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Dear Garry Merkel and Al Gorley,  
via email address [oldgrowthbc@gov.bc.ca](mailto:oldgrowthbc@gov.bc.ca)

**Re: Old Growth Strategic Review**

Pass on my congratulations to the current government for initiating this old growth strategic review. The government's willingness to improve the objectives and practices with respect to old forests is very much appreciated. Implementing this review and engagement demonstrates a recognition that resource management is in evolution.

Current Forest Ecosystem Health Status:

Past forest management approaches have not sustained healthy ecosystems within natural ranges of distribution, nor have they maintained species abundance and species dispersal within natural ranges. As such, past approaches have contributed to BC's ecosystems becoming less healthy:

- While B.C. is the most bio-diverse province in Canada, past and current practices have contributed to BC also being the home to 1,807 species that are currently at risk of extinction<sup>1</sup><https://www.cowichanvalleycitizen.com/opinion/sonia-furstenau-column-b-c-government-needs-to-step-up-to-save-endangered-species/>;
- Past and current practices have contributed to some wildlife species in BC declining in numbers and to other species becoming more prevalent, and the habitat for some wildlife species disappearing (especially species

requiring old forest attributes or large un-fragmented tracts of forest;

- We appear to be in the midst of a human-caused sixth mass extinction, with plant and animal species disappearing faster than they have for millions of years.<sup>2</sup>[https://www.theguardian.com/environment/2017/jul/10/earths-sixth-mass-extinction-event-already-underway-scientists-warn?mkt\\_tok=eyJpIjoiTIRZM01EazVaRFF6WWpoayIsInQiOiJCL2EyWnlWOVRja0M3WjJaTms4SlhVbzVFUTNlYmYwZVlvRUxhamlyY25kMis4RldldE9wVfwwTDBXZlVHUwVKTEZHbTdVYUUVhcXdXMUd2ZlplVd015ZFNCRmthczRpbUNGMUQ4N0Z5MWdyUFNDZFcyczg5cTdqR3JQbnkyVnRsNlZSl0%3D](https://www.theguardian.com/environment/2017/jul/10/earths-sixth-mass-extinction-event-already-underway-scientists-warn?mkt_tok=eyJpIjoiTIRZM01EazVaRFF6WWpoayIsInQiOiJCL2EyWnlWOVRja0M3WjJaTms4SlhVbzVFUTNlYmYwZVlvRUxhamlyY25kMis4RldldE9wVfwwTDBXZlVHUwVKTEZHbTdVYUUVhcXdXMUd2ZlplVd015ZFNCRmthczRpbUNGMUQ4N0Z5MWdyUFNDZFcyczg5cTdqR3JQbnkyVnRsNlZSl0%3D)

Even though forest management objectives and practices have changed (improved) somewhat over the years and decades, these negative forest ecosystem results have resulted. This is because changes (improvements) are often reactive – long after problems and consequences are identified. In addition, changes in resource management objectives are often restricted or limited in the interest of reducing the negative economic impacts to corporate activities and to reduce the compensation government must pay to corporations. As such, past changes have often been limited to making as little change as possible with the hope that maybe, quite possibly, there is a chance the value of interest will be protected or saved.

### What Needs To Happen At The Strategic Level:

As always, the expectation that the objectives adopted at this time should be adapted, modified and improved as better science (information) becomes available should apply. But, rather than doing as little change as deemed necessary, with the intent of increasing or ratcheting up the measures taken to protect old forest characteristics, it would be wise for government to adopt a precautionary approach that overly protects and retains the supply of old forests of varying structures, qualities and distribution to sustain healthy ecosystems over time. This precautionary approach is all the more important due to the negative cumulative impacts of past and current harvesting, expanded access, the effects of climate change, the extended time periods necessary to recruit and recreate old forests, and the recognition that it may never be possible to recruit or recreate some old forest types nor the quality characteristics these forests

currently contain – especially as these forests were often established during an era that had different climate than we have today.

### An Assessment Of How We Got To The Current Situation:

The long history (over 500 years) of government / industry governance has permitted decisions to largely be biased to the short-term benefit of corporate interests – often at the expense of the public's interests. The forest industries that benefit from this corporate bias have done well to bias the government decision making process, including the oversight provided by professional associations such as the ABCFP.

