

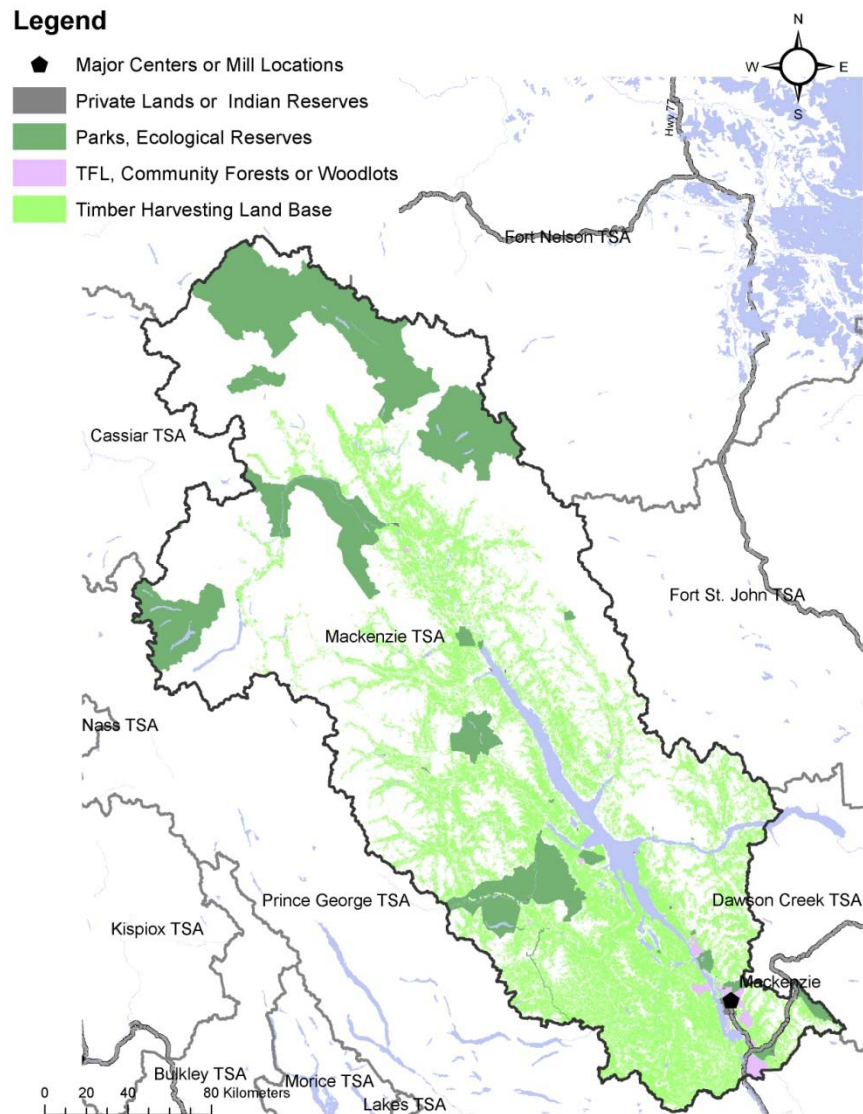


Mid-Term Timber Supply

June 8, 2012

Mackenzie Timber Supply Area

Background



The Mackenzie Timber Supply Area covers 6.4 million hectares:

- 52% considered productive forest (outside of Indian Reserves, private lands, woodlots and community forests).
- 56% of productive forest is not available for timber harvesting.

- Current timber harvesting land base is approximately 1.5 million hectares; 23% of the timber supply area.
- Species profile: 46% pine; 37% spruce; 17% balsam.
- Of the 120 to 140 million cubic metres of mature pine, approximately 80 million cubic metres has been killed by mountain pine beetle. District staff estimate about half might be available for harvest.

Communities: Mackenzie is the location of two operating sawmills and one Kraft pulp mill. There were four sawmills and two pulp mills operating in the community before the 2008 economic downturn.

First Nations:

The following First Nations have communities in the timber supply area: Tsay Keh Dene Band and Kwadacha Nation.

Bands (including tribal councils and associations) with interest but located outside of the timber supply area include: McLeod Lake Indian Band, the Kaska Dene Council, West Moberly First Nations, Takla Lake First Nation, Nak'azdli First Nation, Halfway River First Nation, Fort Nelson First Nation, and Saulteau First Nations.

