

# LAKES TIMBER SUPPLY AREA TIMBER SUPPLY ANALYSIS DISCUSSION PAPER SUMMARY

Timber supply is the amount of timber available for harvesting over a specified period of time. The timber supply for the Lakes timber supply area (TSA) is under review to support an upcoming allowable annual cut (AAC) determination by the chief forester. The AAC is the maximum volume of timber available for harvest-

ing each year.

A detailed Discussion Paper is available at <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/timber-supply-review-and-allowable-annual-cut>

## ALLOWABLE ANNUAL CUT DETERMINATION

The AAC for the Lakes TSA was last determined in 2011. The current AAC is 1 648 660 cubic metres, including a partition of 288 516 cubic metres attributable to non-pine species.

Under the *Forest Act*, the chief forester is required to determine the AAC of the Lakes TSA at least once every 10 years. To support this determination, a timber supply review (TSR) is done to collect and analyse relevant information. The chief forester's AAC determination is an independent, professional judgement based on legal requirements.

## TIMBER SUPPLY REVIEW IN THE LAKES TSA

The timber supply review for the Lakes TSA was initiated in 2018. Before setting a new AAC, the chief forester will review all relevant information, including the results of the timber supply analysis and input from First Nations and the public. The AAC that will be determined by the chief forester may differ from the harvest projections presented here.

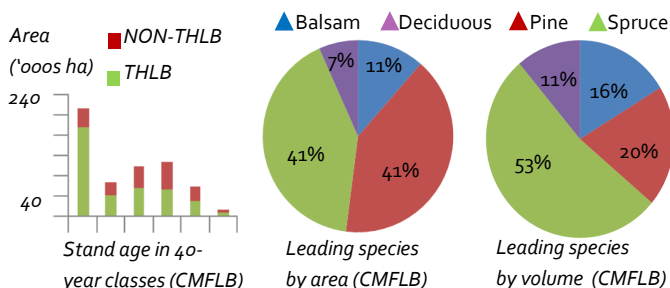
## PUBLIC AND FIRST NATIONS ENGAGEMENT

The TSR includes extensive engagement with First Nations and the public. To date, timely information sharing in an open and transparent process has provided a deeper understanding of First Nations and the public's interest. First Nations engagement began in 2017 and is ongoing. First Nations have expressed interests about wildlife, access management, biodiversity, and cumulative effects.

All input received is considered by the chief forester.

## THE FOREST

The forests of the Lakes TSA are extensive and include both areas reserved for non-timber objectives (e.g., parks) and areas managed for a suite of forest values and objectives. The forests are primarily composed of pine and spruce-leading stands. Relatively large areas of young forests are present, due to past several decades of harvesting activities and large fires. Given the loss of mature pine forests, much of the total volume on the



crown managed forest land base (33 million cubic metres) is within spruce-leading stands.

## MOUNTAIN PINE BEETLE INFESTATION

The mountain pine beetle infestation killed about 49 percent of the commercially available volume. For the past 20 years, harvesting activities have focused on salvaging dead pine to recover its economic value before it decays, speed regeneration and to delay the harvest of live trees for the future.

As of 2018, dead pine continued to account for most of the total harvest in the Lakes TSA. However, the length of time beetle-killed trees can continue to be used is unknown.

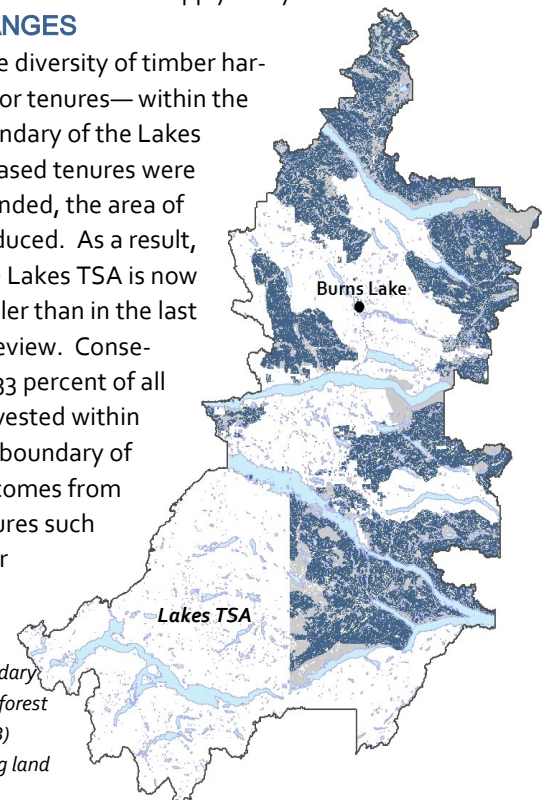
## FOREST FIRES

In 2018, 8 large wildfires impacted about 45 000 hectares of THLB within the Lakes TSA. It is estimated that these fires killed about 1.5 million cubic metres of live trees and about 1 million cubic metres of beetle-killed pine trees.

Fire impact estimates were directly incorporated into the timber supply analysis. Stands affected by fires contribute to the harvest forecast in the timber supply analysis.

