BRITISH COLUMBIA
MINISTRY OF FORESTS

North Island Timber Supply Area

Rationale for the Allowable Annual Cut (AAC) Determination

Effective June 26, 2024

Shane Berg, RPF
Chief Forester

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Objective of this document

This document provides an accounting of the factors I considered, and the rationale I employed in making my determination of the allowable annual cut (AAC) for the North Island Timber Supply Area (TSA). This document also identifies where new or better information should be incorporated in future determinations.

Acknowledgement

For preparation of the information I considered in this determination, I am indebted to staff of the BC Ministry of Forests (the "Ministry") in the Campbell River Natural Resource District, the North Island-Central Coast Natural Resource District, and the Forest Analysis and Inventory Branch (FAIB). I am also grateful to the First Nations, forest industry representatives, local residents, and other stakeholders who offered comments and contributed to this process.

Statutory framework

Section 8 of the *Forest Act* requires the chief forester to determine AACs for TSAs and Tree Farm Licences (TFL) after considering certain specified factors. Section 8 of the *Forest Act* is reproduced in full as Appendix 1 of this document.

Description of the North Island Timber Supply Area

The North Island TSA, located on the northern half of Vancouver Island, was created in January 2017 when the *Great Bear Rainforest (Forest Management) Act* (GBRFMA) and regulations came into effect. Under the regulations, this new TSA was created from the Vancouver Island portions of the former Kingcome and Strathcona TSAs. Segments of the Pacific TSA, TFLs 6, 19, 37, 39 and 47 are interspersed throughout the TSA. The total TSA land base area is approximately 1 749 460 hectares and it is administered by both the Campbell River Natural Resource District (DCR) office in Campbell River, and the North Island-Central Coast Natural Resource District (DNI) office in Port McNeill. Twenty-six First Nations (or Indigenous entities) assert Aboriginal Interests within the North Island TSA.

The western and northern portions of the TSA are characterized by rugged marine coastlines, steep mountainous terrain, and deep river valleys and inlets that extend into the Pacific Ocean. The eastern portion of the TSA and some interior areas have terrain ranging from rugged mountains to poorly drained lowlands. The TSA overlaps three biogeoclimatic zones: the Coastal Western Hemlock (CWH) located between sea level and 1000 metres of elevation, the higher elevation zones of Mountain Hemlock (MH) and the Coastal Mountain-heather Alpine (CMA). Major tree species in the TSA are western hemlock, amabilis fir (more often called balsam), western redcedar, yellow-cedar, mountain hemlock, Douglas-fir and small amounts of red alder and spruce.

The varied topography and climate of the TSA support a rich variety of wildlife. Of particular importance are the old growth forests of the CWH zone and the protected, nutrient-rich estuaries that provide critical habitat for over-wintering water birds, many species of mammals, and young salmon. More than 300 species of migratory and resident birds, 45 species of mammals and 13 species of amphibians and reptiles are found in the TSA. Native mammals include black-tailed deer, Roosevelt elk, black bear, wolf, beaver, pine marten, wolverine and weasel. Native and migratory birds in the forests of the area include species identified as being at risk, such as marbled murrelets, northern goshawks, and great blue herons. The marine habitats and estuaries support populations of red-legged and coastal tailed frog, Peale's peregrine falcons, bald eagles, trumpeter swans, harlequin ducks and over-wintering birds.

There are 275 500 hectares of provincial parks, protected areas and ecological reserves within the TSA with the six largest being Strathcona, Brooks Peninsula (Muqqiwn), Cape Scott, Tahsish-Kwois, Schoen Lake and Woss Lake parks. There are also 492 kilometres of recreation trails and 11 507 hectares of recreation sites and reserves for recreation and enjoyment of the public. These areas, along with water features and wildlife, provide for a range of recreational activities such as hiking, canoeing, camping, horse tours, fishing, hunting, snowmobiling, and downhill and cross-country skiing.

The major communities and corresponding populations (2016 census data) include Campbell River (32,588), Courtenay (25,599), Comox (14,028) and smaller communities of Port Hardy (4132), Cumberland (3753), Port McNeill (2337), Gold River (1212), Port Alice (664), Sayward (311), Tahsis (248), Kyuquot (200) and Zeballos (107). Economic activity includes forestry, mining, commercial and recreational fishing, aquaculture, public sector, and tourism.

The most recent economic dependency estimates provided by BC Stats show the main sources of employment in the North Island TSA area are health care and construction. Forestry and logging, support activities and wood product and paper manufacturing account for 3,055 local jobs. Permanent closures of several wood product manufacturing facilities in the TSA area have reduced the number of direct forestry jobs over time.

Currently, within the North Island TSA there is a small wood processing sector consisting of 10 small lumber mills, 2 chip facilities, 5 shake and shingle mills, and a utility pole facility. The average volume of timber harvested during the period 2017 to 2021 was 1 092 351 cubic metres per year. Most of the wood harvested is shipped to facilities in the Lower Mainland and Southern Vancouver Island.

History of the AAC

This is the first timber supply review (TSR) to be completed for the North Island TSA. The current AAC set in 2017 by the Great Bear Rainforest (Forest Management) Regulation is 1 248 100 cubic metres. The Vancouver Island portion of the former Strathcona TSA contributes 986 000 cubic metres and the Vancouver Island portion of the former Kingcome TSA contributes 262 000 cubic metres to the current AAC. The GBRFMA specifies that subsequent AAC determinations outside of the Great Bear Rainforest must be made by the chief forester.

New AAC determination

Effective June 26, 2024, the new AAC for the North Island TSA will be 1 096 000 cubic metres. This AAC is comprised of 9000 cubic metres of red alder harvested from anywhere in the TSA, and 1 087 000 cubic metres of coniferous timber. A maximum of 543 500 cubic metres of coniferous timber may be harvested from stands older than 140 years, and a maximum of 543 500 may be harvested from stands 140 years and younger. Of the total AAC (1 096 000 cubic metres), a maximum of 450 000 cubic metres may be harvested from the southeastern portion of the Campbell River District (the Sayward timber supply block (TSB)).

This new AAC is 12.2 percent below the current AAC and will remain in effect until another AAC is determined, which must take place within 10 years of this determination.

Role and limitations of the technical information used in this determination

Section 8 of the *Forest Act* requires the chief forester, in determining AACs, to consider biophysical, social, and economic information. Most of the technical information used in AAC determinations is in the form of a timber supply analysis and its inputs related to forest inventory, growth and yield and management practices. The factors used as inputs to timber supply analysis have differing levels of uncertainty associated with them, due in part to variation in physical, biological, and social conditions.

Computer models cannot incorporate all of the social, cultural and economic factors that are relevant when making forest management decisions. Technical information and analysis, therefore, do not necessarily provide the complete answers or solutions to forest management decisions such as AAC determinations. Such information does provide valuable insight into potential impacts of different resource-use assumptions and actions, and thus forms an important component of the information I must consider in AAC determinations.

In determining the AAC for the North Island TSA I have considered known limitations of the technical information provided. I am satisfied that the information provides a suitable basis for my determination.

Guiding principles for AAC determinations

Given the substantial number of periodic AAC determinations required for B.C.'s many forest management units, administrative fairness requires a reasonable degree of consistency of approach in addressing relevant factors associated with AAC determinations. In order to make my approach in these matters explicit, I have considered and adopted the following body of guiding principles, which have been developed over time by B.C.'s chief foresters and deputy chief foresters. However, in any specific circumstance in a determination where I consider it necessary to deviate from these principles, I will explain my reasoning in detail.

When considering the factors required under Section 8, I am also aware of my obligation as a steward of the forests of British Columbia, of the mandate of the Ministry of Forests ("the Ministry") as set out in Section 4 of the *Ministry of Forests and Range Act*, and of my responsibilities under the *Forest Act, Forest and Range Practices Act* (FRPA), and the *Professional Governance Act*.

AAC determinations should not be construed as limiting the Crown's obligations under court decisions in any way, and in this respect, it should be noted that AAC determinations do not prescribe a particular plan of harvesting activity within the management units. They are also independent of any decisions by the Minister of Forests with respect to subsequent allocation of timber supply.

These guiding principles establish a framework for AAC decision-making with consideration to the following: advancing reconciliation with Indigenous people; responding to uncertainties; the incorporation of forest landscape planning information (including any legal orders associated with forest management), cumulative effects, and climate change.

<u>Reconciliation with Indigenous people</u>

The Government of B.C. has committed to true and lasting reconciliation with Indigenous people. The *Declaration on the Rights of Indigenous Peoples Act* of 2019 (the '*Declaration Act*') creates the path forward for aligning provincial laws with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Recognizing that reconciliation and changes to policies, programs, and legislation take time, any interim processes undertaken for AAC determinations should be responsive to the information and issues raised by Indigenous people to the extent possible within the existing legislative framework for AAC determinations. Interim collaborative engagement processes will seek to move beyond the legal duty to consult, align with relevant agreements between First Nations and the Province (including commitments regarding stewardship or resource management), promote capacity building within Indigenous communities, and provide a clear and transparent understanding of the decision-making process.

Where the nature, scope and geographic extent of Aboriginal rights and title have not been established, the Province has a constitutional obligation to consult with First Nations in a manner proportional to the strength of any claimed Aboriginal rights (including title) and the degree to which they may be affected by the decision. The Province also has an obligation to consult with First Nations regarding their treaty rights. In this regard, when making an AAC determination I will give consideration to the following information:

(i) information provided to First Nations to explain the timber supply review process and analysis results;

(ii) information, including Indigenous Knowledge, brought forward through consultation or a collaborative engagement process with respect to Aboriginal Interests, and how these interests may be impacted by an AAC decision;

(iii) any strategic level plans, operational plans, or management information that describe how Aboriginal Interests are addressed through specific actions and forest practices;

(iv) existing relevant agreements and policies between First Nations and the Province; and,

(v) other information regarding the potential impact of an AAC decision on the ability of Indigenous communities to meaningful exercise of Section 35 rights as recognized in the *Constitution Act* (1982), such as information about cumulative effects.

Aboriginal Interests that may be impacted by AAC decisions will be addressed consistent with the scope of authority granted to the chief forester under Section 8 of the *Forest Act,* and with consultation obligations defined in court decisions. When information is brought forward that is outside of the chief forester's scope of statutory authority, this information will be forwarded to the appropriate decision makers for their consideration. Specific considerations identified by First Nations in relation to their Aboriginal Interests that could have implications for the AAC determination are addressed in the various sections of this rationale where it is within the statutory scope of the determination.

The timber on established Aboriginal title lands (meaning Aboriginal title declared by a court or defined under an agreement with necessary federal and provincial implementation legislation), Treaty Settlement Lands or Indian Reserves, is no longer provincial timber. Consequently, it does not contribute to the AAC of the management unit overlapped by those lands. Prior to establishment of Aboriginal title, it is not appropriate for the chief forester to speculate on how potential establishment of Aboriginal title in an area could affect timber supply, given uncertainties about the scope, nature and geographic extent of title. Unless land has been established to be Aboriginal title land, Treaty Settlement Land or reserve land it remains as provincial land managed by the Province and will contribute to timber supply. However, where there is clear intent by government to recognize lands as title land that are yet to be finalized, I will consider information that is relevant to the decision in a manner that is appropriate to the circumstances. The requirement for regular AAC reviews will ensure that future determinations address ongoing changes to the land base.

Information Uncertainty

Given the complex and dynamic nature of forest ecosystems coupled with changes in resource use patterns and social priorities there is always a degree of uncertainty in the information used in AAC determinations. The following are two ways of addressing they uncertainty of information available to support an AAC determination:

(i) undertaking analyses to evaluate the significance of uncertainties associated with available information and assessing the social, economic, and environmental risks associated with a range of possible decisions; and,

(ii) re-determining AACs regularly to ensure they incorporate current information and knowledge, and greater frequency in cases where projections of short-term timber supply are not stable and/or substantial changes in information and management are occurring.

In considering the several factors that Section 8 of the *Forest Act* requires the chief forester to take into account in determining AACs, it is important to reflect those factors that (as closely as possible) are a reasonable extrapolation of current practices. It is not appropriate to base decisions on proposed or

potential practices that could affect the timber supply but are not consistent with legislative requirements and not substantiated by demonstrated performance.

It is not appropriate to speculate on timber supply impacts that may eventually result from land-use designations not yet finalized by government. Where specific protected areas, conservancies, or similar areas have been designated by legislation or by order in council, these areas are deducted from the land base supporting timber harvesting and are not considered to contribute harvestable volume to the timber supply in AAC determinations, although they may contribute indirectly by providing forest cover that helps meet resource management objectives such as biodiversity.

Where appropriate, the chief forester will consider information regarding the types and extent of planned and implemented silviculture practices as well as relevant scientific, empirical and analytical evidence on the likely magnitude and timing of their timber supply effects.

I acknowledge the perspective that an alternative strategy for dealing with information uncertainty is to generally reduce AACs in the interest of caution. On its own, this precautionary approach is not a complete framework for decision making under uncertainty. It is one tool that could be used to address the risk of serious harms in situations of deep uncertainty or significant deficiencies in information. However, the precautionary approach does not consider the full spectrum of values or extensive range of research and information utilized by the chief forester. For these reasons, AAC determinations more appropriately follow a decision process utilizing analyses of current land and management practices and the exploration of the potential effects of uncertainties, rather than relying on an overriding precautionary approach.

