

**BRITISH COLUMBIA
MINISTRY OF FORESTS, LANDS
NATURAL RESOURCE OPERATIONS AND RURAL
DEVELOPMENT**

Old Growth Designated Area No. 1

**Rationale for
Allowable Annual Cut (AAC)
AAC Reductions**

Effective September 11, 2020

**Diane Nicholls, RPF
Chief Forester**

Statutory Framework

Sections 168 to 175 (Part 13) of the *Forest Act*, allow government to temporarily suspend forestry authorizations, obligations, and activities on Crown land within a designated area for up to 10 years. The establishment of designated areas and suspension of timber harvesting allows time for government to complete land base decisions (e.g. protected areas). Section 173(2) of the *Forest Act* stipulates that the chief forester, by written order, may reduce the allowable annual cut (AAC) of a timber supply area (TSA), or a tree farm licence (TFL), if all or part of the TSA or TFL is a designated area. In doing so, the chief forester may specify portions of the reduction that are attributable to different types of timber and terrain in different parts of the Crown land within the designated area.

The purpose of AAC reductions under Part 13 is to ensure that timber harvesting does not become overly concentrated in areas outside of the designated area, due to suspension of operations in the designated area. Another objective of Part 13 is to ensure that the required temporary adjustments are made in a timely manner.

Old Growth Designated Area No. 1

On September 11, 2020, in response to recommendations in the *2020 Old Growth Panel Report*, the Lieutenant Governor issued an Order in Council (OIC), designating Clayoquot Sound and nine other areas as Old Growth Designated Area No. 1 under Section 169 of the *Forest Act* for the period ending August 31, 2022. Concurrently, the Minister of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), signed Ministerial Order (MO) No. M338 suspending old growth harvesting (with some exceptions noted in the MO) for as long as the OIC remained in effect. On June 9, 2021, MO No. M338 was repealed and replaced with Ministerial Order (MO) No. M232. MO No. M232 expanded the suspension of old-growth harvesting to include the “Central Walbran Valley”.

Under the MO No. M232, any part of a Permit or Licence pertaining to a right to cut, damage or destroy standing timber in a “Suspended Harvest Area” is suspended. The Suspended Harvest Area is defined as a forested stand with a “Forest Cover Projected Stand Age (FCPSA)” greater than the age, as defined in in Schedule 1 of the MO. The Schedule 1 age varies by Natural Disturbance Type (NDT), and is 212 years for NDTs 1, 2 and 4; and 119 years for NDT 3. The MO also sets out several conditions when suspension of a permit or licence does not apply.

On January 29, 2021, I met with Ministry staff to review preliminary information on the potential AAC impacts of the MO. This information included the estimated AAC contribution from the suspended harvest areas for seven TFL and six TSA management units overlapped by the designated areas. As a percentage of the total AAC of each management unit, the contribution of these old growth areas ranged from 0.2 percent to 88 percent. For three management units: the Arrowsmith TSA, TFL 54 and TFL 57, preliminary data indicated an impact of greater than one percent of the total AAC. For the other 10 units, the estimated impact was less than one percent.

For TSAs and TFLs where the MO was estimated to reduce the projected timber supply by less than one percent, I determined that the temporary harvest suspension is unlikely to cause an unsustainable concentration of harvesting outside of the suspended harvest areas.

For the Arrowsmith TSA, TFL 54, and TFL 57, where the impact was estimated to be greater than one percent, I instructed staff to develop comprehensive impact estimates, and to undertake First Nations consultation on any orders issued under Section 173.

If additional areas are designated under Part 13, and the additional or cumulative AAC impact of those designations exceeds one percent of the AAC of the management unit, additional AAC reduction orders under Section 173 will be considered.

First Nations Consultation

Recently, British Columbia (BC) created a framework for advancing reconciliation with Indigenous Peoples, in keeping with the Calls to Action of the Truth and Reconciliation Commission. The provincial government passed legislation in November of 2019 to implement the United Nations Declaration on the Rights of Indigenous People (UNDRIP). BC's *Declaration on the Rights of Indigenous Peoples Act (Declaration Act)*, aims to create a clear process by which Indigenous Peoples are a part of the decisions that affect them, their communities, and their territories. As such, First Nations Interests are an important consideration in making decisions related to timber supply.

First Nations with asserted traditional territory overlapping TFL 54, TFL 57 and Arrowsmith TSA within the Clayoquot Sound Designated area include: Hesquiaht First Nation, Ahousaht First Nation, Tla-o-qui-aht First Nation, Huu-ay-aht First Nation, Ka:'yu:'k't'h'/Che:k:tles7et'h' First Nations, Toquaht First Nation, Uchuckleshaht First Nation, Yuułu?ı̨?Ath (Ucluelet) First Nation, and Tseshah First Nation. Although Mowachaht-Muchalaht First Nation's territory overlaps with TFL 54, that overlap is not within the Clayoquot Sound Designated area and therefore there is no potential to impact Mowachaht/Muchalaht's Aboriginal Interests and no consultation was initiated.

