

# Cariboo Region Integrated Investment Plan 2018

The purpose of this document is to provide information on the current natural resource management priorities in the Cariboo Region to guide and focus investment and funding proposals. This is a living document and is subject to ongoing change.

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Ministry of  
Forests, Lands, Natural  
Resource Operations  
and Rural Development



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## Introduction

The purpose of this Integrated Investment Plan (IIP) is to provide information on the current natural resource management priorities to guide and focus investment and funding in the Cariboo region. The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) has and is establishing the Cariboo Region investment priorities in collaboration with First Nations. The Cariboo Region IIP is updated as needed to reflect changing provincial, regional, local and First Nation priorities and interests.

The goal of this plan is economic, environmental and community resilience for the Cariboo Region. To support achievement of our goal, criteria have been developed to enable community and economic resilience and collaboration with First Nations. These criteria, provided on the following page, will be considered when reviewing proposals.

It is the responsibility of the proponent to meet the criteria for both the funding and this plan. It is strongly recommended that proponents seeking funding work with the applicable district and or regional operations contacts<sup>1</sup> to ensure proposals align with priorities and available funding.

To meet the land managers' priorities, proposals for investment should align with one or more of the following objectives:

- Wildfire Risk Reduction
- Forest Rehabilitation
- Fibre Utilization
- Habitat Restoration and Enhancement

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<sup>1</sup> See applicable contacts provided in Appendix 2.

## Natural Resource Investment Priorities

The following tables list the region and district specific priorities for integrated investment planning purposes. The region will use the selection criteria when reviewing, prioritizing and recommending proposed projects. Potential Activities are examples of project activities that could address the stated priorities. This is not an exhaustive list, and if you are considering another type of activity and are unclear as to whether it will be considered, you should get in touch with the District contact. Please refer to each District’s spatial representation of priorities for suitable proposal locations. We recommend reviews of draft proposals with the applicable district. See appendix 2 and 3 for contact information and proposal checklist.

The Cariboo Region has developed the following criteria to enable economic, environmental and community resilience. Preference will be given to proposals that involve one or more of the following:

- Direct involvement of First Nations and collaboration with First Nation for economic benefit, capacity building and respect of their rights
- Partnerships with natural resource<sup>2</sup> tenure holders
- Preference for proposals that have had some level of initial planning and ground-truthing and that include clear outcomes.
- Proposals that address multiple priorities and values on the landbase.

Note that there is a requirement to commit to implementation of BC Wildfire Hazard Abatement guidelines for any proposals that fall within identified wildfire risk reduction areas.

## Region wide Priorities

### Wildfire Risk Reduction

Description	Selection Criteria	Potential Activities
<p><b>Wildfire Risk Reduction</b> Wildfire Risk Reduction (WRR) proposals are to be aligned with BC Wildfire Service <u>and</u> land manager priorities as identified in the investment plan. The goal is implementation of fuel treatments in high risk areas. High risk areas have been identified using the best available information but ground truthing should be done to ensure proposed activities are needed and correctly located.</p>	<p>Proposals on Crown land should consider district mapped priorities. Use the Wildland Urban Interface (WUI) risk maps if your area is not identified in district maps. The WUI Risk maps are the primary source of information for proposals not on Crown land for the Community Resilience Initiative Program.</p> <p>Priority will be given for risk reduction proposals that focus on mitigating large scale impacts to multiple wildland urban interface areas at high risk as defined by the risk class mapping. High risk areas are identified in:</p> <ul style="list-style-type: none"> <li>• Endorsed district wildfire risk reduction maps;</li> <li>• <a href="#">WUI Risk Class Maps</a>, use link;</li> <li>• Approved plans including Community Wildfire Protection Plan, Fuel Treatment Opportunity Plan, Parks Management Plans;</li> <li>• Areas where there is a identified need to mitigate risk to critical infrastructure, including egress routes as identified by the BC Wildfire Service</li> </ul> <p>If proposal is in an area where no approved plan exists then support is required from the Wildfire Prevention Officer, BC Wildfire Service. Proposal to include clearly defined objectives and target conditions for fuel mitigation treatments</p>	<ul style="list-style-type: none"> <li>• Prescription development</li> <li>• Fuel reduction treatments, including prescribed burning</li> <li>• Fibre removal and/or utilization</li> <li>• Thinning</li> <li>• Pruning</li> <li>• Surface fuel management</li> <li>• Reforestation: Planting shade trees in areas, which could benefit from this treatment.</li> </ul>