In making a determination, allowances may need to be made to address risks that arise because of uncertainty by applying judgment as to how the available information is used. Where appropriate, the social and economic interests of the government, as articulated by the Minister of Forests, can assist me in evaluating this uncertainty.

Forest Landscape Planning

In addressing the factors outlined in Section 8 of the *Forest Act*, I will consider relevant available information on timber and non-timber resources in the management unit, including information on the interactions among those resources and the implication for a sustainable timber supply.

AAC determinations will be made in the context of new forest landscape plans and legal orders that establish forest management expectations. These plans and orders direct forestry activities and guide the stewardship of B.C.'s public land and resources, have been established with an understanding of the relationships among the various components of forest management systems, and follow deliberative processes and laws designed to achieve a balance of natural resources values and benefits.

As is the case for land use and management planning in general, it is beyond my statutory authority to speculate on final outcomes where there are preliminary but not yet finalized and formalized land use zones or management objectives. If the timber supply implications of final designations are substantial a new AAC determination prior to the legislated deadline may be warranted.

In some cases, even when government has made a formal land-use decision, it is not necessarily possible to fully analyze and immediately account for the consequent timber supply impacts in an AAC determination. Many of government's land-use decisions must be followed by detailed implementation decisions requiring, for instance, further planning or legislated designations such as those provided for under the *Land Act* and FRPA. In cases where government has been clear about the manner in which it intends land-use decisions to be implemented, but the implementation details have yet to be finalized, I will consider information that is relevant to the AAC in a manner that is appropriate to the circumstance. The requirement for regular AAC reviews will ensure that future determinations address ongoing plan implementation decisions.

Cumulative Effects

Cumulative effects (CE) are changes to environmental, social and economic values caused by the combined effect of past, present and potential future human activities and natural processes. In the context of AAC determinations, I am aware of the mandate provided by the Minister of Forests (FOR) which tells me to ensure that my AAC determinations continue to incorporate the best available information on the CE of multiple activities on the land base. Where the CE of timber harvesting and other land-based activities indicate a risk to natural resource values, my determinations should identify those risks for consideration in land-use planning. I am also asked to consider ways in which my AAC determinations could encourage actions or practices to mitigate risks to natural resource values.

Section 8 of the *Forest Act* only authorizes the chief forester to make decisions on allowable harvest levels, not to change or institute new management regimes for which other statutory decision makers have specific authority. However, cumulative effects information can highlight important issues and uncertainties in need of resolution through land use planning which I can note and refer to those responsible for such planning.

Where a cumulative effects assessment has suggested that an important value is at risk and that a reduced harvest level or implementation of an AAC partition could help to reduce that risk, I will appropriately factor these into my AAC determination. I may also identify actions or implementation instructions that would mitigate risk or accommodate potential impacts to Aboriginal Interests. In this case, I will include expectations that Ministry staff work with relevant interests to address the issues identified and encourage forest licensees to follow the recommendations of CE assessments.

As with all management issues, additional information and any changes can be incorporated into subsequent AAC determinations.

Climate Change

One key area of uncertainty relates to climate change. There is substantial scientific agreement that climate is changing and that the changes will affect forest ecosystems. Forest management practices will need to be adapted to the changes and can contribute to climate change mitigation by promoting carbon uptake and storage. The potential rate, amount, and specific characteristics of climate change in different parts of the province are uncertain. This uncertainty means that it is not possible to confidently predict the specific, quantitative impacts on timber supply.

When determining AACs, I consider available information on climate trends, potential impacts to forest ecosystems and communities that depend on forests and related values, and potential management responses. As research provides substantiated predictions on climate change and its effects, I will incorporate the new information in future AAC determinations. Where forest practices are implemented to mitigate or adapt to the potential effects of climate change on forest resources, or where monitoring information indicates definite trends in forest growth and other dynamics, I will consider that information in my determinations.

I note, however, that even with better information on climate change, in many cases there will be a range of reasonable management responses. For example, it is not clear if either increases or decreases to current harvest levels would be appropriate in addressing potential future increases in natural disturbance due to climate change, which are likely in some areas. Hypothetically, focused harvests in at risk forests could forestall losses of timber and allow for planting of stands better adapted to future conditions. Conversely, lower harvest levels and the use of partitions in my AAC decisions could provide buffers against uncertainty. The appropriate mix of timber supply management approaches is ultimately a social decision.

Due to the uncertainty surrounding impacts on the AAC from climate change, it is important to encourage dialogue to develop climate change mitigation and adaption strategies and remain open to new opportunities for forest management. Deciding on the preferred management approach will involve consideration of established climate change strategies, and available adaptation and mitigation options together with social, economic, cultural, and environmental objectives. The timber supply analysis is a useful tool to determine the potential changes to the frequency, intensity, and scope of natural disturbances under climate change; and for exploring options and trade offs. Any management decisions about the appropriate approach and associated practices will be incorporated into future AAC determinations. The requirement for regular AAC reviews will ensure continuous improvement of the information and knowledge on climate change and ensure the development of a responsive decision-making process to emerging natural resources issues.

The role of the base case

In considering the factors required under Section 8 of the *Forest Act* in AAC determinations, I am assisted by timber supply projections provided to me through the work of the Timber Supply Review (TSR) Program for TSAs and TFLs.

For most AAC determinations, a timber supply analysis is carried out using a data package including data and information from three categories: land base inventory, timber growth and yield, and management practices. Using this set of data and a computer model, a series of timber supply projections can be produced to reflect different starting harvest levels, rates of decline or increase, and potential trade-offs between short- and long-term harvest levels.

From a range of possible harvest projections, one is chosen in which an attempt is made to avoid both excessive changes from decade to decade and significant timber shortages in the future, while ensuring the long-term productivity of forest lands. This is known as the base case harvest projection, and it forms the basis for comparison when assessing the effects of uncertainty on timber supply. The base case is designed to reflect current management practices, demonstrated performance, and established management requirements.

Because it represents only one of several theoretical timber supply projections, and because it incorporates information about which there may be some uncertainty, the base case is not an AAC recommendation. Rather, it is one possible projection of timber supply, whose validity, as with all the other projections provided, depends on the validity of the data and assumptions incorporated into the computer model used to generate it.

Therefore, much of what follows in the considerations outlined below is an examination of the degree to which the assumptions made in generating the base case are realistic and current, and the degree to which resulting projections of timber supply must be adjusted to more properly reflect the current and foreseeable situation.

These adjustments are made based on informed judgment using currently available information about forest management, and that information may well have changed since the original data package was assembled. Forest management data are particularly subject to change during periods of legislative or regulatory change, or during the implementation of new policies, procedures, guidelines, or plans.

Thus, in reviewing the considerations that lead to the AAC determination, it is important to remember that the AAC determination itself is not simply a calculation. Even though the timber supply analyses I am provided are integral to those considerations, the AAC determination is a synthesis of judgment and analysis in which numerous risks and uncertainties are weighed. Depending upon the outcome of these considerations, the AAC determined may or may not coincide with the base case. Judgments that in part may be based on uncertain information are essentially qualitative in nature and, as such, are subject to an element of risk. Consequently, particularly in cases characterized by a large degree of unquantified

uncertainty, once an AAC has been determined, no additional precision or validation would be gained by attempting a computer analysis of the combined considerations.

Base case for the North Island TSA

The base case for North Island TSA was prepared by FAIB staff using the Ministry's spatial timber supply model (STSM) which was developed using the Spatially Explicit Landscape Event Simulator (SELES) modelling framework. STSM was used to project harvesting and growth over an analysis horizon of 250 years. The data and assumptions used in the base case are intended to reflect current legal requirements, the best available information, demonstrated forest management practices and current conditions in the North Island TSA as documented in the *North Island TSA Data Package* (July 2020).

The timber supply projections are not predictions because many unforeseeable events will certainly occur, and practices and knowledge will change and evolve. Given this change and uncertainty, the projections may change in the future. Changes in practices and information will be incorporated into future AAC determinations. However, the harvest projections developed to support this AAC determination were designed to provide a rigorous and reasonable basis for the AAC decision and to be consistent with the guiding principles for AAC determinations.

A *Discussion Paper*, which contained the results of the timber supply analysis, was published in December 2022. The base case for the North Island TSA projects a harvest level of 1 248 100 cubic metres per year beginning in 2020 and maintains this harvest for 30 years before decreasing to a long-term harvest level of 1 170 000 cubic metres per year for the remainder of the projection. This initial harvest level is the same as the current AAC (1 248 100 cubic metres per year), set by the GBRFM Regulation, in 2017.

The base case is used as reference point to assess the timber supply in North Island TSA, including exploration of the potential impacts of uncertainties through sensitivity analyses. I reviewed all inputs to the base case, including how the environmental objectives in the Vancouver Island Land Use Plan (VILUP) were incorporated into the analysis. I also reviewed in detail the assumptions and methodology incorporated in the base case, as well as the model output, including species distribution over time; growing stock projections by age class over time; average age, area, and volume harvested annually; and other factors as described in my considerations below. For this determination I am satisfied that the base case harvest projection and the sensitivity analyses have provided a suitable basis for my assessment of timber supply for the North Island TSA.

First Nations engagement

Twenty-six First Nations (or Indigenous entities) assert Aboriginal Interests within the North Island TSA. These First Nations include: Cowichan Tribes, Ehattesaht Chinehkint First Nation, Gwa'sala-'Nakwaxda'xw Nations, Halalt First Nation, Xwemalhkwu (Homalco) First Nation, Ka:'yu:k'tkh_Che:k:tles7et'h' First Nation, Klahoose First Nation, K'omoks First Nation, Kwakiutl First Nation, Lake Cowichan First Nation, Lyackson First Nation, Mamalilikulla First Nation, Mowachaht/Muchalaht First Nation, 'Namgis First Nation, Nuchatlaht First Nation, Penelakut Tribe, Qualicum First Nation, Quatsino First Nation, Stz'uminus First Nation, Tla'amin Nation, Tlatlasikwala Nation, Tlowitsis First Nation, Tseshaht First Nation, We Wai Kai Nation, and the Wei Wai Kum First Nation.

Overlapping with the North Island TSA are two modern-day treaties, the Maa-nulth Treaty and the Tla'amin Treaty. On April 1, 2011, the Maa-nulth Treaty came into effect. Of the five First Nations covered by the treaty, only the Ka:'yu:k'tkh_Che:k:tles7et'h' First Nation has territory in the TSA. The Maa-nulth Final Agreement provides for self-government by the Nations, 24 550 hectares of land, and various monetary components. It also defines the Nations' rights to resources such as wildlife, fish, timber, and sub-surface minerals. On May 22, 2014, the Maa-nulth Treaty Nations and the Province

signed a *Reasonable Opportunity Agreement* with the objective of defining the collaborative process to evaluate the impact of authorizations of Crown land and providing reasonable opportunity to exercise their right to harvest fish and aquatic plants, wildlife, and migratory birds and gather plants within identified areas.

On April 5, 2016, the *Tla'amin Treaty* came into effect. The Tla'amin Nation and the Province signed a *Reasonable Opportunity Agreement* with the objective of defining the collaborative process to evaluate the impact of authorizations of Crown land and ensuring that the Tla'amin Nation continues to have a reasonable opportunity to exercise their right to harvest fish and aquatic plants, wildlife, and migratory birds and to gather plants within identified areas.

There are also two Douglas Treaties that overlap with the North Island TSA. The Kwakiutl First Nation are signatory to both treaties, signed in 1851, and they have the right to hunt over unoccupied lands and to carry on their fisheries as they did before the treaties were signed. Moreover, in *Chartrand v. The District Manager (2013)*, the BC Supreme Court found that the Kwakiutl First Nation have a credible claim to unextinguished Aboriginal rights and title in addition to their Treaty Rights.

There are several Nations in Stage 5 treaty negotiations, including: Gwa'sala-Nakwaxda'xw First Nations, K'omoks First Nation, We Wai Kum Kwiakah Treaty Society, We Wai Kai Nation, and Hul'qumi'num Treaty Group. The Hul'qumi'num Treaty Group includes Halalt, Cowichan, Lyackson, Penelakut, Stz'uminus (now removed from the Treaty Group) and the more recent addition of Ts'uubaa'astax.

In a recent and significant court decision on April 17, 2024, Nuchatlaht First Nation met the legal test for Aboriginal title to a portion of Nootka Island. Following this decision, we expect the court to make a formal declaration of Aboriginal title and, once the declaration is given full legal effect, parts of the *Forest Act* will no longer apply to Nuchatlaht's Aboriginal title lands.

Many of the First Nations that assert Aboriginal Interests within the North Island TSA have signed Forest Consultation and Revenue Sharing Agreements. This type of agreement outlines consultation engagement expectations and provides the Nations with economic benefits based on harvest activities in their consultative areas.

