

Summary of the Current Condition Report for Old Growth Forest in the Robson Valley Timber Supply Area | 2019 Analysis

The Current Condition Report for Old Growth Forest in the Robson Valley Timber Supply Area (TSA) was developed as part of the provincial [Cumulative Effects Framework](#) (CEF). The CEF identifies and assesses how values are impacted by cumulative effects¹ across the province. Results from current condition reports help to understand the current state of values and help to manage cumulative effects.

Old growth forest is a value that is assessed under the CEF as it is important to the conservation and maintenance of landscape biodiversity at all scales. Functioning old growth forests deliver various ecosystem services, and multiple cultural and spiritual values.

The purpose of this summary is to highlight results from the [Current Condition Report for Old Growth Forest in the Robson Valley Timber Supply Area - 2019 Analysis](#) and to inform collaborative discussions among government, First Nations, natural resource industries, and community stakeholders when managing old growth forests.

Note: Please see the Current Condition Report for important notes on the development of this report and disclaimers to this cumulative effects assessment.

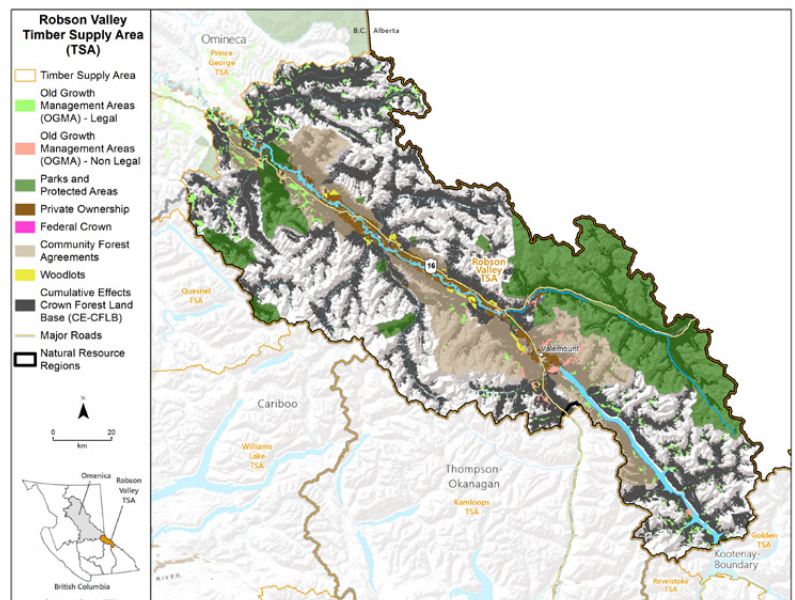
Robson Valley TSA Assessment Area

The Robson Valley TSA is located in east-central B.C. within the Prince George Natural Resource District in the Omineca Region and covers approximately 1.45 million hectares. The Robson Valley TSA is a topographically and ecologically diverse landscape that supports a range of biogeoclimatic ecosystem classification (BEC) zones.

Most of the TSA is within high elevation BEC zones of the ESSF (55.3%) and alpine tundra (IMA 20%). The lower valley bottoms include the ICH (15.5%) and SBS (8.5%).

The Robson Valley TSA boundary and all the Crown land within the TSA define the outer limits of this cumulative effects (CE) assessment. All area-based tenures (e.g., Tree Farm Licences and Community Forests) that are more than 600 hectares are included in the assessment. The exception is all woodlots; regardless of size, they are excluded from the assessment. The Cumulative Effects Crown Forest Landbase (CE-CFLB)² calculated for the Robson Valley TSA is 590,042 ha, which is 40% of the gross area of the TSA.

Land use in the Robson Valley TSA is diverse and includes forestry, agriculture, and recreation. Forestry is the most predominant natural resource sector in the Robson Valley TSA.



¹ Cumulative effects are changes to environmental, social, and economic values caused by the combined effect of past, present, and potential future activities and natural disturbance events.