<sup>2</sup> Natural resource tenure holders include tenures such as forest, range, agriculture, Crown land, mining, oil and gas, and water tenures.



**Fibre Utilization**

Description	Selection Criteria	Potential Activities
<p><b>Fibre Utilization</b> Incremental forest management activities that avoid carbon emissions. Contact your district contact to discuss opportunities and locations.</p>	<p>1. Utilization of fibre that would otherwise be burnt in debris piles 2. Utilization of uneconomic fibre 3. Recovery and utilization of fibre from blocks that will not be utilized by the primary producer Preference given to proposals that:</p> <ul style="list-style-type: none"> <li>▪ Utilize existing roads, minimize construction of new roads and deactivate constructed or existing roads;</li> <li>▪ Include partnerships between primary harvesters and secondary users;</li> <li>▪ Incremental activities to be planned and implemented in coordination with primary harvest; and/or</li> <li>▪ Are cost efficient (emissions avoided per dollar) and where preliminary planning has been done.</li> </ul>	<ul style="list-style-type: none"> <li>• Utilization slash piles</li> <li>• Incremental haul</li> <li>• Utilization of residual fibre (hogging, chipping, processing, etc.)</li> </ul>

**Habitat Restoration & Enhancement**

Description	Selection Criteria	Applicable Districts			Potential Activities
		DQU	DCC	DMH	
<p><b>MDWR Douglas-fir /Post Wildfire</b> Re-establishment of Douglas-fir in MDWRs that have been extensively burned by wildfires 2009-2018.</p>	<p>Use completed analysis of fire-impacted MDWRs, in identified High and Moderate Burn Severity areas where there is no economic harvest opportunity.</p>	YES	<b>YES<sup>3</sup></b>	<b>YES</b>	Surveys, prescriptions, aerial or ground-based planting of Douglas-fir
<p><b>MDWR IDF Stand Structure Enhancement</b> Treatment of dense pole layer Douglas-fir stands to enhancement stand structure in MDWR, using a combination of juvenile spacing and thinning-from-below.</p>	<p>Low volume (eg. &lt;80m<sup>3</sup>/ha) Douglas-fir leading stands in the IDfxm, IDFd3, IDFd4 or BG harvested prior to 1985 (diameter limit logging). High and Moderate Stand Structure Classes are the highest priority. Thinning treatment to follow direction in GWM 9, Shallow and Moderate Snowpack Order, plus additional guidance from the MDWR Committee. Clumpy spacing treatment to follow established specifications (Extension Note 32).</p>		<b>YES</b>	<b>YES</b>	Surveys, prescriptions, clumpy thinning, clumpy spacing of Douglas-fir
<p><b>Moose Cover</b> Re-establishment of forested buffers around selected moose wetlands severely burned in recent wildfires.</p>	<p>High value moose wetlands and as identified in Land Use Order (LUO). In high and moderate burn intensity, verified by imagery. Connectivity between and within wetland complexes should also be considered. Note: The Natural Resource Districts have stated that the focus activity should be reforestation and not within areas where there is an economic harvest opportunity.</p>	<b>YES</b>	<b>YES</b>	<b>YES</b>	Surveys, prescriptions, planting (mainly spruce, some pine), deciduous
<p><b>Access Management for Wildlife</b> Access management for species and habitats (e.g. moose, caribou, marten, grizzly bear) that are sensitive to roads and road density.</p>	<p>Use Cumulative Effects Assessment to help identify high priority areas for multiple species high habitat capability and risk hazard factors, in combination with hydrologic stability information where available. Roads proposed for rehabilitation should be part of an access management plan developed by an appropriate group, that includes considerations for multiple species and habitat recovery overlaps.</p>	YES	YES	YES	Assessment, prescriptions, temporary deactivation to full rehab, planting.
<p><b>Woodland Caribou Habitat Restoration Itcha Ilgachuz Herd Range</b> Priority areas for thinning dense lodgepole pine, originating from natural regeneration after timber harvesting in identified caribou range.</p>	<p>First priority areas for thinning were identified by the following criteria: Stems per hectare &gt;7000 and &lt;12000. 20-40 years old In an area impacted by “industrial activity,” Target areas should be adjacent to intact caribou habitat, defined as “critical habitat” with no industrial activity or fires in the last 80 years and &lt;50% dead stems per hectare. Target areas should be within a caribou herd boundary.  Map of the priority areas can be requested from Carolyn Shores, Ungulate Habitat Biologist <a href="mailto:Carolyn.Shores@bc.gov.bc">Carolyn.Shores@bc.gov.bc</a></p>		YES		Surveys, prescriptions, thinning of dense young pine stands, no fertilization