Status of Land Use Plans

- Mackenzie Land and Resource Management Plan approved by Cabinet in 2000
- Key ungulate winter ranges and wildlife habitat areas declared to protect important species and habitats
- Mugaha Marsh Sensitive Area (order establishing sensitive area) approved 2002
- Mackenzie Area Crown Land Plan (order establishing agriculture and settlement reserve development areas) 2006
- Mackenzie Fox and Obo Landscape Unit Objectives (order to establish objectives for the Fox-Obo landscapes in the Muskwa Kechika Management Area) approved 2002
- Muskwa Kechika Management Area approved 1998; old growth management area orders approved spatial in 2010 and non-spatial in 2010

Past Allowable Annual Cut

- Approximately 3 million cubic metres for more than 30 years
- Minor adjustments due to the issuance of area-based tenures, analysis adjustments, and rounding
- Currently 3.05 million cubic metres (100,000 cubic metres deciduous), set in 2001

From 1997 to 2006, an average of 89% of allowable annual cut was harvested. Starting in 2007, the harvest level collapsed, averaging only 30% of the allowable annual cut from 2007 through 2010. In 2011, the harvest rebounded to approximately 70% of the allowable annual cut.

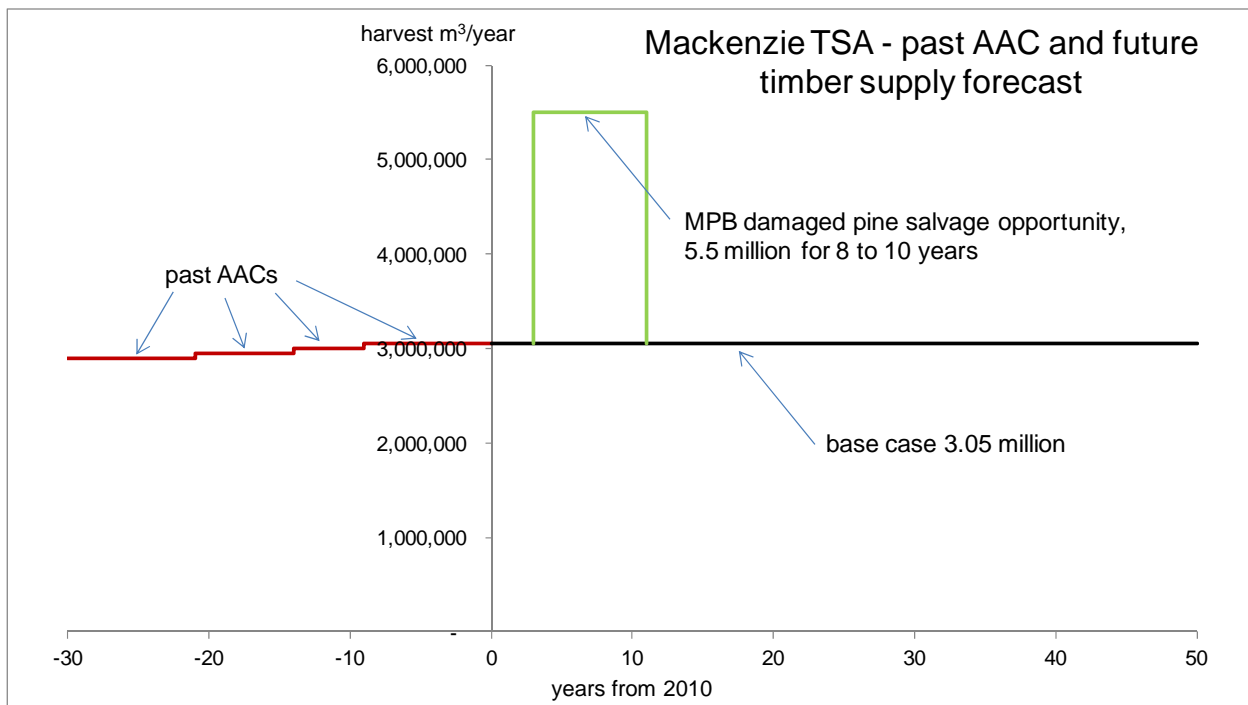
Based on cutting permit applications received to date, the estimated harvest in 2012 will be approximately 3.5 million cubic metres; 15% above the allowable annual cut. BC Timber Sales (BCTS) is ramping up planned salvage harvest from the current allocated level of 768,886 cubic metres a year to 2.0 million cubic metres a year by 2015. This will offset anticipated reductions in harvest in the Prince George District.

Mid-Term Timber Supply Forecasts

The Mackenzie Timber Supply Area was not part of the original 2011 provincial mid-term timber supply initiative which examined, in detail, the Prince George, Lakes, Quesnel and Williams Lake timber supply areas. Estimates of potential mitigation opportunities for the Mackenzie Timber Supply Area are based on analyses done in 2008 and 2010.