² A unique CE-CFLB is calculated for this assessment to include area-based tenures due to their requirement to manage old growth biodiversity objectives. The full methodology can be found in the *Old Growth Forests in British Columbia: Cumulative Effects Assessment Background* (2023).

The Robson Valley TSA has experienced some changes on the land base from natural disturbances such as wildfires and pest infestations (e.g., mountain pine beetle in 2004). These events may further affect the remaining old growth forests in this TSA in combination with cumulative effects from resource development, urban development, and other potential climate change impacts.

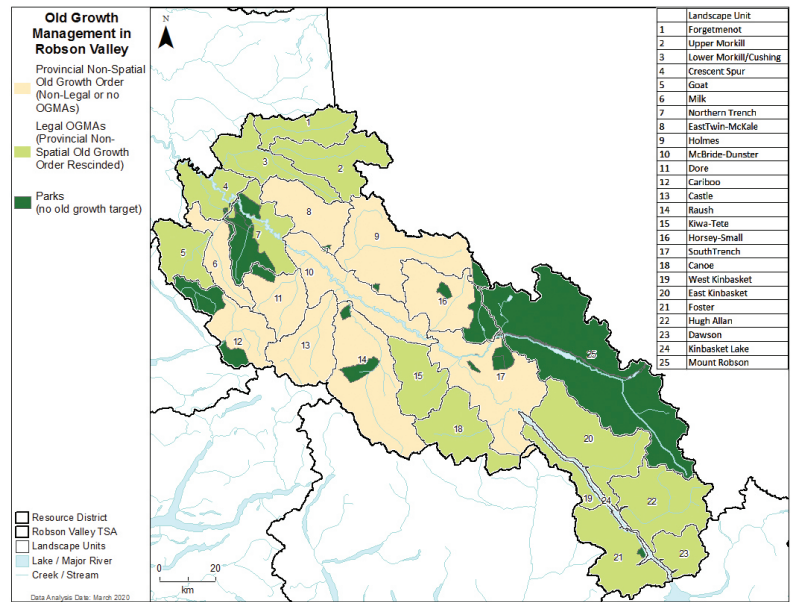
Old Growth Forest Management in the Robson Valley TSA

There are 25 Landscape Units (LUs) in the Robson Valley TSA. The old growth forests in these LUs are managed through legal old growth orders through various mechanisms:

1. **Non-spatial old forest targets legally established through the Provincial Non-Spatial Old Growth Order (PNOGO) (2004).** Old growth forest targets are set in PNOGO by LU for each natural disturbance type (NDT), BEC and biodiversity emphasis option (BEO) combination in the Robson Valley TSA (Table 1). The PNOGO includes the option to reduce old growth forest retention in LUs with low BEO by up to 2/3, and full targets do not need to be met for 240 years to avoid impacting timber supply. This assessment applied full targets to all LUs with low BEO designation.

2. **Legal Old Growth Management Areas (OGMAs) established through three legal Orders in 13 LUs.** In these areas, the PNOGO has been rescinded, however, those targets were used to guide the amount of old growth forest required in OGMAs. Provisions for allowable OGMA incursions and amendments are managed through the legal Orders and Regional OGMA amendment policies.³

3. **Non-legal OGMAs designated under the PNOGO Section 8 in two LUs.** Although **management to mature-plus-old forest targets is not a legal requirement** in the Robson Valley TSA, an assessment against these targets was completed to better inform the current condition. Mature-plus-old forest policy targets are set in the [Biodiversity Guidebook](#) (1995) by LU for each NDT, BEC and BEO combination, with targets defined by seral stage.



Age Definitions

The definition of old growth forest to support this assessment is greater than either 140 or 250 years, depending on the NDT and BEC (Table 1). The definition for mature-plus-old forest is greater than either 100 or 120 years old, depending on the NDT and BEC (Table 2).