<sup>3</sup> Bold type indicates an alignment with district reforestation priorities.

**Habitat Restoration & Enhancement**

Description	Selection Criteria	Applicable Districts			Potential Activities
		DQU	DCC	DMH	
<b>Woodland Caribou Habitat Restoration Chilcotin</b> Approximately 100,000 hectares of dense repressed pine stands in Chilcotin of fire origin that are too dense for caribou use although terrestrial lichens are present. Thinning will improve access to forage.	12,000-50,000 pine stems per hectare fire origin. Desired outcome is thinning to improve access to forage		YES		Surveys, prescriptions, thinning of dense young pine stands, no fertilization
<b>Woodland Caribou Habitat - Eastern section of the Cariboo-Chilcotin District.</b> Post-wildfire recovery of burned stands in important woodland caribou habitat.	Within perimeters of recent wildfires (last 5 years), within Caribou Wildlife Habitat Areas 5-100, 5-106, 5-109 and adjacent core and matrix habitat		YES		Surveys, prescriptions, planting
<b>Restoration - Churn Creek California Bighorn Sheep</b> Use restoration plan for the migration corridor (approximately 30km in length from the Churn Flats area along Churn Creek to Yalakom Mountain).	Treatments of in-grown stands and encroachment identified in an existing restoration plan		YES		Hand or mechanized tree removal, reduced stocking in commercially harvested areas, pile and burn, prescribed fire
<b>Ecosystem Restoration - Grassland Benchmark</b> Restoration of grassland biodiversity through treatment of tree encroachment onto grasslands.	Within the grassland benchmark, identified in a Land Use Order (LUO)		YES	YES	Prescriptions, commercial/non-commercial harvesting, tree knockdown, pile and burn, burn
<b>Ecosystem Restoration</b> Treatments in ingrown forests adjacent to grassland benchmark areas can improve species diversity, increase forage production, increase timber productivity, and improve resilience to fire and insects	Dense ingrown forests adjacent to grassland benchmark. If proposed treatments are also within MDWR or OGMA, the relevant FRPA/Land Act Orders are to be followed. Reference document for example treatments: <a href="http://www.for.gov.bc.ca/hfd/pubs/Docs/Tr/Tr100.htm">www.for.gov.bc.ca/hfd/pubs/Docs/Tr/Tr100.htm</a>		YES	YES	Surveys, prescriptions, thinning, spacing
<b>Hydrologic Stability and Recovery Post-Wildfire</b> Assessment of hydrologic stability throughout the region to prioritize areas for sediment risk reduction and increasing stability. Road rehabilitation can increase hydrologic stability by reducing risk of sediment inputs to streams.	Use Cumulative Effects assessment (e.g. streamflow sensitivity and hazard) to determine priority areas at watershed, basin, sub-basin levels for recovery activities, such as road deactivation and/or reforestation. Assessment to also include wildfire burn severity mapping, and should be coordinated to greatest extent possible with access management for wildlife.  Note: Forest carbon related funding (FES funding) could cover the reforestation aspects of this priority, however all assessment, survey treatment work would need to be funded or done by another partner. We recommend a partnership approach with licensees, the Natural Resource District and other groups such as the Habitat Conservation Trust Fund if you would like to do this type of project.	YES	YES	YES	Assessment, planning, surveys, prescriptions, planting/reforestation