Timber supply analyses for the Mackenzie Timber Supply Area have been performed in 2006 (Council of Forest Industries), 2008 (consultant services for mid-term timber supply assessment) and 2010 (BC Forest Service to assess available fibre supplies). In all cases, timber supply modeling assumptions were generally consistent with the 2001 timber supply review. For these analyses, management assumptions were updated to reflect mountain pine beetle mortality in mature and immature pine stands.

These analyses indicate that the current cut of 3.0 million cubic metres can be maintained through the mid-term despite the mountain pine beetle mortality. These analyses also indicate that a short-term increase in cut to 5.0 million or possibly 6.0 million cubic metres could be managed without impacting mid-term timber supply.



Some cautions are appropriate:

- It is anticipated that a short-term salvage opportunity for eight to 10 years at 5.0 million to 6.0 million cubic metres a year exists for pine stands damaged by the mountain pine beetle.
- Previous analysis has indicated that taking advantage of the salvage opportunity would not impact the mid-term timber supply, and that approximately 3.0 million cubic metres a year would be available after salvage is complete by 2021 to 2023. This assumes the shelf life of beetle-attacked pine is 15 years (similar to the experience in the Prince George Timber Supply Area).
- The timber supply analyses do not reflect recent economic conditions and the fluctuations in timber demand. Much of the Mackenzie Timber Supply Area is remote and costly to operate in. Strong demand and prices are required to sustain the harvest levels modeled in the previous timber supply analyses.
- Maintaining the mid-term cut will require using a much higher proportion of balsam (subalpine fir) and, to a lesser extent, deciduous, both of which are less desirable species.

Current Practices and Silviculture Investments

- All operators are encouraged to concentrate harvesting in dead pine stands, and new tenure opportunities have been restricted to stands containing at least 70% pine. Performance is monitored, and the current harvest is approximately 74% pine compared with 46% pine in the overall mature growing stock.
- Recent tenure opportunities have been designed to encourage the use of low-grade logs and fibre and support development of the fibre-consuming industry (e.g. pulp, cogeneration and wood pellets).
- Aggressive planting programs generally result in reforestation within one year of harvesting.
- The Forests for Tomorrow program is clearing and reforesting some stands that are sub-marginal for conventional harvesting. Innovative Timber Sale Licenses, for fibre, have been used to extend the program.
- Stem rusts are a major pest on young pine stands in the Mackenzie Timber Supply Area. A local Rust Working Group developed guidelines and practices that are reducing losses.

Economic Profile in the Mackenzie District/Mackenzie Timber Supply Area

- Based on the report *2006 Economic Dependency Tables for Forest Districts*, the forest sector accounted for 70% of basic employment – by far the highest percentage in the province. The forest vulnerability index¹ for the Mackenzie Timber Supply Area is 264, also the highest in the province.

¹The magnitude of the forest vulnerability index indicates the vulnerability of each local area to potential downturns in the forest sector – a community is vulnerable if its forest sector dependence is high and its diversity is low. It is worth emphasizing that a high index value does not mean that the wood-based manufacturing facilities in that area are more likely to shut down than in other areas. Rather, a high value means that if forest sector activity in the area declines then the area will experience greater economic difficulties than other areas in the province would under the same circumstances.

- The recent decline in the local forest sector and the construction of the Mount Milligan Mine will have caused a significant shift in this profile, but more recent data is not available.
- Employment in other sectors: public sector (18%), tourism (8%); construction (1%), and other (1%).

Mills:

- Canfor currently operates one sawmill in Mackenzie with an annual consumption capacity of approximately 800,000 cubic metres. Conifex operates one sawmill with an annual consumption capacity of 700,000 cubic metres. Paper Excellence operates a kraft pulp mill with an annual consumption capacity of approximately 1 million cubic metres of chips and 300,000 cubic metres of sawdust/shavings.
- Conifex has plans to restart a second sawmill in Mackenzie with an annual consumption capacity of 600,000 cubic metres and a bioenergy plant with an annual consumption capacity of 400,000 cubic metres of hog fuel.

Projected Mill Impacts

- The two operating sawmills and the additional sawmill Conifex plans to open should be sustainable, based on mid- and long-term timber supply projections.
- As the timber supply declines in the Prince George Timber Supply Area, competition from sawmills in this area will create challenges for the local Mackenzie mills.
- The kraft pulp mill operated by Paper Excellence has a short-term licence to cut, but not a long-term secure fibre supply. As the fibre supply is reduced in the Prince George Timber Supply Area, and the demand for fibre increases due to new cogeneration and pellet plants, this mill is expected to experience fibre supply shortages.