Table 1. Age of Old Growth Forests in the Robson Valley TSA

NDT	BEC zone	PNOGO Target: % Old Growth Forest Retention			Old Forest Age Definition (years)
		Low BEO	Int. BEO	High BEO	
NDT1	ESSF	19	19	28	>250
	ICH	19	13	28	>250
NDT2	ESSF	9	9	13	>250
	ICH	9	9	13	>250
	SBS	9	9	13	> 250
NDT3	SBS	11	11	16	>140

Table 2. Age of Mature-Plus-Old Forests in the Robson Valley TSA

NDT	BEC zone	Policy Target: % Mature + Old Retention			Mat + Old Forest Age Definition (years)
		Low BEO	Int. BEO	High BEO	
NDT1	ESSF	19	36	54	>120
	ICH	17	34	51	>100
NDT2	ESSF	14	28	42	>120
	ICH	15	31	46	>100
	SBS	14	28	42	> 100
NDT3	SBS	11	23	34	>100

³ In the Robson Valley legal OGMA Orders, there are objectives that allow incursions, for up to 10% of an OGMA less than 50 ha (equivalent to a maximum of 5 ha), or 5% of an OGMA greater than 50 ha. All OGMA incursions require an evaluation by a Qualified Professional. The best available information to guide the OGMA amendment and replacement process in Robson Valley TSA is the *OGMA Amendment Policy for the Mackenzie Natural Resource District* (January 2015).

Assessment Results

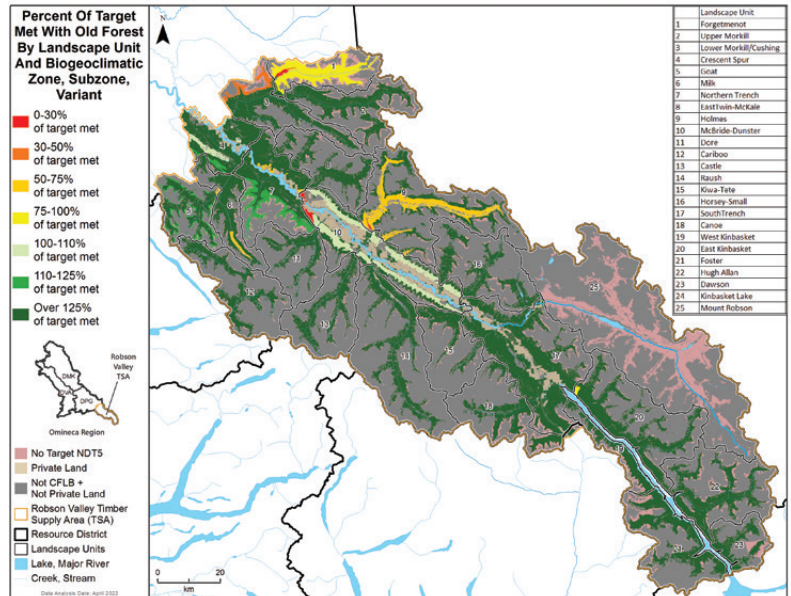
The current condition of old growth forest in the Robson Valley TSA was assessed using the four indicators as outlined in the *Interim Assessment Protocol for Old Growth Forest in British Columbia (2017)*. Assessment units (AUs), which are defined by a combination of LU, BEC, BEO and NDT, are used to report on the current condition of old growth forests and mature-plus-old forest on the CE-CFLB. The Robson Valley TSA has 25 LUs with a total of 85 AUs used in this CE assessment.

Indicator #1: Amount of Old Growth Forest

Indicator Description: This non-spatial indicator determines the current amount of old growth forest as compared to the targets within each AU in the CE-CFLB.