**District Priorities**

**Quesnel Natural Resource District Forest Rehabilitation**

Description	Selection Criteria	Potential Activities
<p><b>Reforestation</b>                      Reforestation of fire or beetle damaged stands with low stocking and little natural regeneration potential.</p> <p>Stands subject to a legal silviculture. obligation are not eligible for funding</p>	<p>Wildfire damaged, stands not already planned for work. Contact district for maps of work underway in area of interest. We will consider other stand types, please work with district to discuss other options.</p> <p>Restoration of riparian areas that have been impacted by fire, focussing on higher severity burn areas or areas that have been impacted by fire suppression efforts</p>	<ul style="list-style-type: none"> <li>• Surveys</li> <li>• Prescriptions</li> <li>• Site preparation,</li> <li>• Planting</li> <li>• Under-planting of stands with low stocking and little natural regeneration potential</li> <li>• Overstory removal and fibre utilization</li> </ul>

**Cariboo Chilcotin Natural Resource District Forest Rehabilitation**

Description	Selection Criteria	Potential Activities
<p><b>Stand Tending Douglas-fir</b>                      Rehabilitation of over-dense Douglas-fir forest stands to improve health and vigour, reduce wildfire hazard and enhance future timber supply.</p>	<p>Douglas-fir leading stands that are at least 40 years from a sawlog harvest. Preference will be given to stands, which also overlap with District Wildfire Risk Reduction Areas, and/or overlap with Mule Deer Winter Range (MDWR).</p> <p>Treatment Priority 1: Recently harvested multi-layer Fdi stands with a recent Free Growing declaration (harvested since 2015).                      Treatment Priority 2: Stands with less than 60m<sup>3</sup>/ha merchantable volume.</p> <p>Proposals will be rated on key stand attributes, such as:</p> <ul style="list-style-type: none"> <li>• Height diameter ratios</li> <li>• Percent Live crown of target stems</li> <li>• Densities, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Assessments</li> <li>• Prescriptions</li> <li>• Pre-commercial thinning, juvenile spacing</li> <li>• Commercial Thinning (non-sawlog)</li> <li>• Pruning</li> </ul>
<p><b>Reforestation</b>                      Reforestation of fire or beetle-damaged stands or non-status roads with low stocking and where there is little natural regeneration potential.</p> <p>Stands subject to a legal silviculture obligation are not eligible for funding</p>	<p>Treatment Priority 1: High productivity, wildfire damaged stands where no economical harvest opportunity currently exists (ex &lt;60 m<sup>3</sup>/ha) where natural regeneration is unlikely.</p> <p>Treatment Priority 2: Poorly stocked Douglas-fir leading stands (under-planting) (&lt;60 m<sup>3</sup>/ha merchantable volume)</p> <p>Treatment Priority 3: Mountain pine beetle killed stands (&lt;40 m<sup>3</sup>/ha merchantable volume)</p>	<ul style="list-style-type: none"> <li>• Surveys</li> <li>• Prescriptions</li> <li>• Site preparation,</li> <li>• Planting</li> <li>• Under-planting of stands with low stocking and little natural regeneration potential</li> </ul>