Opportunities for Diversification

- Construction of the Mount Milligan Mine is already driving diversification. There are about 1,000 direct jobs during construction, and about 400 production jobs for the 22-year mine life, starting in late 2013.
- Several other potential mines are in various stages of exploration and early development planning, with economic and employment opportunities primarily in service and supply. There is potential for more significant construction and production employment if these properties move to development.
- Within the forest sector, the development of fibre-based opportunities (cogeneration, pellets, pulp, etc.) is diversifying and increasing the resilience of this sector.
- The District of Mackenzie has been pursuing economic development and tourism strategies, which are helping to drive diversification and resilience, but do not compare with employment levels associated with major industrial developments.
- The Mackenzie Timber Supply Area has significant access and infrastructure challenges, and investment to improve main access corridors would help support development and diversification across the natural resource sector.

Opportunities for Mitigation

- Mackenzie has a large and diverse land base with a very large growing stock of timber, approximately 46% pine. Timber supply analyses indicate a timber supply falldown can be avoided by harvesting in the entire timber harvesting land base, including some remote, high-cost areas where balsam (subalpine fir) is the most prevalent species.
- If economics improve for the forest industry through increases in lumber prices and improvements in technology, these marginally economic stands will continue to bolster the mid-term timber supply. If the marginal economics being experienced today were to continue, a mid-term falldown following mountain pine beetle salvage harvesting is the more likely scenario.
- Over the past five years (2007-2011), only 38% of the allowable annual cut has been used, leaving 9.4 million cubic metres of “undercut”. The latest Provincial Projection of the Mountain Pine Beetle Outbreak estimates that 68% of the pine in the Mackenzie Timber Supply Area will have been killed by 2022, resulting in a cumulative total of 80 million cubic metres of dead pine. While this represents a substantial short-term opportunity, it must be carefully managed to avoid worsening any potential falldown in economic timber supply.
- A number of timber harvesting commitments have been made in addition to the 3.0 million cubic metre allowable annual cut. BC Timber Sales has plans to offer an additional 1.2 million cubic metres a year to address dead pine in its operation areas. A number of First Nations tenure opportunities have been offered, amounting to approximately 400,000 cubic metres a year. Mackenzie Fibre has a short-term licence to cut 800,000 cubic metres a year. These add up to an additional commitment of about 2.5 million cubic metres for a total of 5.5 million cubic metres. This would appear to be a reasonable harvest level to ensure salvage of the volume and value of the dead pine stands.

Some specific mitigation opportunities include:

- Continue to monitor and encourage the harvest of dead pine. All incremental harvesting opportunities should include criteria restricting the harvest to pine stands.
- Continue to encourage fibre-based industry and greater utilization of non-sawlog timber and residue. This will extend the viability of dead pine stands and expand the economic margin into currently sub-marginal stands.
- Encourage the harvesting of the stands that have been dead for the longest period of time. The infestation in the Mackenzie Timber Supply Area progressed from south to north over about five years, so stands in the northern area will remain viable longer than those in the south.
- Invest in access improvement to reduce costs and increase the capacity to move salvaged pine timber volumes from the northern areas of the timber supply area. This would also support diversification by reducing costs for other sectors such as mining.
- Encourage full use of the 5.5 million cubic metres of available harvest. Aggressive harvesting and reforestation can shorten the length of mid-term timber supply shortfalls by bringing dead stands back into production sooner.
- Support First Nations efforts to act on their offered tenure opportunities as soon as possible.

- Additional commitments, above the currently available 5.5 million cubic metres a year are not recommended as they would likely displace activity from existing First Nations opportunities.
- Expand the Forests for Tomorrow program so more stands of 'undersize' pine can be cleared and reforested, and fibre consumers can capture the fibre value.

Administrative implications:

Many of the potential mitigation options would require funding to manage and implement. These expenditures would be off-set by increased industrial activity and associated government revenue.

More information:

Mid-Term Timber Supply Project

http://www.for.gov.bc.ca/hfp/mountain_pine_beetle/#whatsnew

Forest Analysis: Mackenzie Timber Supply Area

<http://www.for.gov.bc.ca/hts/tsa/tsa16/index.htm>

Land-Based Investment Strategy (Mackenzie Timber Supply Area)

<http://lbis.forestpracticesbranch.com/LBIS/node/47>

Mackenzie Forest District

<http://www.for.gov.bc.ca/dmk/>

Omineca Beetle Action Coalition

www.ominecoalition.ca/

Mackenzie Land and Resource Management Plan

<http://ilmbwww.gov.bc.ca/slrp/lrmp/princegeorge/mackenzie/index.html>