I have noted that the licensee Ma-Mook Natural Resources Limited. (Ma-Mook) is a partnership of the Ahousaht, Hesquiaht, Tla-o-qui-aht, Toquaht and Yuułu?ı̨?ath (Ucluelet) First Nations and is held under the Ma-Mook Development Corporation. Ma-Mook submitted a letter to me as the Chief Forester on December 15, 2020, requesting a temporary reduction in the combined AAC of TFL 54 and TFL 57 from 159 600 cubic metres per year to 69 495 cubic metres per year.

The consultation with First Nations on the proposed AAC reduction was carried out by the FLNRORD South Island Natural Resource District office in Port Alberni. On February 17, 2021, initial engagement letters were sent to all potentially affected First Nations which explained the Section 173(2) proposed AAC reduction decision and requested feedback on Aboriginal Interests that may be affected by this decision. On March 15, 2021, Hesquiaht First Nation requested a meeting between FLNRORD and Hesquiaht First Nation Chief and Council. A virtual meeting was held on April 6, 2021. Further explanation concerning the proposed AAC Reduction was discussed, and the deadline for response was further confirmed, but no written response was received.

Based on the information presented to me by FLNRORD staff, I am satisfied that all potentially impacted First Nations were consulted in accordance with current Provincial guidance and applicable case law. Although no formal public review was conducted regarding these orders under Section 173 (Part 13) of the *Forest Act*, a public engagement process will be completed prior to next AAC determination for the Arrowsmith TSA, TFL 54 and TFL 57.

Subsequent to completion of the assessments describe above, the Ministry has agreed to a request from Ma-Mook Natural Resources Ltd. to consolidate TFL 54 and TFL 57 in accordance with Section 39 of the *Forest Act*. Under TFL 54 Instrument Number 8, and TFL 57 Instrument Number 2, the AAC of TFL 57 will be transferred to TFL 54. This proposed consolidation does not alter the results of the timber supply analyses supporting this determination, and the combined AAC reduction to the consolidated TFL 54 will be 113 600 cubic metres, the sum reductions to the previous individual TFLs.

Timber Supply Analysis

A variety of assessment methods were developed by staff at Forest Analysis and Inventory Branch (FAIB) to estimate the impact of the MO on the timber supply for the three management units. These methods included: 1) the calculation of the AAC contribution of the suspended harvest area, based on a ratio of AAC (m³) to THLB (ha) (the AAC ratio method); and 2) timber supply projections from a generalized forest estate model. I have reviewed the results of this assessment, information received from First Nations and licence holders, and the documents listed in Appendix 1. I have considered this information as described in the following sections.

Arrowsmith TSA

The Clayoquot Sound parcel of the designated area encompasses portions of the Clayoquot Sound Land Use Decision (CSLUD) area which has specific land-use objectives. In the 2018 timber supply review (TSR) for the Arrowsmith TSA, the CSLUD was modelled separately from the TSA to ensure a close approximation of the Clayoquot Sound Scientific Panel recommendations, and a partition of 6850 cubic metres per year was established for this area.

The MO designated area overlaps only the Clayoquot partition within the Arrowsmith TSA. Therefore, the FAIB assessment focussed on the timber supply impacts to the CSLUD partition area.

The FAIB assessment indicated that the harvest suspension attributable to the MO would reduce the timber supply in the partition area, by a volume between 3800 cubic metres per year and 6400 metres per year. Additionally, when the incremental impact of isolated non-old stands was considered, the AAC reduction increased to a level between 3900 cubic metres per year and 6600 cubic metres per year.

I note that the impacts shown in the FAIB assessment represented a wide range in volume. The lower end of this range was based on the AAC ratio method, which did not fully recognize the higher than average volume of the suspended harvest area (i.e., the high volume of old-growth stands) and therefore underestimated the contribution of these stands. The higher end of the range was based on the contribution of the suspended harvest area from the generalized timber supply model that did not include all forest cover constraints applicable to the area, and did not capture timber supply uncertainties regarding harvest performance identified in the 2018 TSR. This uncertainty is discussed below. Therefore, the generalized timber supply model overemphasized the contribution of old stands to the timber supply. For this reason, I believe the upper end of the FAIB assessed range (6600 cubic metres) represents an overestimation of the impact.