1. Changes must be incorporated to remove the bias that works to the benefit of the corporate interests at the expense of the public's interests. This is especially important for you to consider in developing a strategy to better maintain and sustain quality old forest.
2. Ideally, you would scrap the "forest" tenure system and place the management of public forests into the hands of public bodies that function with a priority of conserving forests for their intrinsic values and essential ecosystem services.

For many decades, the trend is to reduce the corporate dominance and bias in management decisions, governance and professional oversight. Another trend is that of respecting many more values than just the harvesting of trees. I appreciate and support these trends, and request you to make changes that are consistent with these trends.

3. The Association of BC Forest Professionals (ABCFP) have been resisting these trends due to the corporate influence within their membership. Changes must be made to remove the corporate bias from the professional oversight of the ABCFP.

## Changes For Old Forest To Implement:

4. Forest objectives must be established to ensure the quantity and quality of old forest and mature plus old forest is maintained within the natural range of variability.
5. Landscape Unit Boundaries that have been informally in use throughout the province in recent years must be formally established (if not already formally established);
6. Old forest objectives must be formally established at the Natural Disturbance Type, Biogeoclimatic Zone, Subzone, and Variant level with in each Landscape Unit.
7. The old forest objectives must include objectives for maintaining interior forest conditions;
8. Old forests assumed to meet the old forest objectives must be spatially identified and conserved;
9. “Mature plus old” seral objectives must be simultaneously established to ensure more than enough mature forest exists to ensure the sufficient recruitment of old forest. The quantity of mature plus old forest must be sufficient even after all disturbances such as fire, insect and disease take place upon the landscape;
  - a. Seral objectives must be established to ensure the area, quality and variety of “old” and “mature plus old” forests exist within the natural range of variability. The natural range of variability has been well described by the high biodiversity option in the Biodiversity Guidebook (1995), unless better information has since become available;
10. Some science suggests old forest targets can be drawn down to 30% below naturally occurring levels for a limited time period without causing serious degradation to the health of ecosystems. As such, it may be acceptable for the amount of old or mature plus old forest to be up to 30% below naturally occurring levels for limited periods of time;

11. Area summaries, including those presented in timber supply analysis, must clearly denote the legally harvestable land base. The current definition of timber harvesting land base (THLB) under-represents the forest area that is at risk of being changed or damaged by harvesting. The current definition of timber harvesting land base (THLB) also over-represents the area of forest that is protected from future man caused changes. Denoting the legally harvestable land base will help clarify and correct these misleading messages.
12. The objectives for guiding the amount of quality old forest that should be maintained should be based on the total area that would be forested had it not been for human activity. Please note that the area reported as forest in your Old Growth Forests Backgrounder material appears to under-represent the area that use to be forested (especially on Vancouver Island).

To assist you with understanding and making the above note changes, I provide additional detailed reflections as appendices (5 Appendices are included below) to this input.

Yours truly,  
Doug Beckett

#### Appendix 1

##### **Benefit of spatially identifying the old growth being maintained as compared to a-spatial old growth;**

Over a longer time horizon, all landscapes for which our desire is to optimize both the volume harvested and the benefits derived from old characteristics will require a spatial approach. Conversely, the non-spatial approach of specifying old forest objectives will result in the harvest of less volume over time and the realization of less benefits from old characteristics than could be optimally obtained.

Spatially defining old forest, as compared to using an a-spatial old forest approach, will be less costly, less time consuming, more accountable, less open to abuse, and will be less expensive to apply Compliance and Enforcement.

As such, all old forest being maintained must be spatially defined.

Under a-spatial approaches, licensee's will still produce a 'back-room spatial retention and recruitment plan' in support of their due diligence in managing for old characteristic benefits. It only makes sense that such spatial information that guides resource management decisions be open, transparent and available to the public. Even better, these spatial approaches should be developed by public bodies.