Assessment Results:

- 24% (141,455 ha) of the CE-CFLB is old growth forest.
- Of the 85 AUs in the Robson Valley TSA, currently **82% of AUs (70 AUs) have sufficient amounts of old growth forest compared to the defined targets**, while the remaining 15 AUs (18%) have not met the defined targets with old growth forest.
- These 15 AUs occur across 10 LUs. Six of these LUs contain legal OGMA (East Kinbasket, Forgetmenot, Goat, Kiwa-Tete, Lower Morkill/Cushing, and Northern Trench), one LU contains non-legal OGMA (Holmes), and three LUs currently have no spatial OGMA established (Horsley-Small, McBride-Dunster, and Milk).

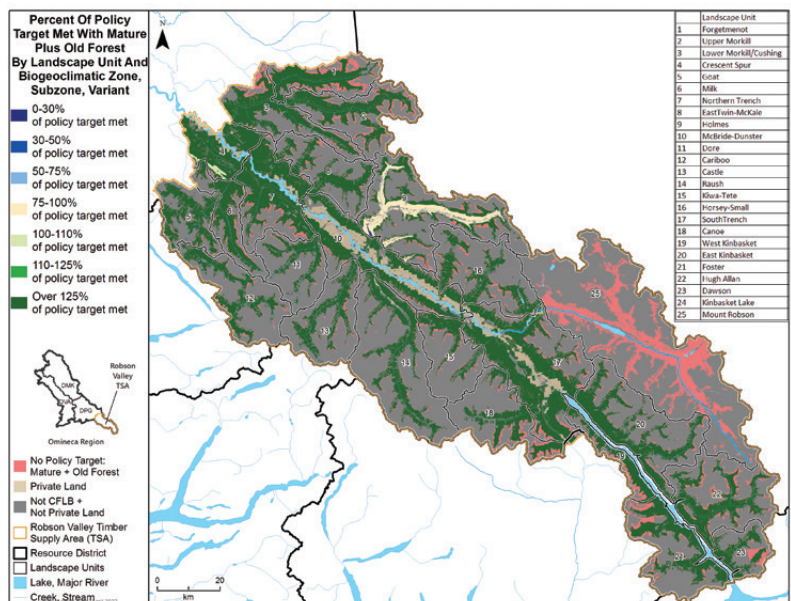


Indicator #2: Amount of Mature-Plus-Old Forest

Indicator Description: This non-spatial indicator determines the current amount of mature-plus-old forest within each AU in relation to the policy targets for mature-plus-old forest. As mature forest will become old growth forest over time, it is important to assess where mature-plus-old forest is available to recruit towards old growth forest targets.

Assessment Results:

- 63% (374,061ha) of the CE CFLB is mature-plus-old forest. This is considerably more than old growth forest alone (24%).
- **95% of AUs (81 AUs) meet or exceed the mature-plus-old forest policy targets.** The 5% of AUs (4 AUs) that do not meet the mature-plus-old forest policy targets are concentrated in the Holmes LU that has non-legal OGMA and Kiwa-Tete LU that has legally established OGMA.



Indicator #3: Incursions into Old Growth Management Areas

Indicator Description: This indicator compares the area of anthropogenic (human caused) disturbance footprint (i.e., incursions) in OGMA relative to allowable incursions⁴ specified in the legal Orders or regional policy.

Assessment Results:

- There are **576 OGMA in the Robson Valley TSA** (473 legal OGMA and 103 non-legal OGMA) in 15 LUs.

Legal OGMA:

- **2.3% of legal OGMA (11 of 473 legal OGMA) have incursions greater than the allowable threshold.** These incursions represent 0.2% (71.3ha) of the total gross legal OGMA area in the Robson Valley TSA. Forest harvesting (cutblocks) account for 59.1% of these incursions followed by roads (40.9%). The OGMA with greatest incurred percent area occur in the Dawson (60.1%), East Kinbasket (17.1% and 13.5%) and Upper Morkill (13.4%) LUs.