**100 Mile House Natural Resource District Forest Rehabilitation**

Description	Selection Criteria Other stand types will be considered, please work with district to discuss other options.	Potential Activities
<p><b>Reforestation</b> Reforestation of fire or beetle damaged stands or non-status roads with low stocking and little natural regeneration potential.</p> <p>Stands subject to a legal silviculture obligation are not eligible for funding.</p>	<p>Treatment Priority 1: High productivity, wildfire damaged stands with no economical harvest opportunity (&lt;60 m<sup>3</sup>/ha) when natural regeneration is unlikely.</p> <p>Treatment Priority 2: Reforestation of resource roads that have been rehabilitated through an approved access management plan. For more information contact DMH</p> <p>Treatment Priority 3: Mountain Pine Beetle killed stands (&lt;45 m<sup>3</sup>/ha merchantable volume)</p>	<ul style="list-style-type: none"> <li>• Surveys</li> <li>• Prescriptions</li> <li>• Site preparation,</li> <li>• Planting</li> <li>• Under-planting of stands with low stocking and little natural regeneration potential</li> </ul>
<p><b>Stand Tending</b> Rehabilitation of stagnant (overstocked) Douglas-fir stands to improve health and vigor and contribute additional future timber supply.</p>	<p>IDFdk3 BEC sub-zone in Fdi leading stands that are at least 40 years from a sawlog harvest. Preference will be given to stands, which also overlap with District Wildfire Risk Reduction Areas, and/or overlap with Mule Deer Winter Range (MDWR).</p> <p>Treatment Priority 1: Recently harvested multi-layer Fdi stands with a recent Free Growing declaration (harvested since 2015). Treatment Priority 2: Stands with less than 60m<sup>3</sup>/ha merchantable volume.</p> <p>Proposals will be rated on key stand attributes, such as:</p> <ul style="list-style-type: none"> <li>• Height diameter ratios</li> <li>• Percent Live crown of target stems</li> <li>• Densities, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Assessments</li> <li>• Prescriptions</li> <li>• Pre-commercial thinning, juvenile spacing</li> <li>• Commercial Thinning (non-sawlog)</li> <li>• Pruning</li> </ul>



## **Appendix 1: Investment Priority Maps and Information Links**

### **BC Wildfire Maps and Information (Use for CRI Program and FES funding)**

Wildland Urban Interface Risk Class Maps:

[WUI Risk Class Maps](#)

Provincial Strategic Threat Analysis Maps and Wind Information

<https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/fire-fuel-management/psta>

A Guide to Fuel Hazard Assessment and Abatement

[https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/wildfire-management/fire-fuel-management/hazard-assessment-abatement/bcws\\_hazard\\_assessment\\_abatement\\_guide.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/wildfire-management/fire-fuel-management/hazard-assessment-abatement/bcws_hazard_assessment_abatement_guide.pdf)

### **Fibre Utilization Maps**

Contact Districts for more information on opportunities, as updated maps not yet available.

### **Quesnel Natural Resource District Maps**

<https://www.for.gov.bc.ca/ftp/DQU/external/!publish/Integrated%20Investment%20Plan/Quesnel%20Map%20Integrated%20Investment%20Plan%20DQU.pdf>

### **Cariboo Chilcotin Natural Resource District Maps**

<https://www.for.gov.bc.ca/ftp/DQU/external/!publish/Integrated%20Investment%20Plan/Williams%20Lake%20Map%20Integrated%20Investment%20Plan%20DCC.pdf>

### **100 Mile House Natural Resource District Maps**

<https://www.for.gov.bc.ca/ftp/DQU/external/!publish/Integrated%20Investment%20Plan/100%20Mile%20Map%20Integrated%20Investment%20Plan%20%20DMH.pdf>



