpinnovations.ca/>
- **Slocan Integral Forestry Co-Op (SIFCo) Website**
<https://www.sifco.ca/>
- **Douglas-fir Beetle Fact Sheet, Forest Health Pamphlet #2**
<https://www.for.gov.bc.ca/rsi/foresthealth/pdf/dfbpamphlet.pdf>

Feedback Form:

Kalesnikoff is seeking feedback with respect to our wildfire risk reduction proposal in the Selous Creek area. We intend to begin operations within this area in 2020.

We are seeking input from indigenous peoples, local stakeholders and residents regarding what you think we should know and consider as we move forward in finalizing our plans. We'd like to hear from you about:

1. Infrastructure (buildings, roads, fencing)
2. Natural features or important resource values not identified in our proposed plan.
3. Wildfire risk reduction in your community.
4. Other information you would like to receive.
5. How you would prefer to be kept informed.
6. Any other questions, comments or concerns you may have.

Topic 1: Existing and Proposed Infrastructure:

Consistent with our commitments, we will use modern road building practices with attention to drainage control and will monitor and maintain roads and structures on a regular basis.

- 1. Are there any key pieces of infrastructure or sites of interest (roads, buildings, fencing, gates, etc.) that you would like to know more about or think we should know more about? (Ongoing road maintenance issues, siltation problems, seasonal issues, values at risk etc.) Is there any other infrastructure we should be aware of, or that you would like more information on?***

Topic 2: Natural or Significant Features

Kalesnikoff consistently adheres to government regulations and guidelines when planning and conducting forest harvesting activities, including those protecting or maintaining features of environmental, social or cultural significance. Whenever possible, we also respect significant local and informal features and landmarks of importance to the community.

2. Are there any key environmental, social or cultural features that were not identified in our proposed harvest plan that should be considered? Please provide a description and location of each feature.

Topic 3: Wildfire Risk Reduction

As our collective understanding of climate change and the increased potential for catastrophic wildfires grows, there is a need for further discussion as to how we may best approach and mitigate this hazard. Forest licensees are viewed as a key component to this process as we hold tenure rights to harvest trees on Crown land and have a high level of interest in maintaining forest cover over the landscape through proactive forest health management. There is a growing consensus that Provincial funding will not be able to cover the entire cost of fuel reduction treatments due to the vast scope of the issue, and that some amount of timber harvesting near and adjacent to communities can help to reduce the wildfire risk. This type of work requires collaboration and careful consideration in the planning process. Kalesnikoff is committed to working with communities where we operate to come up with locally supported decisions around tackling this important issue. Please help begin the conversation by giving us some input to consider.

3. Are you in favor of wildfire hazard mitigation treatments around your community? Do you own property that is at risk, or which may currently be in a condition that contributes to the risk? Please give us your thoughts.

Topic 4: Other information

We are committed to ongoing engagement and communications to help ensure local communities are aware of our harvest and related activities. We are open to continuing communication throughout and beyond our harvest planning processes.

4. What other information, if any, would you like to receive?

Topic 5: Preferred Method of Communication

5. Please check your preferred form of communication for this project:

You can get in touch with us at any time using the contact information listed below. Please let us know how you would like to receive any additional information from us. If you received this referral package via email and would rather not receive further updates for this project, you can be removed from our email list by checking the third box.

- Email
 Kalesnikoff website
 I know enough. I don't want more information

If you chose "Email", please provide yours here: _____

Topic 6: Other Related Input

6. Please provide any other questions, comments or concerns you may have regarding our proposed harvest plans.

How Public Input Will Be Used:

Your feedback is important to us. Input received through this community consultation will be compiled, reviewed and considered by Kalesnikoff Lumber Company along with technical, environmental and social considerations in planning for this harvest. We'll do our best to alleviate any concerns and incorporate public input into our plans.

How you can return your Feedback Form to Us:

1. Mail your completed form to:
 - Woodlands Team, c/o Gerald Cordeiro
Kalesnikoff Lumber Company
PO Box 3000 Hwy 3A
Thrms, BC
V1N 4N1
2. Drop your Feedback Form off at our office:
 - 2090 Hwy 3A
Thrms, BC
3. Scan and email your completed Feedback Form to: referrals@kalesnikoff.com
4. Provide a written submission by email or regular mail (addresses above).

To sign-up for a mailing list:

Name: _____
Email address: _____
Phone # (optional): _____
Address (optional): _____
Postal Code (optional)*: _____

Please give us a brief description of your area of interest (community, neighborhood, watershed, etc.)

*If you don't wish to enter your address, you may still identify your neighborhood by entering a postal code only.