Several forest landscape planning (FLP) processes are underway in the North Island TSA. The West Coast FLP is being co-developed with the Ehattesaht First Nation, Mowachaht/Muchalaht First Nation, and the Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nation. The East Coast FLP will be co-developed with the Nanwakolas Council (on behalf of K'omoks, Tlowitsis, We Wai Kum and We Wai Kai First Nations).

The 'Namgis FN is currently working on an FLP Pilot with Western Forest Products Inc. (WFP) within the portion of TFL 37 that overlaps with their consultative area. Also, the 'Namgis FN is currently working on the Gwa'ni Project within their consultative area. This project will evaluate the existing Vancouver Island Land Use Plan to provide more effective management direction for the resources found within the project area. The 'Namgis have indicated a desire to apply recommendations resulting from the FLP Pilot and the Gwa'ni Project to their consultative area which overlaps parts of the North Island TSA.

The Quatsino FN is currently working on an Integrated Resource Management Plan (IRMP) with WFP within the portion of TFL 6 that overlaps with their consultative area. Quatsino would like this work to inform future FLP work over the whole of their consultative area, including within the North Island TSA.

Since initiating the North Island TSR in 2018, Ministry staff contacted all First Nations with territories overlapping the North Island TSA to discuss their perspectives on timber supply within their respective territories. First Nations were provided with the data, analysis results and the discussion paper to inform their discussions with Ministry staff. The provincial government has committed to collaborative engagement with Indigenous communities on the North Island TSR and AAC determination.

The Nanwakolas Council is comprised of Da'naxda'xw Awaetlala, Mamalilikulla First Nation, K'omoks First Nation, Tlowitsis First Nation, Wei Wai Kum First Nation and We Wai Kai First Nation. The *Nanwakolas/British Columbia Framework Agreement (2016 Amending Agreement)* outlines the process for consultation. Under the Nanwakolas Reconciliation Protocol the Province and the signatories have agreed to undertake discussions on shared decision-making measures for land and natural resource management.

Under the *Nanwakolas-Province Shared Decision-Making Protocol* Nanwakolas presented the following joint recommendations:

- Nanwakolas member First Nations and the Province agree the base case projection is a reasonable reflection of current legal requirements, demonstrated forest management and the best available information in the TSA unless otherwise noted in the recommendations below.
- The chief forester should account for the Wei Wai Kai and Wei Wai Kum Incremental Treaty Agreement (ITA) land transfers in the AAC decision by assuming they no longer contribute to timber supply within the North Island TSA.
- The chief forester should specify an AAC partition for red alder based on the even-flow contribution demonstrated in the red alder partition alternative harvest projection.
- The chief forester should specify an AAC partition for the Sayward Timber Supply Block (TSB) in a manner that does not permit AAC attributed to the remaining portion of the TSA to be harvested on the partition area. The Sayward TSB partition volume should be set in the range defined by the even-flow contribution of the Sayward TSB in the partition harvest projection (412 500 cubic metres per year) to the Sayward TSB contribution to the short-term harvest level of the base case (550 000 cubic metres per year). This range in partition volumes is provided to allow some discretion in decision making, understanding the intent of this recommendation is to ensure resource sustainability within Nanwakolas member First Nations' combined territory while FLP occurs and policy linking FLP to timber supply review is developed.
- Other Nanwakolas member First Nations values are being investigated in the ongoing Integrated Resource Management Plan (IRMP) and subsequent FLP. The chief forester should return to the AAC decisions for the management units covered by the plan after the FLP completion to ensure they account for changes in the management regime.
- To support broader government-to-government processes connected to the AAC determination, the chief forester will communicate to applicable provincial staff that Nanwakolas member First Nations wish to engage in discussions about subsequent volume apportionment and licence re-charting processes.

I met with representatives of the Nanwakolas Council on January 17, 2024, to discuss these recommendations. Having considered the information presented, I am satisfied that the province and Nanwakolas First Nations have successfully implemented the protocol for shared decision-making process pursuant to the Nanwakolas Reconciliation Protocol. I have reviewed the recommendations provided, and have determined they were adequately considered in my determination for the North Island TSA. I discuss my considerations of all the information provided to me, including these recommendations, and other First Nations input throughout the document.

On September 13, 2023, I participated in video-conference calls where I met separately with representatives from Ka:'yu:'k't'h'/Che:k:tles7et'h' First Nation, Quatsino First Nation, 'Namgis First Nation, and Ehattesaht First Nation. On October 17, 2023, I met with Mowachaht/Muchalaht First Nation representatives in person. At these meetings I listened to the concerns and issues raised by the representatives, and I will reflect on what I heard when making the AAC decision. Concerns included the need for further wildlife habitat and stream protection to ensure First Nations can continue to practice

their Aboriginal Rights, the need to protect cultural heritage resources for cultural survival, and the need to safeguard water quality and quantity.

In my considerations for the North Island TSA, I am mindful of the significant interest shown by First Nations in the harvest level and the effect of past and present harvesting on their interests and ability to meaningfully practice their rights. I am also aware of the government's desire for reconciliation with First Nations and the government's intention to change the way forests are managed in this province as described in the June 2021 document titled *Modernizing Forest Policy in British Columbia: Setting the intention and leading the forest sector transition* (Intentions Paper).

I reviewed the entire First Nations consultation record provided by staff which included comments from those I met as well as from those I did not meet. I will reflect on what I read as well as what I heard during my meetings with First Nations as I make this AAC decision.

Licensee engagement

Approximately 80 percent of the current AAC is apportioned to Western Forest Products Inc., Interfor, and BC Timber Sales. Upon completion of the *Data Package* and the *Discussion Paper* these documents were made available to all licensees operating in the North Island TSA. The *Data Package* contained the sources of the data used and licensees were able to review those data. Licensee comments led to some corrections to the data used for modelling.

Comments and recommendations from licensees were included in the factors I considered for this determination. Also included were the responses from staff to the licensees. Many of the comments requested clarification to data and explanation of modelling methods. I read and discussed these comments with staff as the factors were considered.

There were many requests for sensitivity analyses. Most of these requests were warranted, however, there were some, such as the request to assume all unconstrained stands were physically and economically operable, that served no useful purpose. These requests deplete scarce staff resources and delay the completion of the TSR. I urge licensees to carefully consider the merits of such requests in future.

Consideration of factors as required by Section 8 (8) of the *Forest Act*

I have reviewed the information for the factors required to be considered under Section 8 of the *Forest Act*. Where I have concluded that the modelling of a factor in the base case is a reasonable reflection of current legal requirements, demonstrated forest management and the best available information, and uncertainties about the factor have little influence on the timber supply projected in the base case, no discussion is included in this rationale. These factors are listed in Table 1.

For other factors, where more uncertainty exists or where public or First Nations' input indicates contention regarding the information used, modelling, or some other aspect under consideration, this rationale incorporates an explanation of how I considered the issues raised and the reasoning that led to my conclusions.

Table 1. List of factors accepted as modelled in the base case.

Forest Act **section and description**	**Factors accepted as modelled and not discussed further in the rationale**
8(8)(a)(i) the composition of the forest and its expected rate of growth on the area	• Land ownership • Non-forest • Estimates for road, trails, and landings • Provincial parks • Recreation resources • Economic and physical operability • Environmentally sensitive areas/unstable terrain • Low productivity sites • Non-merchantable forest types • Stand-level biodiversity • Ungulate winter range • Archeological sites • Growth & yield permanent sample plots and research installations • Karst • Site productivity estimates • Volume estimates for existing stands • Minimum harvestable criteria • Operational adjustment factors
8(8)(a)(ii) the expected time that it will take the forest to become re-established following denudation	• Planting delay • Not satisfactorily restocked
8(8)(a)(iii) silviculture treatments to be applied to the area	• Silviculture systems
8(8)(a)(iv) the standard of timber utilization and the allowance for decay, waste, and breakage expected to be applied with respect to timber harvesting on the area	• Utilization standards and compliance • Decay, waste, and breakage
8(8)(a)(v) the constraints on the amount of timber produced from the area that reasonably can be expected by use of the area for purposes other than timber production	
8(8)(a)(vi) any other information that, in the chief forester's opinion, relates to the capability of the area to produce timber	
8(8)(b) the short and long term implications to British Columbia of alternative rates of timber harvesting from the area	• Harvest sequencing • Economic and employment implications

Forest Act **section and description**	**Factors accepted as modelled and not discussed further in the rationale**
8(8)(d) Economic and social objectives of the government, as expressed by the minister, for the area, for the general region and for British Columbia	• Economic and social objectives expressed in the Minister's letter • Summary of public input
Section 8(8)(e) Abnormal infestations in and devastations of, and major salvage programs planned for, timber on the area	• Forest health

***Forest Act* Section 8 (8)**

In determining an allowable annual cut under subsection (1) the chief forester, despite anything to the contrary in an agreement listed in section 12, must consider

(a) the rate of timber production that may be sustained on the area, taking into account

(i) the composition of the forest and its expected rate of growth on the area

- general comments

The total land area of the North Island TSA is 1.749 million hectares. After removing areas not managed by the province, non-forest and non-productive areas, and areas managed by area-based tenure holders the remaining forested area is 522 577 hectares (30 percent of the TSA area). This area is referred to as the analysis forest land base (AFLB) and contributes to timber and non-timber objectives.

The timber harvesting land base (THLB) is an estimate of the land where timber harvesting is considered both legally available and economically feasible, given the objectives for all relevant forest values, market values and applicable technology. It is a strategic-level estimate developed specifically for the timber supply analysis and, as such, could include some areas that may never be harvested or could exclude some areas that may be harvested.

As part of the process used to define the THLB, a series of deductions were made from the AFLB. These deductions account for biophysical, economic, or ecological factors that reduce the forested area available for harvesting. For the North Island TSA, the THLB that is available after deductions are applied is 172 388 hectares. The THLB represents about 10 percent of the total land area of the TSA and about 33 percent of the AFLB.

In reviewing these deductions, I am aware that some areas may have more than one classification. To ensure accuracy in defining the THLB, care was taken to avoid any potential double-counting associated with overlapping objectives. Hence, a specific deduction for a given factor reported in the analysis or the AAC rationale does not necessarily reflect the total area with that classification; some portion of it may have been deducted earlier under another classification.

For this determination, I accept that the approach used to determine the THLB for the North Island TSA base case was appropriate.

- landscape-level biodiversity/old growth management

In the North Island TSA, landscape-level biodiversity is primarily managed through old-seral forest retention as specified by the *Order Establishing Provincial Non-Spatial Old Growth Objectives* (NSOGO) dated June 2004. This legislation specifies the required distribution and amount of old growth

retention by ecosystem type and Biodiversity Emphasis Option (BEO). The retention is distributed over the land base by requiring targets for old growth retention to be met in each landscape unit (LU).

Old growth management areas (OGMA) are spatially-defined areas of old growth forest that are established by a cabinet Order or by an Order under the FRPA or the *Land Act*. The spatial OGMAs are assumed to reserve a sufficient area of old forest to meet the NSOGO biodiversity requirements for the LU. Legal OGMAs were established for 11 LUs in the North Island TSA, a further 12 LUs have non-legal OGMAs, and old growth is managed aspatially in the remaining nine LUs.

All OGMAs were excluded from the THLB. The gross area of OGMAs (legal and non-legal) in the North Island TSA is 47 828 hectares while the net area excluded from the THLB is 14 008 hectares. Requirements for old growth in the LUs with aspatial targets were met by applying old forest management objectives as specified in the NSOGO.

In addition to the NSOGO, the VILUP Higher Level Plan Order has old growth specific objectives for one special management zone (SMZ) and five enhanced forestry zones (EFZs). Twelve SMZs also have requirements to maintain a minimum of 25 percent of the forested area in a mature and old seral state. These requirements were modelled in the base case.

In June 2021 the government convened an independent Old Growth Technical Advisory Panel (TAP) to identify at risk old growth ecosystems and prioritize areas for temporary deferral from harvesting. The TAP identified 2.6 million hectares of BC's most at risk old growth forests for deferral, including priority old forest with large trees (1.7 million hectares), ancient forest (400 000 hectares), and rare forest (500 000 hectares). As long-term measures have not yet been identified for old growth, the TAP polygons contributed to the base case THLB.

Some First Nations disagreed with specific areas identified by the TAP for harvest deferral and have proposed alternative areas for protection. The Kwakiutl First Nation advised that there should be no harvesting of old growth that is over 250 years old. Currently, the 'Namgis First Nation is opposed to old growth harvesting within their territory. However, some harvesting of old growth may be considered by 'Namgis after meaningful collaborative planning and can occur only in areas where there is no infringement on Aboriginal rights and title. The Quatsino First Nation stated that old forests are a critically important cultural resource and all old growth redcedar stands are restricted from commercial logging. Mowachaht/Muchalaht First Nation (MMFN) developed a Corridor Plan (comprising primarily old growth forests) to create habitat connectivity throughout their traditional territory. MMFN also requested deferral of harvesting in Salmon Parks – areas surrounding key watersheds which require time to heal from the impacts of industrial harvesting.

It is my expectation that there will be changes to the way that old forest is managed in the TSA. While the paradigm shift has begun with the TAP identifying priority at risk forest, implementation of long-term measures for old forest management, including TAP polygons and other old forest, is expected to occur through the FLP and other processes, in collaboration with First Nations and input from the public. During that transition I expect that some of the old forest contributing to the base case harvest projection may be deferred from harvest.