## Appendix 2: District and Region Contact

Interest	Lead	Phone & E-Mail	Location
Quesnel Forest District Proposal contact	Ian Hannah, Land and Resource Team Lead	250-992-4480 <a href="mailto:Ian.Hannah@gov.bc.ca">Ian.Hannah@gov.bc.ca</a>	Quesnel
Cariboo-Chilcotin Forest District Proposal Contact	Kerri Howse, Land and Resource Section Lead	250-398-4794 <a href="mailto:Kerri.Howse@gov.bc.ca">Kerri.Howse@gov.bc.ca</a>	Williams Lake
100 Mile House District Proposal contact	Kane Copley, Strategic Land Manager	250-395-7873 <a href="mailto:Kane.Copley@gov.bc.ca">Kane.Copley@gov.bc.ca</a>	100 Mile House
Wildfire Risk Reduction	Bev Atkins, Fuels Management Specialist	778-799-2099 <a href="mailto:Bev.Atkins@gov.bc.ca">Bev.Atkins@gov.bc.ca</a>	Williams Lake
FNESS – CRI Application Support for First Nation Communities	Jeff Eustache Brendan Mercer Darrick Andrews	<a href="mailto:JEustache@FNESS.bc.ca">JEustache@FNESS.bc.ca</a> <a href="mailto:BMercer@FNESS.bc.ca">BMercer@FNESS.bc.ca</a> <a href="mailto:DAndrew@fness.bc.ca">DAndrew@fness.bc.ca</a> <a href="mailto:LPrice@fness.bc.ca">LPrice@fness.bc.ca</a>	Kamloops
Habitat questions	Becky Bings, Habitat Biologist	250-398-4246 <a href="mailto:Becky.Bings@gov.bc.ca">Becky.Bings@gov.bc.ca</a>	Williams Lake
Cariboo Region Integrated Investment Plan and funding questions	Christine Unghy, Integrated Investment Specialist	250-991-7260 <a href="mailto:Christine.Unghy@gov.bc.ca">Christine.Unghy@gov.bc.ca</a>	Quesnel
Rural Dividend questions and Community and Business funding	Emily Colombo Regional Manager	250-992-4442 <a href="mailto:Emily.Colombo@gov.bc.ca">Emily.Colombo@gov.bc.ca</a>	Quesnel
Forest Enhancement Society	Dave Conly Ray Raatz	<a href="mailto:dconly@fesbc.ca">dconly@fesbc.ca</a> <a href="mailto:rraatz@fesbc.ca">rraatz@fesbc.ca</a>	Kamloops 100 Mile



### Appendix 3: Proposal Checklist

Fill out this page and provide to district for your initial proposal meeting.

#### Proposal Detail

Proponent Name	
Address	
Contact Name	<i>If different from proponent information</i>
FESBC Project #	
Project Title	.
Project Type	
Planned Activities	<i>Road use or construction, harvest, harvest type, site prep, surveys, sowing, planting, burning, pruning, brushing, etc.</i>
Project Location	

#### Items to provide

Proposal Outline and outcomes
Proposal map(s)
Shapefile of project boundary
Planned and/or taken steps to engage or collaborate with First Nations
Planned and/or taken steps to involve or engage with other natural resource tenure holders

#### Proposal Map Checklist

- Include an overview map and operational map(s)
- Maps require legend and scale and need to meet map standards

#### Items

Boundary and subunits of work being proposed (harvesting, site prep., planting, thinning, pruning, etc.)
Forest cover
Topography
Location and riparian class of streams, wetlands & lakes
Fish streams
Biogeoclimatic zone & subzone
Wildlife Habitat Areas
Ungulate winter ranges
Old Growth Management Areas
Sensitive soils
Other resource features such as reserves
Wildland Urban Interface 2 km boundary
Existing roads
Barricades restricting access
Private property (within or adjacent)
Public Utilities
Community Watersheds & Fisheries Sensitive Watersheds
Water supply intakes & infrastructures (within 100 m of work)
Proposed road construction and stream crossings
Non-status roads to be used (will require authority or exemption)

#### For Wildfire Risk Reduction Projects

Areas of Provincial Strategic Threat Analysis of 7 or higher. Use new maps
Boundaries of known Fuel Treatment Opportunity Documents or an approved fuel reduction plan
Boundaries of known plans, such as Community Wildfire Prevention Plans