The generalized timber supply model was also used to project the harvest of non-old-growth stands in the CSLUD, which are not subject to the suspension order and not physically isolated. This projection suggested that these stands could support a harvest level of approximately 2500 metres per year which

equates to an AAC reduction of 4350 cubic metres. This reduced amount is incremental to the harvest level supported by the old-growth stands in the suspended harvest area.

In addition to the FAIB assessment, I have also considered the analysis supporting the 2018 AAC determination for the Arrowsmith TSA. That analysis indicated the CSLUD area is capable of supporting an annual harvest of 13 700 cubic metres, an amount that is twice the AAC that I specified in my determination. As indicated in my *2018 AAC Rationale for Arrowsmith TSA*, I reduced my expectation for harvest level in the CSLUD area from 13 700 cubic metres to 6850 cubic metres per year to account for the lack of harvesting in the area over the 10 years prior to my 2018 determination. I also note that very little harvesting has occurred in the CSLUD area since 2018.

Given the above considerations, I determine that a reduction of 4350 cubic metres is applicable to the CSLUD partition of the Arrowsmith TSA for the period that the MO remains effective. As a result, the AAC for the CSLUD partition area is reduced to 2500 cubic metres, which is the non-old-growth harvest level in the generalized timber supply model. The reduction will provide continued harvesting opportunity in the CSLUD area while minimizing the risk of an over-concentration of harvesting in non-old-growth stands.

Tree Farm Licence 54

The most recent timber supply review for TFL 54 was completed in February 2019 when the area-based AAC was set at 170 hectares. In 2019, the AAC was converted to a volume-based AAC of 71 070 cubic metres.

The FAIB assessment indicated the harvest suspension attributable to the MO would reduce the timber supply for TFL 54 by an amount between 38 000 cubic metres per year and 54 000 metres per year. Additionally, when the incremental impact of isolated non-old stands was considered, the AAC reduction increased to a level between 41 000 cubic metres per year and 62 000 cubic metres per year.

The lower end of this range was based on an AAC ratio method which did not fully recognize the higher than average volume of the suspended harvest area (i.e., the high volume in old-growth stands) and therefore underestimated the contribution of these stands in the harvest suspension area.

The higher end of the range was based on the contribution of old-growth stands in the suspended harvest area from the generalized timber supply model which did not include all forest cover constraints applicable to the area. Since the model did not sufficiently constrain the harvest of old stands, it overemphasized their contribution to the projected timber supply. For this reason, I believe the upper end of the FAIB assessed range represents an overestimation of the impact.

I have also reviewed an impact analysis prepared for Ma-Mook Natural Resources Limited by Forsite Consultants for TFL 54 and TFL 57. This analysis utilized two methods to assess the impact of the MO. The first method was an AAC ratio method and the second method was a timber supply projection produced using the Patchworks modelling software. I reviewed these two approaches and note that the AAC ratio method indicated an annual harvest level of 28 900 cubic metres, which equates to a reduction of 42 170 cubic metres. The Patchworks model projected an annual harvest level under the MO at 19 015 cubic metres for the next decade and then at increasing harvest levels for the following four decades, culminating to a long-term level of 33 573 cubic metres per year. I note that the initial harvest level of 19 015 cubic metres per year equates to a reduction of 52 055 cubic metres per year.

In considering the range of impacts in the Forsite assessment, I believe an AAC reduction closer to the higher end of the range is appropriate. This is because of the high proportion of old-growth stands in TFL 54 that will not be available under the MO, and because there is uncertainty regarding the physical and economic isolation of non-old-growth stands during the term of the MO. Additionally, if the MO is extended past August 2022, harvesting at the higher level could potentially impact the mid-term timber supply in this unit.

Given the above considerations, I determine that an AAC reduction of 49 070 cubic metres is applicable for TFL 54 for the period that the MO remains effective. A reduction at this level will result in an AAC of 22 000 cubic metres and will provide the licence holder flexibility to operate while minimizing the risk of an over concentration of harvesting in stands outside the suspended harvest area.

Tree Farm Licence 57

The most recent determination for TFL 57 was completed in 2016. At that determination an AAC of 222 hectares was established. In 2019, the AAC was converted to a volume-based AAC of 88 530 cubic metres.

The FAIB assessment indicated that the suspension of harvesting in the designated area would reduce the timber supply for TFL 57 by an amount in the range of 48 000 cubic metres per year and 75 000 metres per year. Additionally, when the incremental impact of isolated non-old stands was considered, the reduction increased to a level between 51 000 cubic metres per year and 77 000 cubic metres per year. There was uncertainty around these results because of the high proportion of old stands in this management unit (approximately 54 percent) and because many non-old stands currently do not meet the minimum harvest criteria defined in the TSR.