I do not have the authority to make land use decisions regarding the amount of area protected for old forest management in the province. My concern is to ensure there is flexibility for the implementation of appropriate long-term measures for old forest management that reflect the evolving management expectations around old growth. I will implement short-term measures in my decision to ensure that harvest deferrals in mature and old forest, and any associated accumulated unused volume, do not unintentionally result in the overharvest of young forests within the remainder of the TSA.

I am also cognizant that approximately half of the short-term harvest projection comes from older forests. Though I expect a portion of the harvest from these forests to be deferred, the contribution of old forests across the TSA to timber supply will continue to be significant, following my AAC determination.

In the base case forest older than 140 years (age classes 8 and 9) contributed 51 percent of the harvest in the first decade. Limiting the harvest of old forest may unintentionally lead to overharvesting the younger forest. To prevent this from happening, I will also specify limits on the harvest of stands 140 years and younger (age classes 1 to 7). As discussed under '**Reasons for Decision**', I will specify partitions limiting the harvest in both the older forests as well as the younger forests.

- *wildlife habitat*

Wildlife habitat areas (WHA) are established to provide habitat for identified wildlife species that are at risk or are of regional importance. Management objectives may prevent harvest or set conditions under which harvesting can occur. Since 2001, WHAs have been established in the North Island TSA for northern goshawk, marbled murrelet, and red-legged frog.

The gross area of WHAs in the TSA where no harvesting is allowed is 13 345 hectares. These areas were removed from the THLB in the base case. There were 1752 hectares of WHA where harvesting was allowed under specific conditions. These areas were included in the THLB.

After the analysis was completed, 19 new WHAs were approved. Exclusion of these areas from the THLB reduces short-term timber supply by 1.3 percent.

Under Section 7 of the Forest Planning and Practices Regulation (FPPR), notices were sent to the Campbell River District and to the North Island Central Coast District in 2004 specifying areas to be set aside for the protection of species at risk (Queen Charlotte goshawk, red-legged frog, Keen's long-eared myotis and great blue heron). An outstanding THLB budget of 183 hectares remains where WHAs will be established to meet the notice. Removing these areas from the THLB reduces short-term timber supply by 0.3 percent.

In February 2018, the Province announced a plan for further protection of marbled murrelet and northern goshawk nest/breeding areas. For northern goshawk there are 14 proposed WHAs which are very likely to be established, with more being identified to meet the plan. Removing these proposed WHAs from the THLB would reduce short-term timber supply by about 0.8 percent. Wildlife staff have informed me that the proposed WHAs will be finalized shortly.

A Ministerial Land Use Objectives Regulation (LUOR) Order for the recovery of Marbled Murrelet was issued on December 2, 2021. The LUOR order specifies a minimum amount of suitable habitat to be retained by landscape unit. The final location and distribution of these new protected areas has yet to be determined but would likely overlap with the existing and proposed WHAs in the North Island TSA. There will be a reduction in timber supply when the location of marbled murrelet habitat is finalized but the actual reduction is unknown at this time. Some of the proposed goshawk WHAs overlap marbled murrelet suitable habitat.

For this factor, I conclude that the base case overestimated timber supply by about 1.3 percent to account for new WHAs that have been established. The base case also overestimated timber supply by about 0.3 percent to account for protection of species at risk. Wildlife staff inform me that the proposed WHAs for goshawk will soon be finalized. To account for the overlap with marbled murrelet impacts, I will reduce the base case projection by 0.4 percent, half of the total 0.8 percent impact. As discussed under '**Reasons for Decision**', to avoid overharvesting the THLB, I will reduce the base case harvest projection by a total of 2.0 percent to account for the combined impacts from wildlife.

- riparian management

Riparian areas are transition zones between aquatic areas such as lakes, streams or wetlands, and drier upland areas. Riparian areas provide key habitat for various fish, plant and animal species and help conserve water quality and biodiversity while also providing habitat connectivity.

The FPPR requires protection of riparian areas. It defines riparian classes and specifies minimum widths of reserve and management zones for streams, wetlands, and lakes to minimize or prevent impacts of forest and range practices on these aquatic resources. In the Sayward LU there are enhanced riparian requirements to protect small fish-bearing streams and lakes.

The gross area of riparian areas in the North Island TSA is 21 532 hectares while the net area excluded from the THLB is 8733 hectares. The methodology used to approximate the legislation requirements for wetland complexes (W5) resulted in a small overestimate of the THLB and timber supply.

The Kwakiutl First Nation stated that they would like to see additional reserves in five key watersheds to protect fish habitat and mitigate stream temperatures. The 'Namgis First Nation commented that the riparian areas excluded in the base case were based on current FRPA targets and that they are currently in multiple planning processes where riparian management will exceed the FRPA minimums for riparian reserves and management zones. Mowachaht/Muchalaht First Nation pointed out that their initiatives to protect their Salmon Parks and Old Growth Corridor would increase the amount of area removed from the THLB.

It is beyond the scope of my authority to require forest practices beyond those specified in legislation. Future AAC decisions will account for any changes in forest practices. As discussed under '*TSR and FLP linkage*' I expect that the forest landscape planning process will resolve the approach to these forest practices. Under '**Reasons for Decision**', I note that the methodology used to model wetland complexes will lead to a small, unquantified overestimate of the base case timber supply.

- contribution from areas harvested using helicopters

Helicopter logging systems are much more expensive than other systems employed in the TSA. The areas harvested by helicopter systems varies with the log values and fluctuating timber markets. High-value western redcedar has been more consistently harvested by helicopter systems. Mixed hemlock and balsam stands have been less consistently harvested because of lower log values. There is a risk of overharvesting the non-helicopter land base if the volume harvested in the helicopter areas is less than projected in the base case. The contribution from helicopter accessible areas to the base case harvest projection is 10 percent in the first decade and seven percent in the following two decades. The Ministry's harvest records do not indicate whether logs were harvested using helicopter systems or conventional systems.

If helicopter areas were managed separately, it is possible to harvest 56 000 cubic metres per year from those areas. The sum of the harvest from both the helicopter areas and the non-helicopter areas would be four percent lower than the base case harvest projection.

If, within the helicopter accessible areas, only those stands with greater than 30 percent western redcedar are considered economically harvestable, it is possible to harvest 18 000 cubic metres per year from helicopter areas. The sum of the harvest from the helicopter areas with greater than 30 percent redcedar and the non-helicopter areas would be seven percent lower than the base case harvest projection.

After discussions with staff, I concluded that it is not likely that there will be harvesting from helicopter areas with less than 30 percent redcedar. As discussed under '**Reasons for Decision**', I will reduce the base case harvest projection by seven percent to account for harvest performance using helicopter systems.

- forest inventory

The Vegetation Resources Inventory (VRI) is the standard for forest cover inventories in the province of British Columbia. The VRI is a photo-based, two-phase program. Phase I delineates polygons of homogenous forest cover types through photo interpretation and provides estimates of the vegetation attributes for each polygon. Phase II is ground sampling carried out to verify the accuracy of stand volumes, species composition and other key Phase I vegetation attributes.

The forest inventory used in this analysis is a combination of two VRI projects; one completed for the Kingcome TSA and the other completed for the Strathcona TSA. The Strathcona Phase I VRI was completed between 2005 and 2007 with aerial photography taken in 2003. VRI Phase II sampling was completed between 2006 and 2007. The Kingcome Phase I VRI was completed in 2003 and was based on aerial photography taken in 1996. Phase II ground sampling was completed in 2004.

In an effort to improve the accuracy of some VRI attributes, Light Detection and Ranging (LiDAR) technology was used in a portion of the former Kingcome TSA. This project was intended to be a proof-of-concept for enhancing forest cover inventories. The results were not conclusive, and more work is being done to determine whether the technology can be used as intended.

For this TSR, for both the Kingcome and Strathcona portions of the North Island TSA, FAIB staff recommended using the unadjusted Phase I data. It was reasoned that applying the Phase II information to the combined subsets of two separate forest inventories may further increase the uncertainty of inventory attributes.

The forest inventory data published in January 2018 on the BC Data Catalogue was used for the timber supply analysis. Inventory attributes (e.g., age, height, volume) in this data were projected to 2018. Harvesting depletions were updated to 2020.

A new forest inventory for the North Island TSA was completed in 2022. A comparison of the 2018 VRI and the 2022 VRI showed that the average site index was 0.8 percent lower in the 2022 VRI. For stands greater than 60 years in age within the THLB, the 2022 VRI showed that timber volume was nine percent less than in the 2018 VRI used in the base case.

A sensitivity analysis indicated that if natural stand volumes were reduced by 10 percent, short-term timber supply would be about seven percent lower. Staff informed me that to assess the impact to timber supply of the new inventory the timber supply model would have to be rebuilt because the VRI has multiple linkages to other factors in the model. However, it is likely that timber supply would be lower if the 2022 VRI was used. Under '**Reasons for Decision**', I will consider an unquantified decrease to the base case timber supply projection to account for the forest inventory used in the analysis.

- growth and yield – managed stands

Managed stands are those stands that have been harvested and are now regenerated. To produce yield tables for managed stands FAIB used data from the Reporting Silviculture Updates and Land Tracking System (RESULTS) to incorporate both planting data as well as free-growing survey data, thus accounting for species changes after planting due to ingress or mortality. A managed stand yield table is developed for every existing managed stand. Where data was insufficient to generate a yield table, stands were assigned an aggregate yield table. Those tables were produced using a species composition and stem density derived from an average of the biogeoclimatic zone and subzone based on recent planting history in the TSA.

In this analysis, managed stand yield tables were produced using Table Interpolation Program for Stand Yields (TIPSY). TIPSY provides yield tables for single-species and even-aged stands based upon the interpolation of yield tables generated by the individual tree growth model Tree and Stand Simulator (TASS). Mixed species yield tables generated by TIPSY are weighted averages of single-species yield

projections and do not directly consider inter-species interactions. BatchTipsy Composer version 5 was used for this analysis.

Stands harvested prior to 1987 that have RESULTS data are modelled as having irregular spacing due to the lack of stocking standards prior to 1987, differences in planting techniques and differences in actual planting stock quality.

To verify that managed stand growth aligns with the TIPSY volume projections FAIB initiated a Young Stand Monitoring (YSM) sampling program across the province. Data collected from 22 YSM plots in the TSA show TIPSY yield projections overestimate measured plot volume. Since there were only 22 plots it was not possible to determine whether the difference in volume is statistically significant.

A licensee was concerned that the *Data Package* did not give reasons for the new approach to produce managed stand yield tables, nor was there any attempt to quantify the potential impact of the new procedure. They asked for a comparison of the mean annual increment (MAI) derived from the yield tables of the previous TSRs to the current TSR. The comparison showed that the MAI for the current TSR is slightly higher than the MAI for the previous TSR.

Another licensee questioned whether 1987 was the correct year to consider regenerated stands as managed stands. Staff pointed out that if there is RESULTS data for stands harvested before 1987 those stands were modelled as managed stands with irregular spacing to account for the variability in planting techniques, stock quality, and survival prior to 1987.

I note that YSM sample data suggest that the managed stand yield tables overestimate stand volume, but because of the small sample size, the difference in volume cannot be quantified with statistical rigor. I conclude that the volume projections for managed stands overestimate timber supply by a small unquantified amount. Under '**Reasons for Decision**', I will account for a small unquantified overestimate of future timber supply.

Under '**Implementation**' I ask staff to establish more YSM plots in the TSA to better quantify the difference in yield between projected managed stand yield tables and actual measured volume.

- *western hemlock ingress/redcedar regeneration*

Approximately 50 percent of the THLB for the North Island TSA is in the CWH biogeoclimatic subzone characterized by a very wet maritime climate. After harvesting, western redcedar is planted in these areas. While there is generally good survival of the planted species there is considerable western hemlock ingress after planting.

The growth and yield models used in BC to project the development of managed stands (TASS and TIPSY) are not yet capable of capturing stand dynamics and competition between planted stems and ingress occurring over the rotation of the stand. In this analysis, the underlying data used by TIPSY was provided by TASS II which is used to simulate individual tree crown dynamics in even-aged stands. It is expected that TASS III, which is still under development and not yet ready for coastal species, will be capable of modelling complex stand dynamics and structures with multiple species and age cohorts.

The methodology developed by FAIB for using RESULTS data to produce managed stand yield tables accounts for ingress only in the first of the two following circumstances:

a) If the number of stems recorded in the free-growing survey falls below 400 stems per hectare (plantation failure), the yield projection is based on the surviving planted trees and any ingress observed in the free-growing survey and the spacing is assumed to be irregular.

b) When the number of planted stems recorded in the free-growing survey does not fall below 400 stems per hectare then a comparison is made to the original number of stems recorded in the survey conducted at the time of planting. There is no recognition of the ingress in either case.

i. If the free-growing survey indicates the planted number of stems is within 20 percent of the original planted density, the original planting density is used in the yield projection.

ii. If the free-growing survey indicates the planted number of stems is more than 20 percent below the original planted density (but above 400 stems per hectare), the lower number in the free-growing survey is used in the yield projection.