## TENURE CHANGES

There is a wide diversity of timber harvesting rights—or tenures—within the geographic boundary of the Lakes TSA. As area-based tenures were created or expanded, the area of the TSA was reduced. As a result, the THLB of the Lakes TSA is now 30 percent smaller than in the last timber supply review. Consequently, about 33 percent of all the volume harvested within the geographic boundary of the Lakes TSA comes from area-based tenures such as woodlots or community forests.



## HARVEST PERFORMANCE

Since 2011, the average annual harvest level has been approximately 1.1 million cubic metres (66 percent of the current AAC). Due to successful salvage efforts by the forest industry, 52 to 61 percent of the total volume harvested during the same period was dead. Most of this harvested volume is processed in mills located in Burns Lake and Fraser Lake. These mills also rely on timber harvested outside of the Lakes TSA.

## TIMBER HARVESTING LAND BASE

Much of the Lakes TSA land base is not available for timber harvesting. The available forested area—the crown managed forest land base (CMFLB)—is 552 983 hectares in size. A subset of the CMFLB—the timber harvesting land base (THLB)—is an estimate of the land where timber harvesting is legally and economically feasible. About 66 percent of the forested area of the Lakes TSA—or 363 194 hectares—is considered to be THLB.

## TIMBER SUPPLY FORECASTS

Timber supply forecasts reflect the current forest composition and forest management assumptions. They also provide information about uncertainties around these assumptions.

The base case is a forecast that reflects current conditions and provides a baseline from which the chief forester can understand the dynamic of timber supply.

### The base case is not an AAC recommendation.

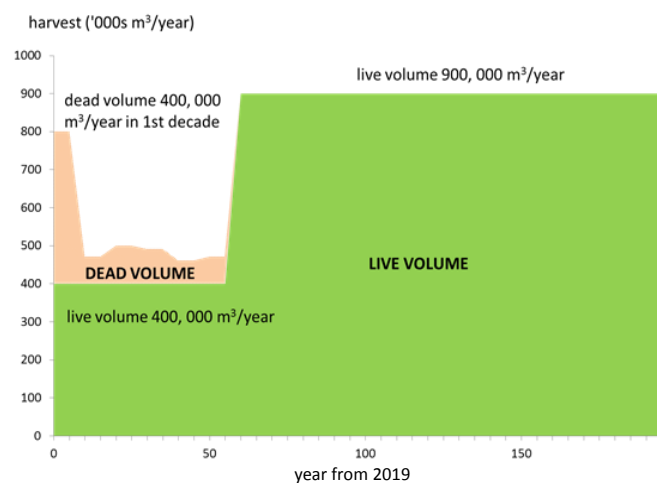
#### Base case

The base case was modelled to obtain a sustainable live volume harvest, but with an initial harvest priority on stands with currently more than 50 percent dead volume.

The base case forecast for the Lakes TSA has an initial harvest level of 400 000 cubic metres of live volume for 60 years. This includes a significant contribution (292 000 cubic metres per year) from low productivity stands in the first 10 years.

While harvesting this live volume, an additional 400 000 cubic metres per year of dead volume can also be salvaged for the next 10 years.

Managed stands are projected to provide almost the entire harvest after 60 years from now and are able to support a sta-



Base case harvest forecast

ble long-term harvest level of 900 000 cubic metres per year.

#### Alternative harvest flows

Attempts to increase the initial harvest level to the current AAC (1.6 million cubic metres) or the current harvest level (1 million cubic metres) could not be achieved as they depleted all the commercially available timber in a short period of time.

All alternatives that attempted to raise the harvest of live volume higher in the first decade result in a lower mid-term.

For example, the harvest level could be increased to 500 000 cubic metres per year for the next 10 years followed by a mid-term level of 380 000 cubic metres per year.

#### Sensitivity Analyses—Alternative Assumptions

Sensitivity analyses are used to examine the impacts of uncertainties in data and assumptions. Some of the uncertainties tested showed possible lower timber supply (e.g. decrease in stand productivity) while others identified possible opportunities. The opportunities tested could increase the short-term harvest levels from 400 cubic metres per year (by including marginally economic stands) to 40 000 cubic metres per year (by including deciduous component of coniferous stands).

## SUMMARY

The timber supply of the Lakes TSA has significantly changed over the past 2 decades, given the mountain pine beetle, large wildfires and the establishment of new area-based tenures.

The timber supply analysis identifies a significant decrease from the current AAC and recent harvest levels.

The base case shows that for the next 10 years, a live harvest level of 400 000 cubic metres per year is possible and an additional 400 000 cubic metres per year of dead timber is available if the initial harvest is mostly focused on the harvest of low productivity stands.

Of all the opportunities tested to increase timber supply beyond the base case level, the harvest of the deciduous component of coniferous stands has the largest potential impact.

## YOUR INPUT IS NEEDED

Feedback is welcome on any aspect of the discussion paper (available at <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/timber-supply-review-and-allowable-annual-cut>) or any other issue related to the timber supply review for the Lakes TSA.

**Comments will be accepted until Friday, July 5, 2019.**

For more information or to submit comments, contact the District Manager at Nadina Natural Resource District, PO Box 999, Burns Lake, BC VoJ 1E0 (phone number (250)692-2200) or Agathe Bernard, Stewardship Officer at [Agathe.Bernard@gov.bc.ca](mailto:Agathe.Bernard@gov.bc.ca).