I note that the lower end of the FAIB assessed range is based on an AAC ratio method which did not fully recognize the higher than average volume of the suspended harvest area (i.e., the high volume in old-growth stands) and therefore represents an underestimation of the impact. I also note that the higher end of the range was based on the contribution of old stands in the suspended harvest area from the generalized timber supply model which did not include all forest cover constraints applicable to the area. Since the model did not sufficiently constrain the harvest of old stands, it overemphasized their contribution to the modelled results. For this reason, I believe the upper end of the FAIB assessed range represents an overestimation of the impact.

I am aware that Forsite Consultants completed two alternate assessments for TFL 57 using a AAC ratio method and the Patchworks timber supply model. I reviewed these two approaches and note that AAC ratio method indicated a harvest level of 40 600 cubic metres, which equates to a reduction of 47 930 cubic metres from the current AAC. This represents a lower bound to the range of reduction. I also note the initial harvest level in Forsite's Patchworks model was 15 848 cubic metres per year, which equates to a reduction of 72 682 cubic metres from the current AAC and thus sets an upper bound.

In considering this range of reductions assessed by FAIB and Forsite, I believe an AAC reduction at the upper end of the range is more appropriate. This is because of the very high proportion of old growth in this management unit that will not be available to support harvest levels, and because there is uncertainty regarding the physical and economic isolation of non-old-growth stands. Additionally, if the MO is

effective past the August 2022 time frame, a higher AAC would potentially impact the mid-term timber supply in this unit.

Given the above considerations, I determine that an AAC reduction of 64 530 cubic metres is applicable for TFL-57 for the period that the MO remains effective. A reduction at this level will result in an AAC of 24 000 cubic metres and will provide the licence holder flexibility to operate while minimizing the risk of an over concentration of harvesting in stands outside the suspended harvest area.

Determination

I have considered and reviewed all the impact assessments as documented above, including the risks and uncertainties of the information provided. It is my determination that timber harvest levels that meet the requirements as specified in MO No. M232, and that reflect current management can be best achieved in the Old Growth Designated Area No. 1 by reducing the AAC for each unit as follows:

Arrowsmith TSA a reduction of 4350 cubic metres applicable to CSLUD partition area;
TFL 54 a reduction of 49 070 cubic metres;
TFL 57 a reduction of 64 530 cubic metres.

These orders are effective as of September 11, 2020, and will remain in effect until MO No. M232 expires.

Following consolidation of TFL 57 and TFL 54, the reduction for TFL 54 will be 113 600 cubic metres.

If additional significant new information is made available to me, or major changes occur in the management assumptions upon which I have predicated this decision, I am prepared to revisit this determination prior to the expiry of MO No. M232.

It is my expectation that during the period that MO No. M232 is in effect, FLNRORD staff will monitor timber harvesting levels in non-old-growth stands within the designated area.



Diane Nicholls, RPF
Chief Forester



August 31, 2021

Appendix 1 – Relevant Legislation and Documents

In considering all the factors required under Part 13, Section 173 of the *Forest Act*, I have reviewed the following:

Legislation

- Province of BC. *Forest Act* Part 13, Sections 173(2), 173(3);
- Old Growth Designated Area No. 1, B.C. Reg. 228/2020;
- Ministerial Order (MO) #232 [Ministerial Order \(MO\) No. M232](#);
- Order in Council Number 500 [Order in Council \(OIC\) no. 500](#);
- Tree Farm Licence Management Plan Regulation, BC Reg. 280/2009.

Licence Holder Plans, Timber Supply and other related documents

- Official map: Old Growth Designated Area No .1 file name Old_Growth_PT13_No1_20200722 with GEOBC;
- Province of BC. *Arrowsmith TSA Rationale for Allowable Annual Cut (AAC) Determination*, Effective February 9, 2018;
- Province of BC. *Tree Farm Licence 54 held by Ma-Mook Natural Resources Limited Rationale for Allowable Annual Cut (AAC) Determination*, Effective February 7, 2019;
- Province of BC. *Tree Farm Licence 57 held by Ma-Mook Natural Resources Limited. Rationale for Allowable Annual Cut (AAC) Determination*, Effective September 14, 2016;
- *Ma-Mook Natural Resources Limited Tree Farm Licence 54 Management Plan #5* October 2, 2018;
- *Ma-Mook Natural Resources Limited Tree Farm Licence 57 Management Plan #2* September 2014.
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First Nations Consultation

- Province of BC. First Nations consultation summary as per Timber Supply Review binder: *Allowable Annual Cut Determination for Old Growth Designated Area No. 1* May 14, 2021.