This inability to model stand dynamics associated with hemlock ingress greatly overestimates the modelled proportion of redcedar in future managed stands. If the hemlock ingress is recognized and modelled while considering stand dynamics, i.e., TASS III, then the proportion of redcedar in future managed stands is expected to be lower than projected in the base case.

To understand the effect of this expected change in species composition on stand volume, staff examined the YSM data available for the TSA. As discussed under '*growth and yield – managed stands*', there were not sufficient data to adjust the estimate of managed stand volumes provided by TIPSY. Under that factor, I accounted for an unquantified overestimate of future timber supply and I will not make any further adjustments to the base case to account for the volume of hemlock ingress in managed stands.

Western redcedar is a culturally important species for First Nations as well as being financially valuable to licensees. The challenge in projecting the amount of western redcedar in the future makes it difficult to regulate the future harvest of redcedar or set management objectives to ensure the maintenance of a desired component of western redcedar on the land base.

Western Forest Products stated that licensees have invested significant amounts of money to plant redcedar expecting to maximize the amount and value of redcedar on the land base.

I understand the difficulty in trying to regenerate redcedar. Climate change (drought), wildlife browsing, and hemlock ingress are some of the factors that reduce the amount of redcedar in managed stands. I will not make any adjustments to the base case harvest projection to account for hemlock ingress in planted redcedar stands. However, for future AAC determinations, I would like to have better projections of the redcedar component in managed stands. Under '**Implementation**' I urge staff to continue developing more sophisticated growth and yield models, such as TASS III, to model stand dynamics and more accurately project the future species composition of managed stands.

- *genetic gain*

Genetic gain is an indication of the quality of genetically improved seed, as represented by a percentage volume increase expected near rotation age. Licensees are obliged by FRPA, FPPR and the *Chief Forester's Standards for Seed Use* to use the best available seed source when regenerating sites with planted stock. Information on the use of select seed and the associated genetic gains are available from the Seed Planning and Registry (SPAR) application of the Forest Improvement and Research Management Branch.

The base case used the area-weighted average genetic gain of select seed sown from 2005 to 2015, by species. The area-weighted average genetic gain for select redcedar seed was 4.33 percent, for select Douglas-fir seed it was 7.63 percent, for select western hemlock seed it was 5.2 percent, and for select Sitka spruce seed it was 2.0 percent.

Genetic gain of select seed used in the TSA has steadily increased. In 2021 the average genetic gain for seed used in the TSA was 21 percent. No sensitivity analyses were done to test the effect of using the more recent and projected values for genetic gain, but staff informed me that there would be an increase in long-term timber supply if the higher genetic gain values were used. I expect that if climate-based seed transfer rules were observed there could be a further increase in timber supply.

Western Forest Products was concerned that the genetic gain for future stands did not account for the increase in genetic gains of those seeds currently in storage and future predictions of genetic gain from the Seed Planning Units and Species Plans.

It is clear the genetic gains are improving based on the data and are likely to be higher in the future than the values used in the managed stand yields used in this analysis. Under '**Reasons for Decision**', I will account for an unquantified underestimation of timber supply in the base case harvest projection.

(iii) silviculture treatments to be applied to the area

- incremental silviculture

Incremental silviculture practices such as juvenile spacing, fertilization and commercial thinning are practices that are beyond those required to meet licensees' basic silviculture obligations.

Aerial fertilization of second-growth stands is expected to increase tree growth and stand volume by the time of harvest. The increase in expected volume on the coast is up to 30 cubic metres per hectare. Data from RESULTS show that a total of 41 819 hectares in the TSA were aerially fertilized since 1998. Those stands that were fertilized, but not harvested, were modelled as fertilized in the base case. Since there is no certainty to the continuation of forest fertilization, no future fertilization was modelled. A sensitivity analysis where no fertilization was modelled showed that there was no change compared to the base case harvest projection.

Commercial thinning is an intermediate harvest where some merchantable wood is removed, and the remaining stems continue to grow until there is a final harvest about 20 to 40 years later. When commercial thinning is carried out on the right stands and at the right time it could help alleviate timber supply shortfalls that may occur if sufficient merchantable stands are not available for harvesting.

There is information indicating some areas in the TSA were commercially thinned, but very little is known about the thinning intensity, timing, and type of thinning. VRI specialists indicate that historic commercial thinning is very difficult to see on orthophotos. Given the uncertainty of the data needed to model commercial thinning it was not included in the base case.

I will not make any adjustments to the base case harvest projection to account for incremental silviculture. However, I urge licensees to consider commercial thinning to augment their timber supply.

(iv) the standard of timber utilization and allowance for decay, waste and breakage expected to be applied with respect to timber harvesting on the area

- dead potential volume

The Ministry's forest cover inventory standard does not account for volume from dead trees that could potentially be used as sawlogs. The base case for the North Island TSA, therefore, did not include any contribution from dead trees that could be used as sawlogs. On the coast of BC, logs from trees that were dead prior to harvest have been scaled and charged to the AAC. Dead western redcedar and old growth Douglas-fir stems can remain sound and potentially suitable for milling for many years.

In 2006 the Ministry of Forests released a report titled *Summary of Dead Potential Volume Estimates for Management Units within the Coast Forest Region* which provided estimates of dead potential volume in each coastal management unit. From the 2006 report dead potential volume was estimated at 11.6 percent in the Kingcome TSA and 6.3 percent in the Strathcona TSA. These values represent the maximum amount of volume from dead timber, but it is not clear how much dead volume is actually recovered. Dead volume in old-growth stands is a dwindling resource and I do not expect there will be significant volumes recovered.

For this determination, I conclude that the potential volume contribution from dead logs represents a small underestimate of timber supply. Under '**Reasons for Decision**', I will account for an unquantified underestimation of timber supply in the base case harvest projection due to dead potential volume.

(v) the constraints on the amount of timber produced from the area that reasonably can be expected by use of the area for purposes other than timber production

- cutblock size, adjacency and green-up

The FPPR specifies that the maximum cutblock size in the BC Coast is 40 hectares. Larger openings are permitted where the licensee ensures that the structural characteristics of the cutblock after harvest resemble an opening from a natural disturbance. The VILUP allows larger cutblocks in enhanced forestry zones and specifies smaller cutblocks in special management zones.

Based on a summary from RESULTS, the average block size (current practice) in the TSA is 16.8 hectares. In the base case, the modelled block size was set to allow a range of blocks sizes up to 40 hectares to achieve an average block size over time that reflects current practice.

Section 65 of the FPPR specifies that timber must not be harvested on a new cutblock unless the tallest trees on a minimum of 75% of the net area to be reforested on all existing adjacent cutblocks are at least three metres in height (green-up height). Current practice is to not harvest within 200 metres of an existing cutblock until after that cutblock is greened-up. This practice was modelled in the base case.

In approximately 30 years this TSA will be at its most constrained point in the timber supply projection when the availability of existing natural stands and thrifty stands is limited, and managed stands are only just becoming harvestable. As a result, the next 30 years will be the most difficult time for licensees to spatially locate harvest blocks of an economic size which also meet adjacency and other legal requirements.

All stands within the THLB were assumed to be available for harvest when they achieve the minimum harvestable criteria. Isolated THLB is land that contributes to the THLB but cannot be harvested economically when it meets minimum harvestable criteria. This may be due to small patch size, timing of availability in comparison to surrounding forests, size of surrounding timber, or access cost. During the first decade of the base case harvest projection, blocks less than 10 hectares account for 12 percent of the area harvested. The proportion of small blocks increases to 17 percent in decade two, and 21 percent in decade three. There is a risk that some of the areas the model harvests as small blocks are actually isolated timber that are not economic to harvest until certain additional operational level conditions are met. This creates an additional unquantified downward pressure on the timber supply.

I agree that the base case timber supply projection likely includes some isolated timber that may not be feasible to harvest in practice. Under '**Reasons for Decision**', I will account for an unquantified overestimation of timber supply in the base case harvest projection due to small blocks of isolated timber not being harvested.

- community and fisheries sensitive watersheds

The FPPR sets out objectives for water management in community watersheds. Management objectives for community watersheds depend on the results of a hydrological assessment of the watershed. There are six community watersheds in the TSA covering a gross area of 30 300 hectares. Licensees in the North Island TSA currently have commitments in their Forest Stewardship Plans requiring them to complete hydrological assessments and abide by the recommendations of the hydrologist.

On December 28, 2005, the Minister of Environment issued a Government Action Regulation (GAR) Order establishing 11 fisheries sensitive watersheds (FSW) on Vancouver Island. Two of these, the Artlish (F-1-001) and the Memekay (F-1-009) are in the North Island TSA.

The GAR Order provides three objectives:

a) Conserve the natural hydrological conditions, natural stream bed dynamics and integrity of the stream channels in the FSW;

b) Conserve the quality, quantity and timing of water flows required by fish in the FSW;

c) Prevent the cumulative hydrological effects of primary forest activities in the FSW from causing a material adverse impact on fish habitat in the watershed.

Several of the community watersheds and FSWs have had hydrological assessments which recommend managing certain subbasins by equivalent clearcut area (ECA) limits. The base case modelled these recommended ECA limits.

There are several other non-designated watersheds that have also been assessed and have ECA limit recommendations. Some licensees have also committed to voluntary ECA limits. A sensitivity analysis showed that applying these additional ECA limits to the non-designated watersheds had no effect on timber supply compared to the base case harvest projection.

In my meetings with First Nations on September 13, 2023, I heard about the importance of water quality and salmon to their sustenance. 'Namgis First Nation recommended 800-meter buffers for fish-bearing streams. It is beyond the scope of my authority to make land use decisions attributable to fish-bearing streams. I will discuss this further under '*TSR and FLP linkage*'. For this determination I will not make any adjustments to the base case harvest projection to account for additional management objectives on community watersheds and fisheries sensitive watersheds.

- *First Nations cultural heritage resources*

A cultural heritage resource is defined in the *Forest and Range Practices Act* as, "an object, site, or location of a traditional societal practice that is of historical, cultural or archaeological significance to the province, a community, or an aboriginal people". Cultural heritage resources include archaeological sites, structural features, heritage landscape features, and traditional use sites.

Indigenous cultural heritage, however, is broader in its definition. Indigenous cultural heritage encompasses land, resources, creation stories, histories, knowledge, practices, relations, and language. It also includes all the places, spiritual areas, and objects that are linked to Indigenous history and traditions: transformer places, archaeological sites, trails, hunting grounds, gathering areas, burial grounds, artifacts, and cultural objects and materials. In the North Island TSA, there is a demand from First Nations for cultural cedar. First Nations harvest cultural cedar from both the THLB and the non-THLB.

In the base case 3908 hectares were removed from the THLB to protect archeological sites. No other land exclusions were made to account for cultural heritage resources. It was assumed the protection of cultural heritage resources would be addressed through management for other values such as wildlife tree retention and riparian areas.

Nanwakolas Council was concerned that the analysis did not include the large cultural cedar strategy. Since the strategy was not available for this analysis Nanwakolas recommended that this strategy be dealt with through the FLP process and be reflected in subsequent TSRs. Mowachaht/Muchalaht First Nation is concerned that culturally modified trees are not protected.

It is beyond the scope of my authority to make land use decisions attributable to the amount of area to be reserved for cultural heritage resources. I am also aware of government's desire for reconciliation with First Nations and the government's intention to change the way forests are managed in this province. As discussed under '*TSR and FLP linkage'* I expect that the forest landscape planning process will resolve the approach to these forest practices. Under '**Implementation**', I urge licensees to engage with First Nations when they encounter culturally modified trees and other large cedar trees so that First Nations have access to large cultural cedar trees. For this determination I will not make any adjustments to the base case harvest projection to account for cultural heritage resources.

- carbon sequestration

The 'carbon cycle' refers to the constant movement of carbon from land and water through the atmosphere and living organisms. Forests are a vital part of the carbon cycle, both storing and releasing carbon in a dynamic process of growth, decay, disturbance and renewal, thus making them important from a carbon and climate change mitigation perspective.

Forests act either as carbon sources or carbon sinks. A forest is considered a carbon source if it releases more carbon than it absorbs. A forest is considered a carbon sink if it absorbs more carbon from the atmosphere than it releases. The net ecosystem carbon balance (NECB) is used to describe the net change between the given ecosystem and the atmosphere. If the atmosphere is used as a base, a positive NECB means the atmosphere carbon pool is increasing and the given ecosystem is a carbon source, while a negative NECB means the atmosphere carbon pool is decreasing and the ecosystem is a carbon sink.

Five terrestrial carbon pools have been defined by the Intergovernmental Panel on Climate Change (IPCC): above ground biomass carbon, below ground biomass carbon, dead organic matter, forest floor litter, and soil organic carbon. The sum of all five pools is referred to as total ecosystem carbon (TEC).

A carbon analysis of the base case harvest projection was completed using carbon budget model – Canadian forest sector version 3 (CBM-CFS3) to project carbon dynamics over the first 100 years in the TSA. Sources of greenhouse gases modelled were harvesting, wildfires, non-recoverable losses due to insects and disease, and road building. In accordance with the *British Columbia Greenhouse Gas Offset Protocol: Forest Carbon* (Draft, 2022), the retention factor for harvested wood product (HWP) in use after 100 years was 0.06, and the HWP in landfill was treated as a one-time emission.