Non-Legal OGMA:

- **38.8% of non-legal OGMA (40 of 103 non-legal OGMA) show some level of incursions.** Of these, eight OGMA occur in the Holmes LU, and 32 OGMA occur in South Trench LU. These incursions represent 2% of the total non-legal OGMA area in the Robson Valley TSA.

Indicator #4: Amount of Old Growth Forest in OGMA

Indicator Description: This indicator determines the amount of old growth within OGMA and compares that to PNOGO targets. Although the PNOGO is no longer the legal target where OGMA are established, OGMA were the implementation mechanism to meet the retention targets under PNOGO, therefore this comparison provides assessment of that implementation strategy.

Assessment Results:

- The total gross OGMA area in the Robson Valley is 43,835 ha. There is a total of **38,823 ha of CE-CFLB in OGMA** – 26,714 ha are within legal OGMA, and 12,108 ha are within non-legal OGMA.

Legal OGMA:

- In legal OGMA, 71% of area is old forest (18,959.1 ha), 20.3% is mature forest (5,431.3 ha), with minor components of early (2.3% or 607.58 ha) and mid (0.2% or 44.0 ha) seral stage forests.
- There are 66 AUs with legal OGMA. Of these, **5 AUs (7.6%) have sufficient amounts of old growth forest** within those OGMA to meet PNOGO targets. The other **61 AUs (92.4%) currently have insufficient amounts of old growth forest** within established OGMA compared to PNOGO targets. 44 AUs (66.7%) have less than 50% of targets met using old growth within OGMA.

Non-Legal OGMA:

- In non-legal OGMA, 32.3% of the area is old forest (3,911.6 ha), 40.2% is mature forest (4m911.9 ha), 16.2% is mid-seral (1,965.5 ha), and a minor component is early (2.2% or 265.5 ha) seral stage forest.
- There are 9 AUs with non-legal OGMA. Of these, 5 AUs occur in the Holmes LU and 4 AUs occur in South Trench LU. Currently, **all AUs have insufficient amounts of old growth compared to PNOGO targets**, with most having less than 50% of targets met using old growth within OGMA.



Minnow Creek, Robson Valley – Bruce Rogers



Animal den, Robson Valley – Bruce Rogers

⁴ Incursions are defined as alterations to OGMA caused by permitted activities, such as forestry cutblocks and roads, non-forestry-related activities (e.g., pipelines, oil and gas), and human use features such as recreation sites and trails.

What are the general reasons contributing to current condition?

- Natural disturbance – historic and recent insect and pest damage (recent mountain pine beetle in 2004) have reduced the amount of old growth forest; several historic and recent large wildfires burnt extensive areas, leaving large areas without old growth stands.
- Forest harvesting – forest harvesting has occurred in all LUs, some associated with salvage in response to mountain pine beetle as well as wildfires which influenced the amount of old growth in the TSA.
- Access to timber – the landscape of the TSA is easily accessible in valley bottoms compared to higher elevations, meaning that forest harvesting and other land uses are common and widespread. Areas with easier access to timber (e.g., low elevation, closer to population centres) are often furthest from meeting old growth targets.
- Many of the AUs that are the furthest from meeting targets are very small, thus even small disturbances (human or natural) have a large impact on the AU.
- The varying interpretation of orders and policy, as well as approaches to analyzing and tracking of old growth by the Province and licensees presents challenges to accurately track and monitor old growth conditions relative to orders.
- Younger forests may have been used to meet old growth targets in AUs with insufficient old growth or to minimize socio-economic impacts to forestry operations.
- Old growth forest and OGMAS are subject to impacts from other resource development as these sectors are not legally required to manage for old growth (e.g., mines, exploration, land conversion, oil and gas).
- Incursions into OGMAs may be overestimated as it was not possible in the analysis to remove anthropogenic disturbance, except for cutblocks, that occurred prior to OGMA establishment due to the lack of dates in the data.
- Application of provincial policy and guidance designed to mitigate the impacts to timber supply from the management of old growth forest (e.g., Landscape Unit Planning Guide).

