



Attn: oldgrowthbc@gov.bc.ca

January 31, 2020

Re: Submission of information regarding Old Growth Forests in British Columbia

Thank you for taking the time to review our comments and recommendations as part of the Old Growth Strategic Review – we appreciate the opportunity. SkeenaWild is a regional conservation initiative dedicated to creating a global model of sustainability, ensuring the long-term health and resiliency of wild salmon populations and communities in northern British Columbia. In response to our concerns about the impacts to fish and fish habitat from forest harvesting practices, SkeenaWild developed an initiative to support better forestry and land use management. We are collaborating with indigenous, conservation, government, and academic partners to achieve positive outcomes.

Please find our comments and recommendations below.

Overview

Intact forest ecosystems of advanced age with diverse stand structure attributes and diverse micro topography can be considered old growth forests. In general, old growth forests are contiguous tracts of forest land that have representation from multiple age and species classes with variegated canopy cover and stand structure. In the coastal temperate rainforest, old growth stands are generally those stands where the primary canopy trees are greater than 250 years old.

Old growth forests provide a vast array of ecosystem services and are associated with a number of social, ecological, economic, and intrinsic values. The list of ecosystem services and associated values provided by old growth forests includes but is not limited to the following: Carbon sequestration and storage values, water quality values, air quality values, wildlife and plant habitat values, ecosystem resilience values (including natural disturbance resistance), market economic values, and community/cultural values.

Old growth forests are currently managed as renewable resources under Provincial forest management policy with the presumption that young and mature forests of today will eventually develop into stands with the characteristics of old growth forests in the future. Forest ecosystems are increasingly succumbing to pressures posed by pests, pathogens, and abiotic natural disturbance and climatic changes are exacerbating the pressures on forest health from pests, pathogens, and natural disturbance events in BC. Given the drastically increased risk of stand replacing events in the future, it is no longer reasonable to assume that young and mature forests of today will develop into stands meeting old growth characteristics under current Provincial forest management policies. Old growth forests must now be considered a non-renewable resource. Further, as climate change continues to negatively impact forest ecosystems in BC, old growth forests will be increasingly important in buffering impacts, creating ecosystem resilience and disturbance resistance.

High value non-renewable provincial resources, such as old growth forest, must be afforded reasonable protection from destruction and degradation. While it may be unreasonable to remove all stands meeting old growth criteria at this time from the Provincial Timber Harvesting Landbase, it is necessary to protect a greater proportion of existing old growth forest in BC from harvest. Harvesting of old growth forest should be dramatically reduced to reflect the increased value of ecosystem services in the future under changing climatic conditions and to ensure the representation of some old growth forest stands on the landbase in the future. Future Timber Supply Review processes and resulting AAC determinations should acknowledge the high values associated with old growth forest and out-positions should be placed on AAC determinations such that



limitations and restrictions are set for the proportion of harvested timber that can originate from old growth stands.

Old Growth Forest Ecosystem Services and Associated Values

Carbon Sequestration and Storage: Old growth forests are crucial stores of carbon by way of forest soils and vegetative material. The assertion that old growth forests become sources of carbon as they age and begin to decay is based on carbon accounting that fails to recognize the immense carbon storage capacity of undisturbed forest soils, among other faulty assumptions.

Water Quality: Old growth forests contribute to the proper ecological functioning of hydrological systems. Productive old growth forests, specifically those of valley bottom ecosites, are particularly important in maintaining water quality throughout a watershed. The body of scientific knowledge on the topic overwhelmingly concurs that old growth forest ecosystems help keep slopes intact and prevent soil erosion, as well as shade small streams and seepage features such that water temperature and flow rates are regulated throughout a watershed.

Air Quality: Old growth forests play a significant role in maintaining air quality due to high rates of evapotranspiration and photosynthesis which serve to purify the air and regulate local climate conditions. When old growth forests are harvested using clear-cut harvesting methods there are immediate impacts to local air quality through the release of carbon dioxide from forest soils and decomposing coarse woody debris. Rates of carbon dioxide release from soil and coarse woody debris are increased as a result of clear-cut harvesting due to increased solar radiation to the site and subsequent increases in local temperature.