TEC (THLB and non-THLB) decreased by about 0.8 percent over the 100 years modelled. In the THLB, TEC decreased by about 18.8 percent largely due to harvesting and all the harvested wood products being treated as one-time emissions, while TEC in the non-THLB increased by 8.6 percent.

The TSA is a net carbon source (NECB > 0), with an annual carbon loss of about 0.66 Mt CO2e over the 100-year projection period. The major source of carbon is timber harvesting, which releases about 0.9 Mt CO2e per year (all the harvested logs are treated as one-time emission). Slash burning is the second largest carbon source, releasing about 0.03 Mt CO2e per year. Other sources of carbon were from future road building and non-recoverable losses.

The carbon analysis conducted for the North Island TSA provides useful information to understand the impact of the base case harvest projection on forest carbon and greenhouse gas emissions. Specifically, I note the loss of ecosystem carbon from slash burning and I urge licensees to increase biomass utilization to reduce greenhouse gas emissions. I will not make any adjustment to the base case harvest projection to account for forest carbon.

- *climate change*

There is substantial scientific agreement that the climate is changing, and the changes will affect forest ecosystems. One of the important forest health impacts observed in the southern portions of the TSA is that on very dry to fresh sites there is dieback of western redcedar.

Current forest management practices (e.g., recent natural disturbances, silvicultural practices, forest growth monitoring) that may relate to climate change are captured as part of existing data collection processes and incorporated into the timber supply review. However, it is not possible to confidently predict the specific quantitative impacts on timber supply of climate change given both the uncertainty of the rate and specific characteristics of climate change and the uncertainty around the impact to the forest and how management will respond. Therefore, the base case does not include specific accounting for climate change projections.

In response to climate change, some of the adaptation and mitigation measures recommended by staff include: use the Ministry's *Climate-based Seed Transfer* guidelines to plant species suitable for future climates; use genetically improved seed (e.g., pest resistance, drought tolerance); promote diversity of species and age classes; manage for drought risk using the stand-level drought risk assessment tool; increase riparian buffers and avoid degradation of stream bank stability.

A recent paper was prepared for FAIB and the Forest Carbon and Climate Services Branch entitled *Approaches to Advance Climate Change Considerations in Timber Supply Reviews: A Discussion Paper*. This paper provides useful ideas for the Ministry to understand options for better incorporating climate change in timber supply analysis.

Under '**Implementation**', I request that staff continue working to develop ways to integrate the implications of climate change projections such as growth and yield and natural disturbance in timber supply analyses to better inform future decisions. I will not make any adjustment to the base case harvest projection to account for climate change.

- *cumulative effects*

Cumulative effects are changes to social, economic, and environmental conditions caused by the combined impact of past, present, and potential human activities or natural events. The provincial cumulative effects team has developed a framework, the cumulative effects framework (CEF), for assessing cumulative effects on high priority values and implementing cumulative effects assessments across the province.

Currently, CEF has interim assessment protocols for aquatic ecosystems, grizzly bear, moose, old growth forests, and forest biodiversity that are approved by the Natural Resource Sector for implementation. At the time of the analysis, there were no assessment reports for any of these values in the North Island TSA. Therefore, no additional practices to address cumulative effects were modelled in the base case.

There is work ongoing to develop assessment protocols in the West Coast Region on the following values: marbled murrelet, northern goshawk, elk, cultural cedar, and cutthroat trout.

Mowachaht/Muchalaht First Nation expressed concerns about cumulative impacts of forestry activities on cultural heritage resources (e.g., cedar) and fisheries resources (e.g., salmon). They stated that the current condition reports for values listed in the CEF do not address the cumulative impacts to values they are concerned about in their territory.

In the absence of a framework for assessing cumulative effects in the North Island TSA, staff recommended that CEF personnel should work more collaboratively with Indigenous communities to identify values that are important to them.

It is beyond the scope of the chief forester to give direction on forest practices while making AAC decisions. As discussed under '*TSR and FLP linkage'*, I am aware that forest landscape planning, with First Nations participation, is underway in this TSA. I expect the participants will consider forest practices as well as cumulative effects. The results of those decisions will be reflected in future AAC decisions. I will not make any adjustment to the base case harvest projection to account for projected cumulative effects to forest values.

(vi) any other information that, in the chief forester's opinion, relates to the capability of the area to produce timber

- other reserves

The *Forest Act*, Part 13, allows for areas to be classified as a designated area for up to 10 years and either limit harvest or attach conditions for harvesting those areas. The *Land Act*, Sections 16 and 17, allow for land to be either withdrawn (Section 16) or conditionally withdrawn (Section 17) from having Crown land applications accepted on the identified area.

There are four Part 13 designated areas within the North Island TSA, three of which are one-hectare reserves associated with trees from the Big Tree Registry. The other area is associated with an ongoing treaty process. There are 14 Crown land files with Section 16 and 17 treaty reserves which are part of the Interim Treaty Agreements (ITA) signed by the Wei Wai Kai and the Wei Wai Kum First Nations. After accounting for the overlap of the Part 13 designated areas with the Section 16 and 17 treaty reserves, the gross area totals 5350 hectares.

Since these reserves have not yet been removed from the TSA, they contributed to the base case harvest projection. District staff indicated that harvesting is not permitted in the reserves which are expected to be removed from the North Island TSA within the next 10 years. A sensitivity analysis showed that removal of the reserves would decrease short-term timber supply by about 2.9 percent.

Nanwakolas Council was concerned that the We Wai Kai and Wei Wai Kum ITA lands were included in the base case and recommended that the chief forester should account for the ITAs. I agree that the reserves should not contribute to the base case timber supply.

In a recent and significant court decision on April 17, 2024, Nuchatlaht First Nation met the legal test for Aboriginal title to a portion of Nootka Island. Following this decision, we expect the court to make a formal declaration of Aboriginal title and, once the declaration is given full legal effect, parts of the *Forest Act* will no longer apply to Nuchatlaht's Aboriginal title lands. These areas no longer contribute to the timber supply in the TSA and removing them from the THLB reduces short-term timber supply by 0.2 percent.

For this factor, I conclude that I will account for a 2.9 percent overestimation of timber supply in the base case harvest projection due to the imminent removal of lands conditionally withdrawn from the TSA. I will also account for a 0.2 percent overestimation of timber supply resulting from the removal of areas where Nuchatlaht First Nation met the legal test for Aboriginal title. Under '**Reasons for Decision**', I will account for a cumulative 3.1 percent overestimation of timber supply in the base case harvest projection due to the inclusion of reserves and title area where harvesting is no longer permitted.

- unharvested volume carried forward

In January 2018 the Ministry introduced a *Policy Regarding the Administration of Unharvested Volumes, Uncommitted Volumes and Unused BCTS Volumes* (collectively referred to as accumulated volume). The total accumulated volume, excluding BCTS volume, in the North Island TSA is currently 1 193 989 cubic metres. Of this volume, 95 171 cubic metres is committed to support harvest tenures for First Nations in the TSA. The base case accounts for the committed unharvested volume of 95 171 cubic metres (9517 cubic metres per year for the first decade).

There is currently no plan to retire the remaining 1 098 818 cubic metres due to numerous requests for new licences to be issued. The accumulated volume is predominantly on the west side of the TSA.

The base case harvest projection is predicated on the condition of the forest, including the amount of merchantable timber growing stock present, as of the date of the timber supply analysis. The standing forest was not depleted to account for potential harvesting of the remaining accumulated volume in the North Island TSA. However, a sensitivity analysis showed that there is no change in timber supply compared to the base case harvest projection if all of the accumulated volume was harvested during the next 10 years.

The request by First Nations for tenures sourced from accumulated volume is beyond the scope of my authority. The Regional Executive Director and the Executive Director of BC Timber Sales are authorized to dispose of accumulated volume. Since the sensitivity analysis showed that there will be no impact to the base case harvest projection if all of the accumulated volume is harvested, I will not make any adjustments to account for the disposition of accumulated volume.

8(8)(b) The short-and long-term implications to British Columbia of alternative rates of harvesting from the area

- *TSR and FLP linkage*

The Province has initiated forest landscape planning processes in several management units across BC.

Key goals of forest landscape plans are to:

- Identify where and how forest management activities can occur (i.e., timber harvesting, road layout, silviculture activities).
- Provide clarity on overlapping direction from strategic plans and land use objectives including wildfire risk reduction plans and access management plans.
- Efficiently address changing conditions (e.g. climate change, wildfires).
- Address the potential environmental impacts of timber harvesting activities.
- Consider cumulative effects to prepare for possible future forest conditions.

Forest landscape planning aligns with the *B.C. Declaration on the Rights of Indigenous Peoples and the United Nations Declaration on the Rights of Indigenous Peoples*. FLPs provide opportunities for Indigenous Nations to participate in forest planning and decision-making. Forest landscape plans must be developed in consultation and cooperation with Indigenous peoples whose rights may be affected and to reflect the right of self-government and self-determination of Indigenous peoples. In the North Island TSA there are discussions occurring with seven First Nations with respect to two FLP projects.

Elsewhere in this rationale under '*cumulative effects',* '*riparian management',* '*community and fisheries sensitive watersheds',* and '*First Nations cultural heritage resources'* I stated that it beyond the scope of my authority to make land use decisions or to specify forest practices. Under '*First Nations engagement'*, several concerns were raised about access to redcedar, the protection of fisheries, water quality, visual quality, and cumulative effects. I expect that the FLPs would resolve the approach to these forest management practices negotiated between First Nations, licensees, local government, and other interested parties that address these concerns. Nanwakolas Council recommended that I should return to the AAC decisions for the management units covered by their plan after the FLP completion to ensure they account for changes in the management regime. I agree with this recommendation. Subsequent AAC decisions I make will account for those management practices stipulated in FLPs.

- partition options and implications

When making AAC determinations, the chief forester can specify portions of the harvest attributable to different timber types, geographic areas, or types of terrain. This is referred to as an AAC partition. The purpose of a partition is to ensure that the harvest attributable to certain types of timber, terrain or geographic areas of the TSA is not taken from another (potentially higher value) area or type of forest. A partition may also be applied to encourage use of the timber from different areas and timber types that may not be otherwise harvested.

Licensees decide where to harvest while complying with all applicable legislative objectives. The chief forester does not have the authority to direct where harvesting occurs. The AAC partition I set limits the amount of harvest that can take place in certain geographic areas, terrain, or timber types but it does not require licensees to harvest in specific areas or timber types.

- contribution from the southeastern portion of the TSA

The climate in the southeastern portion of the TSA is generally drier than the rest of the TSA and falls within the CWHxm (very dry, maritime) biogeoclimatic subzone. Douglas-fir, along with hemlock and western redcedar, is the main tree species growing in this region referred to as the Sayward timber supply block. This is the area of the TSA which is East of Strathcona Park, within DCR. The stands here range in age from 30 to 100 years and are critical for maintaining the base case timber supply for the next 50 years until managed stands become harvestable.

The Sayward TSB contributes about 550 000 cubic metres per year to the first decade of the base case harvest projection. The contribution from the Sayward TSB declines to about 350 000 cubic metres per year by year 50. If these forests are harvested at a higher rate than their contribution to the base case, there will be timber supply shortfalls in the near future.

Nanwakolas Council recommended that a partition limiting the harvest from the Sayward TSB be implemented. I agree with this recommendation, and as discussed under '**Reasons for Decision**', I will establish a partition limiting the harvest from this area.

- red alder/deciduous forest types

In the base case all deciduous species, except for red alder, were removed form the THLB. The harvest contribution from red alder-leading stands fluctuates between a high of 21 000 cubic metres per year in the first decade, to a low of 4500 cubic metres per year in the fifth decade. Some licensees and First Nations have expressed interest in harvesting red alder over the past few decades. Nanwakolas Council recommended that I specify an AAC partition for red alder based on the even-flow contribution demonstrated in the red alder partition alternative harvest projection. I agree with this recommendation. A sensitivity analysis showed that it is possible to sustain a harvest of 9000 cubic metres per year of red alder without affecting the base case harvest projection.

I encourage the use or red alder; however, I am mindful of the possibility that the AAC attributable to alder may be used to harvest more desirable coniferous timber. As discussed under '**Reasons for Decision**', I will specify a partition to the AAC to encourage the use of red alder.

8(8)(e) Abnormal infestations in and devastations of, and major salvage programs planned for, the timber on the area

- non-recoverable losses

Non-recoverable losses (NRL) are timber volumes destroyed or damaged on the THLB by natural causes such as fire, wind, and disease that are not recovered through salvage operations and remain unutilized. These timber volumes do not include endemic losses that are incorporated within growth and yield model projections or epidemic losses specifically modelled.

Based on the Ministry's aerial forest health overview survey the average annual NRL between 1999 and 2019 is estimated to be 2921 cubic metres. Windthrow generally affects 15 to 35 hectares per year but since there was no data regarding the volume salvaged it was assumed that all windthrow was salvaged. In the base case an area equivalent to 2921 cubic metres in the THLB was set to age zero each year to account for NRLs.

The non-THLB forest may also be disturbed by many factors such as fire, pests, wind, and road building. These disturbances influence both timber supply and requirements for non-timber objectives. The base case did not model disturbance in the non-THLB, but a sensitivity analysis showed that short-term timber supply is affected by disturbance in the non-THLB.

Given the uncertainty regarding the occurrence and timing of natural disturbances in the non-THLB I will not make any adjustments to the base case harvest projection to account for non-recoverable losses in this determination.

Reasons for Decision

In reaching my AAC determination for the North Island TSA, I considered the factors required under Section 8 of the *Forest Act* and reasoned as follows.

The base case showed that a harvest level of 1 248 100 cubic metres per year can be maintained for 30 years before decreasing to 1 170 000 cubic metres per year for the remainder of the harvest projection period of 250 years. The average volume harvested during the period 2017 to 2021 was 1 092 351 cubic metres per year.

I am satisfied that the assumptions applied in the base case for many of the factors applicable to the North Island TSA were appropriate, as detailed in Table 1 or as described elsewhere in this rationale. However, I have identified factors which, considered separately, indicate that the timber supply may be either greater or less than projected in the base case. Some of these factors can be readily quantified and their impact on the harvest level assessed with reliability. Others may influence timber supply by adding an element of risk or uncertainty to the decision but cannot be readily quantified at this time.

I identified the following factors in my considerations as indicating that the timber supply projected in the base case may have been overestimated, to a degree that can be quantified:

- *wildlife habitat* – After the analysis was completed, 19 new WHAs were approved. Exclusion of these areas from the THLB reduced short-term timber supply by 1.3 percent. The base case did not account for areas set aside for species at risk where WHAs have not yet been established (Queen Charlotte goshawk, red-legged frog, Keen's long-eared myotis and great blue heron). Removal of these areas reduced short-term timber supply by 0.3 percent. For northern goshawk 14 new proposed WHAs were announced in 2018. Removing these WHAs from the THLB would reduce short-term timber supply by about 0.8 percent. Wildlife staff have informed me that the proposed WHAs will be finalized shortly. To account for the overlap with marbled murrelet impacts, I will reduce the base case projection by 0.4 percent, half of the total 0.8 percent impact. A 2.0 percent reduction to the base case harvest projection accounts for the combined impacts from wildlife.
- *contribution from areas harvested using helicopters* – timber volume from areas harvested using helicopters contribute 10 percent in the first decade and seven percent in the following two decades to the base case harvest projection. Since helicopter systems are very expensive to operate, harvesting usually occurs in stands with a higher component of redcedar. A sensitivity analysis showed that if helicopter harvesting is limited to stands with greater than 30 percent redcedar timber supply is reduced by seven percent.

- *other reserves* – Interim Treaty Agreements with associated land transfers were signed by the Wei Wai Kai and the Wei Wai Kum First Nations. Harvesting is not permitted in these areas and they will likely be removed from the North Island TSA within the next 10 years. A sensitivity analysis showed that removal of the reserves would decrease short-term timber supply by about 2.9 percent. In a recent court decision, Nuchatlaht First Nation met the legal test for Aboriginal title to a portion of Nootka Island, which decreases short-term timber supply by 0.2 percent. Combined, removing ITA lands and areas where Nuchatlaht First Nation met the legal test for Aboriginal titlewill reduce the short-term timber supply by 3.1 percent.

I identified the following factors in my considerations as indicating that the timber supply projected in the base case may have been overestimated, but are not quantifiable at this time:

- *riparian management* – The methodology used to approximate the legislative requirements for wetland complexes resulted in a small overestimate of the THLB and timber supply.
- *forest inventory* – The base case used forest inventories that were completed between 2003 and 2007 and were updated for disturbances to 2018. A new forest inventory for the North Island TSA was completed in 2022. A comparison of the 2018 VRI and the 2022 VRI showed that the average site index and mature stand volume the 2022 VRI were lower than in the 2018 VRI. A sensitivity analysis indicated that if natural stand volumes were reduced by 10 percent, short-term timber supply would be about seven percent lower. While it is not known what the timber supply projection would be if the timber supply model was rebuilt using the 2022 VRI, staff indicated that there is a potential overestimate of short-term timber supply.
- *growth and yield - managed stands* – To verify that managed stand growth aligns with the TIPSY volume projections FAIB initiated a YSM sampling program across the province. Data collected from 22 YSM plots in the TSA show TIPSY yield projections overestimate measured plot volume. Because of the small sample size, the difference in volume cannot be quantified with statistical rigor, however, there is an indication that managed stand volumes may be less than assumed in the base case.
- *cutblock size, adjacency, and green-up* – All stands within the THLB were assumed to be available for harvest when they achieve the minimum harvestable criteria. Isolated THLB is land that contributes to the THLB but cannot be harvested economically when it meets minimum harvestable criteria. Analysis of the block sizes harvested showed that during the first decade of the base case harvest projection, blocks less than 10 hectares account for 12 percent of the area harvested. The proportion of small blocks increases to 17 percent in decade two, and 21 percent in decade three. There is a risk that some of the areas contributing to the base case harvest projection as small blocks are actually isolated timber that are not economic to harvest until certain additional operational level conditions are met. This creates an additional unquantified downward pressure on the timber supply.

I have identified the following factors in my considerations as indicating that the timber supply projected in the base case may have been underestimated, but are not quantifiable at this time:

- *genetic gain* – The base case used the area-weighted average of genetic worth of select seed sown from 2005 to 2015. Genetic gain of select seed used in the TSA has steadily increased. No sensitivity analyses were done to test the effect of using the more recent and projected values for genetic worth, but staff informed me that there would be an increase in long-term timber supply if the higher genetic gain values were used.
- *dead potential volume* – Dead western redcedar and old growth Douglas-fir stems can remain sound and potentially suitable for milling for many years. Dead potential volume was estimated at 11.6 percent in the Kingcome TSA and 6.3 percent in the Strathcona TSA, but it is not clear how much dead volume is actually recovered. Dead volume in old growth stands is a dwindling resource and I do

not expect there will be significant dead volumes recovered. I recognize that recovery of dead potential volume may increase the base case timber supply.

In considering the above-mentioned influences, I find that the combined effect of accounting for the quantifiable factors represents a net overestimation of timber supply by 12.1 percent. In addition, there were some factors mentioned above ('*riparian management*', '*forest inventory*', '*growth and yield - managed stands*', and '*cutblock size, adjacency and green-up*') where I considered the impacts to timber supply were overestimated but unquantified. There were also some factors ('*genetic gain*', '*dead potential volume*') where I considered timber supply to be underestimated but unquantified. These unquantified factors add some uncertainty to the base case timber supply projection.

As discussed under '*contribution from the southeastern portion of the TSA*', the climate, species composition and the stand ages of this area make it particularly economic to harvest. As well, the age class distribution of the remainder of the TSA means that these stands are critical for maintaining the base case timber supply for the next 50 years until managed stands become harvestable. To avoid future timber supply shortfalls, it is important that this portion of the TSA not be harvested at a rate greater than its contribution to the base case timber supply. Before consideration of the over- and underestimates to the base case harvest projection discussed above, this area contributed 550 000 cubic metres per year for the first decade of the harvest projection. Nanwakolas Council recommended that a partition limiting the harvest from the Sayward TSB be implemented. I agree with this recommendation, and after accounting for other adjustments, I will establish a partition limiting the harvest from this area to a maximum of 450 000 cubic metres per year. I expect that this level of harvest will avoid the possibility of overharvesting this area while FLP discussions continue.

As discussed under '*red alder/deciduous forest types*', I would like to encourage the use of red alder in this TSA. A sensitivity analysis showed that it is possible to sustain a harvest of 9000 cubic metres per year of red alder without affecting the base case harvest projection. I will therefore specify a partition of 9000 cubic metres per year for the harvest of red alder.

It is my expectation that there will be changes to the way that old forest is managed in the TSA. While the paradigm shift has begun with the TAP identifying priority at-risk forest, implementation of long-term measures for old forest management, including TAP polygons and other old forest, is expected to occur through the FLP and other processes, in collaboration with First Nations and input from the public. During that transition I expect some of the old forest contributing to the base case harvest projection may be deferred from harvest.

As discussed under '*landscape-level biodiversity/old growth management*', I decided that there should be a partition specifying the maximum amount of the AAC I determine that may be harvested from older forests (older than 140 years), as well as from younger forests (140 years and younger). Older forests contribute 51 percent to the base case harvest projection in the first decade. I will therefore stipulate that no more than 50 percent of the AAC I determine may be harvested from forests older than 140 years old, understanding that a proportion of this will likely be deferred in the short term. Limiting the harvest of old forest may unintentionally lead to overharvesting the younger forest. To prevent the unintentional overharvest of young forest that may result from old- and mature-forest deferrals, I will specify a limit of 50 percent on the harvest of stands 140 years old and younger.

Following the comprehensive public review of the analysis results for the North Island TSA, I have considered the many comments and concerns regarding harvest levels expressed by First Nations, licensees, and residents of the TSA. The factors where the impact to timber supply were quantifiable indicate that short-term timber supply in the base case should be decreased by 12.1 percent. In addition, there were some factors where I considered the impacts to timber supply were overestimated but unquantified and other factors where I considered timber supply to be underestimated but unquantified. These, when combined, add uncertainty. As such, I will specify an AAC of 1 096 000 cubic metres,

which is 12.2 percent below the base case harvest projection. This AAC is comprised of 9000 cubic metres of red alder and 1 087 000 cubic metres of coniferous species. Of the coniferous portion of the AAC, no more than 543 500 cubic metres (50 percent) may be harvested from stands older than 140 years old, and no more than 543 500 cubic metres may be harvested from stands 140 years old and younger. Of the total AAC, a maximum of 450 000 cubic metres may be harvested from the Sayward TSB. I expect that the reductions I made to the base case harvest projection, along with the partitions will address the concerns raised by First Nations, residents of the TSA and licensees.

In making this AAC determination I have considered the joint recommendations provided to me by the Nanwakolas Council on behalf of the member First Nations and the Province, under the *Nanwakolas Reconciliation Protocol*. I note that the AAC determination and AAC partitions outlined throughout this document and in my reasons for decision are consistent with the recommendations. With respect to the last recommendation, I will provide this document to the provincial staff supporting any subsequent volume apportionment and licence re-charting processes, which are independent of my AAC determination, and indicate the stated desire of Nanwakolas member First Nations to be engaged on these subsequent processes.

Determination

I have considered and reviewed the factors as documented above, including the risks and uncertainties of the information provided. It is my determination that a timber harvest level that accommodates objectives for all forest resources during the next 10 years and that reflects current management practices as well as the socio-economic objectives of the Crown, can be best achieved in North Island TSA by establishing an AAC of 1 096 000 cubic metres. This AAC is comprised of 9000 cubic metres of red alder harvested from anywhere in the TSA, and 1 087 000 cubic metres of coniferous timber. A maximum of 543 500 cubic metres of coniferous timber may be harvested from stands older than 140 years, and a maximum of 543 500 may be harvested from stands 140 years and younger. Of the total AAC (1 096 000 cubic metres), a maximum of 450 000 cubic metres may be harvested from the Sayward TSB.

This new AAC of 1 096 000 cubic metres is 12.2 percent below the current AAC. This determination becomes effective on June 26, 2024, and will remain in effect until a new AAC is determined, which must take place within 10 years of the effective date of this determination.

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, then I am prepared to revisit this determination or partitions sooner than the 10 years required by legislation.

Implementation

In the period following this decision and leading to the subsequent determination, I encourage Ministry staff, other agencies, and licensees (as appropriate) to undertake or support the tasks noted below, the particular benefits of which are described in greater detail in appropriate sections of this rationale.

I recognize that the ability of staff and licensees to undertake projects is dependent on available resources, including funding. However, I have highlighted here what I view to be the most critical needs to help reduce the risk and uncertainty associated with key factors that affect the timber supply in the North Island TSA.

1. *Growth and yield – managed stands* - I request that sufficient YSM plots be established in every management unit to better calibrate the volume projection for managed stands.
2. *Western hemlock ingress/redcedar regeneration* - I urge staff to continue developing more sophisticated growth and yield models, such as TASS III, to model stand dynamics and more accurately project the future species composition of managed stands.

3. *First Nations cultural heritage resources* – I urge Ministry staff and licensees to engage with First Nations when they encounter culturally modified trees and other large cedar trees to ensure First Nations have a supply of large cultural cedar trees.
4. *Climate change* – I request that staff continue working to develop ways to integrate the implications of climate change projections such as growth and yield and natural disturbance in timber supply analyses to better inform future decisions.

Shane Berg, RPF
Chief Forester

June 26, 2024

Appendix 1: Section 8 of the *Forest Act*

Section 8 of the *Forest Act*, Revised Statutes of British Columbia 1996, c. 157, (current to June 11, 2024), reads as follows:

Allowable annual cut

8 (1)The chief forester must determine an allowable annual cut at least once every 10 years after the date of the last determination, for

(a) the Crown land in each timber supply area, excluding the Crown land in the licence areas of area-based licences, and

(b) each tree farm licence area.