Wildlife and Plant Habitat: Old growth forests provide high quality habitat for an abundance of wildlife and plant species. Rare plant and animal species are often found in old growth forests due to the diversity of habitat available in these stands and the increased chance for survival of specialist organisms that this diversity brings.

Ecosystem Resilience (including natural disturbance resistance): Old growth forests are highly resilient in the face of ecosystem pressures due to biotic or abiotic stressors such as pathogen outbreaks or extreme wind events because of the high degree of biological diversity present in these stands. Old growth stands have high genetic diversity among tree, plant, and fungi species as well as among insect and animal species. Genetic diversity is the most important factor in determining the degree to which an ecosystem can adapt to changes in climate and/or recover from disturbance events. Second growth forests are often lacking in genetic diversity, particularly among tree species, which makes them more susceptible to stand replacing disturbance events and decreases the likelihood of ecosystem recovery following a disturbance. Old growth forests are more resistant to natural disturbance events such as insect outbreaks and wildfire events due to the heterogeneous nature of the stand species composition, genetic diversity, and stand structure attributes. For example, the presence of multiple tree species of different ages and with differing structural attributes translates to a greater likelihood that some trees may not succumb to a given insect or disease outbreak or that some sections of a stand may not succumb to destruction by a wildfire event.

Market Economic Values: Market economic value derived by forests goes far beyond timber in the global economy. Ecological and traditional tourism and non-timber forest products industries are just a few examples of market economic values that can be derived from standing old growth forests. Almost all market economic values associated with old growth forests are mutually exclusive with clear-cut harvesting of old growth. That is, if the old growth forests are cut down to yield economic benefits of the timber most other non-timber economic benefits that could be derived from the stand are forgone.



Community & Cultural and Intrinsic Values: Old growth forests are inextricably linked to the culture and spirituality of Indigenous groups in BC and these forests are inherently important to Indigenous and non-Indigenous communities alike. The temperate rainforests of BC are globally unique in terms of biological diversity and abundance; with this wealth comes a global responsibility to protect the values present in BC forest ecosystems. Old growth forests, particularly rich and productive valley-bottom ecosites, are integral to the preservation and continuity of biological diversity in BC. In order to uphold our global responsibility to protect the biodiversity of BC old growth ecosystems, we must make reasonable efforts to identify and protect existing old growth forests.

Recommendations

It is no longer reasonable to consider old growth forests in BC as a renewable resource. As such, measures to protect the old growth forest existing on the landbase today from harvest must be enacted. Under current Provincial forest management policy, the majority of BC's forests are managed at relatively short rotations that do not allow for stands to develop and achieve old growth forest characteristics. Young and mature forests of today will be at increased risk of stand replacing natural disturbance events in the future and there is a high degree of uncertainty that these stands will live to mature into old growth stands.

BC forest policy reform recommendations relating to the management of old growth forest are as follows:

- Limit the proportion of harvested timber that can originate from old growth forest stands through cut partitions associated with future TSR AAC determinations in order to protect the benefits accrued from them.
- Reduce AAC levels to reflect uncertainty relating to increased potential forest losses due to heightened levels of natural disturbance in the future
- Invest in incremental silviculture on the landbase including spacing treatments, pre-commercial thinning, and commercial thinning in order to increase timber value and volume yields from second growth stands
- Improve second growth forest management and harvesting systems from both economic and ecological perspectives in order to improve BC's competitive advantage in the global forest economy of the future (such as incentivizing investment in specialized harvesting and manufacturing infrastructure.)
- Phase out the obsolete BC Timber Sales program which has demonstrated failure to manage the public forests of BC in a sustainable manner and develop a new method of benchmarking the market pricing stumpage system for the purposes of adhering to the Softwood Lumber Agreement

Thank you for the opportunity to engage on the value and importance of old growth forest management in BC.

Sincerely,

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