(2) If the minister

(a) makes an order under section 7 (b) respecting a timber supply area, or

(b) amends or enters into a tree farm licence to accomplish a result set out under section 39 (2) or (3),

the chief forester must make an allowable annual cut determination under subsection (1) for the timber supply area or tree farm licence area

(c) within 10 years after the order under paragraph (a) or the amendment or entering into under paragraph (b), and

(d) after the determination under paragraph (c), at least once every 10 years after the date of the last determination.

(3) If

(a) the allowable annual cut for the tree farm licence area is reduced under section 9 (3), and

(b) the chief forester subsequently determines, under subsection (1) of this section, the allowable annual cut for the tree farm licence area,

the chief forester must determine an allowable annual cut at least once every 10 years from the date the allowable annual cut under subsection (1) of this section is effective under section 9 (6).

(3.1) If, in respect of the allowable annual cut for a timber supply area or tree farm licence area, the chief forester considers that the allowable annual cut that was determined under subsection (1) is not likely to be changed significantly with a new determination, then, despite subsections (1) to (3), the chief forester

(a) by written order may postpone the next determination under subsection (1) to a date that is up to 15 years after the date of the relevant last determination, and

(b) must give written reasons for the postponement.

(3.2) If the chief forester, having made an order under subsection (3.1), considers that because of changed circumstances the allowable annual cut that was determined under subsection (1) for a timber supply area or tree farm licence area is likely to be changed significantly with a new determination, he or she

(a) by written order may rescind the order made under subsection (3.1) and set an earlier date for the next determination under subsection (1), and

(b) must give written reasons for setting the earlier date.

(4) If the allowable annual cut for the tree farm licence area is reduced under section 9 (3), the chief forester is not required to make the determination under subsection (1) of this section at the times set out in subsection (1) or (2) (c) or (d), but must make that determination within one year after the chief forester determines that the holder is in compliance with section 9 (2).

(5) In respect of an allowable annual cut determined under this Act, the chief forester may, at any time, specify that portions of the allowable annual cut are attributable to one or more of the following:

(a) different types of timber or terrain in different parts of Crown land within a timber supply area or tree farm licence area;

(a.1) different areas of Crown land within a timber supply area or tree farm licence area;

(b) different types of timber or terrain in different parts of private land within a tree farm licence area.

(c)[Repealed 1999-10-1.]

(5.1) The chief forester may, at any time, amend or cancel a specification made under subsection (5).

(6) The minister must determine an allowable annual cut for each woodlot licence area in accordance with the woodlot licence for that area.

(7) The minister must determine an allowable annual cut for

(a) each community forest agreement area in accordance with the community forest agreement for that area, and

(b) each first nations woodland licence area in accordance with the first nations woodland licence for that area.

(8) In determining an allowable annual cut under subsection (1) the chief forester, despite anything to the contrary in an agreement listed in section 12, must consider

(a) the rate of timber production that may be sustained on the area, taking into account

(i) the composition of the forest and its expected rate of growth on the area,

(ii) the expected time that it will take the forest to become re-established on the area following denudation,

(iii) silviculture treatments to be applied to the area,

(iv) the standard of timber utilization and the allowance for decay, waste and breakage expected to be applied with respect to timber harvesting on the area,

(v) the constraints on the amount of timber produced from the area that reasonably can be expected by use of the area for purposes other than timber production, and

(vi) any other information that, in the chief forester's opinion, relates to the capability of the area to produce timber,

(b) the short and long term implications to British Columbia of alternative rates of timber harvesting from the area,

(c) [Repealed 2003-31-2.]

(d) the economic and social objectives of the government, as expressed by the minister, for the area, for the general region and for British Columbia, and

(e) abnormal infestations in and devastations of, and major salvage programs planned for, timber on the area.

(9) Subsections (1) to (4) of this section do not apply in respect of the management area, as defined in section 1 (1) of the *Haida Gwaii Reconciliation Act*.

(10) Within one year after the chief forester receives notice under section 5 (4) (a) of the *Haida Gwaii Reconciliation Act*, the chief forester must determine, in accordance with this section, the allowable annual cut for

(a) the Crown land in each timber supply area, except the areas excluded under subsection (1) (a) of this section, and

(b) each tree farm licence area

in the management area, as defined in section 1 (1) of the *Haida Gwaii Reconciliation Act*.

(11) The aggregate of the allowable annual cuts determined under subsections (6), (7) and (10) that apply in the management area, as defined in section 1 (1) of the *Haida Gwaii Reconciliation Act*, must not exceed the amount set out in a notice to the chief forester under section 5 (4) (a) of that Act.

Appendix 2: Section 4 of the *Ministry of Forests and Range Act*

Section 4 of the *Ministry of Forests and Range Act* (current to June 11, 2024) reads as follows:

Purposes and functions of ministry

4 The purposes and functions of the ministry are, under the direction of the minister, to do the following:

(a) encourage maximum productivity of the forest and range resources in British Columbia;

(b) manage, protect and conserve the forest and range resources of the government, having regard to the immediate and long term economic and social benefits they may confer on British Columbia;

(c) plan the use of the forest and range resources of the government, so that the production of timber and forage, the harvesting of timber, the grazing of livestock and the realization of fisheries, wildlife, water, outdoor recreation and other natural resource values are coordinated and integrated, in consultation and cooperation with other ministries and agencies of the government and with the private sector;

(d) encourage a vigorous, efficient and world competitive

(i) timber processing industry, and

(ii) ranching sector

in British Columbia;

(e) assert the financial interest of the government in its forest and range resources in a systematic and equitable manner.

Appendix 3: Minister's letter of November 24, 2021

Reference: 268022

November 24, 2021

Diane Nicholls, R.P.F.
Assistant Deputy Minister and Chief Forester

Dear Diane Nicholls:

The *Forest Act* gives you the authority to determine an allowable annual cut (AAC) for each timber supply area and tree farm licence in the province and specifies what you must consider when determining an AAC. Included in these considerations are the economic and social objectives of the government, which are provided below. These government objectives are to be considered as part of the comprehensive timber supply review process that your office has developed and implemented to ensure that your AAC determinations consider many forest management objectives and aligns with provincial statutes and regulations. They replace the objectives provided to you by the former minister, Doug Donaldson, on October 30, 2017.

British Columbians expect a government focused on building a strong sustainable economy that works for everyone, providing a path for lasting and meaningful reconciliation with Indigenous peoples, and developing strategies to address climate change. Government has committed to delivering on these priorities while recognizing that healthy, resilient forests are essential to the social, economic, and environmental interests of current and future generations. To advance these commitments, natural resource ministries, Indigenous partners, and stakeholders are collaborating to develop and implement forest management strategies and policies that will be relevant to your AAC determinations. I ask that you remain mindful of these commitments and as government approves related objectives, that you ensure they are fully considered within the timber supply review process.

The British Columbia (BC) government has committed to full and lasting reconciliation with Indigenous Peoples. As the provincial government implements the *Declaration on the Rights of Indigenous Peoples Act* and works toward aligning provincial laws with the United Nations Declaration on the Rights of Indigenous Peoples, I ask that your AAC determinations fully consider relevant outcomes of that work. For greater certainty, please continue to ensure that your AAC determinations are consistent with relevant agreements that are in effect between First Nations and the BC government, and court decisions that define Aboriginal title and rights. I expect you to continue to find ways to advance engagement and collaboration with Indigenous Peoples throughout the timber supply review process. In making your AAC determinations, I also ask that you continue to carefully consider Indigenous knowledge and other input that could have implications for your AAC determinations from First Nations and organizations whose traditional territories overlap the management unit under consideration.

Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Office of the Minister
Mailing Address: PO BOX 9049 Stn Prov Govt Victoria, BC V8W 9E2
Tel: 250 387-6240
Fax: 250 387-1040
Website: www.gov.bc.ca/for

Diane Nicholls, Assistant Deputy Minister and Chief Forester

BC's forests provide fibre for forest products, habitat for plants, fish and wildlife, and many other benefits essential to diverse and resilient communities. The capacity of these forests to support economic and environmental sustainability and reconciliation with Indigenous peoples is challenged by insect infestations, increasing levels of wildfire activity and other risks related to climate change. As healthy forests are essential for a healthy industry and province, I ask you consider how your determinations may encourage economic recovery and forest revitalization, improve forest health, and support approved strategies to reduce wildfire.

Since a sustainable and resilient timber supply supports BC's goals for a better, cleaner future and environmental sustainability, your AAC determinations should continue to incorporate, as appropriate, the best available information on climate change and forest health. When making your AAC determinations, please consider ways to encourage management practices that reduce greenhouse gas emissions and support forest resiliency. Practices that are consistent with established climate change strategies, adaptation, and mitigation practices, including practices that result in better fibre utilization and sector diversity, should be explored.

As new land use policies are developed and implemented to support BC's goals for economic activity, environmental sustainability, and reconciliation with Indigenous peoples, I ask that your determinations continue to incorporate, as appropriate, the best available information on the cumulative effects of multiple activities on the land base. Where the cumulative effects of timber harvesting and other land-based activities indicate a risk to natural resource values, your determinations should identify those risks for consideration in land-use planning. I also ask that you consider ways in which your AAC determinations could encourage actions or practices to mitigate the identified risks to natural resource values.

Forests are essential to build a strong, sustainable economy that supports people, communities and competitiveness and this government is focused on transitioning the forestry sector from high volume to high value production. As part of the timber supply review process, I ask that you consider ways to foster and encourage the value-added sector and increase the use of fibre. Please identify timber types that may not be reflected in harvest choice, and in your AAC determinations, examine opportunities for these timber types to sustain clean-energy jobs and value-added products or enhance ecosystem health and resiliency.

In making your AAC determinations, I ask that you consider the needs of local communities as expressed by the public during timber supply review process. This includes input that contribute to the economic recovery and sustainability of communities and is consistent with the government's broader objectives. To ensure a sustainable future for BC's forest-dependent communities, I also ask that when faced with necessary reductions in AAC's that wherever possible those reductions be no larger than necessary to avoid significant longer-term impacts.

Thank you, Diane, for your service and your care and attention to these important matters.

Sincerely,

Katrine Conroy
Minister

Appendix 4: Information sources used in the AAC determination

The information sources considered in determining the AAC for the North Island TSA include the following:

Approved Legal Orders. Ministry of Forests, Lands, Natural Resource Operations and Rural Development. See https://www2.gov.bc.ca/gov/content/industry/crown-land-water/land-use-planning/regions;

Approved Orders. Ministry of Environment. See http://www.env.gov.bc.ca/wld/frpa/;

Archaeology in British Columbia. Ministry of Forests, Lands, Natural Resource Operations and Rural Development. See https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology;

Biodiversity Guidebook. Ministry of Forests. https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/frep-docs/biodiversityguidebook.pdf;

Forest Act. See Section 8 Allowable Annual Cut http://www.bclaws.ca/civix/document/id/complete/statreg/96157_02;

Forest and Range Practices Act. See http://www.bclaws.ca/civix/document/id/complete/statreg/02069_01;

Strathcona Timber Supply Area Data Package, Ministry of Forests, October 2012;

Strathcona Timber Supply Area Technical Report, Ministry of Forests, August 2015;

Strathcona TSA Timber Supply Analysis Public Discussion Paper, Ministry of Forests, December 2014;

Strathcona Timber Supply Area Rationale for Allowable Annual Cut (AAC) determination. Effective December 17, 2015. Ministry of Forests, Victoria, BC.

Kingcome Timber Supply Area Data Package, Timberline Natural Resource Group, September 2008;

Kingcome Timber Supply Area Analysis Report, Timberline Natural Resource Group, December 2008;

Kingcome Timber Supply Area Socio-Economic Assessment, Robinson Consulting and Associates Ltd. And Timberline Natural Resource Group, September 2008;

Kingcome Timber Supply Area Rationale for Allowable Annual Cut (AAC) determination. Effective February 2, 2010. Ministry of Forests, Victoria, BC.

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. Electronic Commerce Appraisal System (ECAS). See https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/electronic-commerce-appraisal-system ;

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. Provincial Site Productivity Layer. See https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-inventory/site-productivity/provincial-site-productivity-layer ;

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. Reporting Silviculture Updates and Land Status Tracking System (RESULTS) Application. See https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/silviculture/silviculture-reporting-results ;

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. The B.C. Geographic Warehouse. See https://www2.gov.bc.ca/gov/content/data/geographic-data-services/bc-spatial-data-infrastructure/bc-geographic-warehouse;

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. 2019. Coast Appraisal Manual. Timber Pricing Branch. Victoria, BC. See https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/coast-timber-pricing/coast-appraisal-manual-and-amendments

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. 2008. British Columbia's Forest Fertilization Strategy. Forests For Tomorrow. Victoria, BC. See https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/land-based-investment/forests-for-tomorrow/provincial_fertilization_strategy2008.pdf;

B.C. Ministry of Forests, Lands, Natural Resource Operations & Rural Development. 2015. 2015-17 Coastal Timber Supply Areas Forest Health Overview. Victoria, BC. See https://www.for.gov.bc.ca/ftp/HFP/external/!publish/Forest_Health/TSA_FH_Strategies/2015-Coast%20FH%20Strategy.pdf;