The review and comment phase will be more meaningful with these spatial plans. Providing this spatial detail will result in less anxiety and scepticism from individuals reviewing the proposed activities

When considering the quality of our forest inventory in relation to identifying old characteristics, our limited knowledge of old characteristics, and our limited understanding of species and organism reliance upon old characteristics, an open process would likely capture knowledge from others which could be used to improve upon the old growth management strategy. In addition, by spatially defining the old forests we are able to ground verify and use real life observations which may not be accurately reflected in the inventory to select the best of the old forest for conservation.

Future planners will benefit from improved documentation provided by the spatial plans and their objectives and assumptions. Localized knowledge and expertise will be maintained as planners are replaced by new planners.

## Appendix 2

### **Importance of interior condition old forest**

The interior old forest condition (along with the Antique forest condition) is likely on the verge of being lost - possibly forever. This forest condition is critical

habitat as many species and organisms require interior old forest conditions for their existence.

The non-spatial approach provides no mechanism to ensure an adequate portion of the old-growth is maintained as large patches, is appropriately distributed, is of appropriate quality or provides adequate connectivity.

This is especially of concern in areas of the province where most of the forested area is considered suitable and accessible to harvesting. As this is where the old seral objectives are most likely being comprised of narrow riparian areas, small wildlife tree patches, and narrow bands of high elevation forests.

### Appendix 3

#### **Importance of simultaneously establishing “mature plus old” seral objectives to be applied at the Natural Disturbance Type, Biogeoclimatic Zone, Subzone, and Variant level with in each of these Landscape Units**

The old seral objectives set out in the Forest Practices Code of British Columbia Biodiversity Guidebook, September 1995 were reliant on the simultaneous management of “mature plus old” seral objectives. The ability to maintain biodiversity and functioning old forests of any quality is placed at significant risk if the simultaneous management of “mature plus old” seral objectives are not included in the old growth protocol.

### Appendix 4

#### **The importance of the precautionary principles**

The Association of British Columbia Forest Professionals “Managing for Species at Risk: What are a Forester’s Professional Responsibilities?”, February 2003 states the precautionary principle as: “. . .due to the fear of irreversible consequences, the test of due diligence should shift from ‘demonstrate it’s harmful before you stop’, to ‘demonstrate it’s okay before you start’”.

Considering old forests took many decades and on occasion centuries to become their existing condition. And it is unlikely all old forest conditions (especially antique forest conditions) can ever be recreated once lost, it is imperative to ensure natural levels of old forests will be maintained.

Of the various forest conditions, early seral forests are the easiest and most likely for us to recreate. Species relying on these conditions are not likely at much risk, as we can likely provide the habitat they require within a relatively short time period. The immature and mature forest conditions take a little more time to recreate, but with a little planning we can ensure adequate natural or man caused disturbance occurs to ensure adequate recruitment to immature and mature forest conditions.

Ensuring we maintain adequate representation of old forest, along with adequate area of mature forest for potential recruitment to old is imperative to meet the ABCFP Professional Responsibilities. Until better science indicates otherwise, it is best to manage old forest within the natural range of variability.

The precautionary principle presented in the ABCFP document extends beyond species formally at risk - to any specie/ecosystem/biological diversity at risk. In support of this interpretation, the following excerpts from the ABCFP "Managing for Species at Risk" paper are presented:

***Professional responsibilities:*** *The focus of modern professional forestry practice is to manage forests as ecosystems, sustain biological diversity, and manage forests within their natural range of variability.*

***In fact, the lack of protection and recovery of species at risk may be a major constraint on future forest harvesting.*** *With that in mind, it is the responsibility of every forester to ensure species at risk are managed, and that as few species as possible get on the threatened or endangered lists owing to forestry practices.*

*A professional forester's responsibility is not waived by the existence of legislated or policy direction.*

*Although biological diversity is beyond the scope of this paper, the concepts presented herein may have application to the management of resource values other than species.*

*Although this paper focuses primarily on mammals, the full range of species at risk also includes plants, birds, amphibians, reptiles, insects and micro-organisms.*

I am gravely concerned that without better objectives for maintaining old forests, that harvest forecasts will over-estimate the volume that can be harvested sustainably during timber supply reviews. Especially as timber supply reviews will falsely assume the loss of old forest over time is acceptable - until the ABCFP, environmental organizations or others can raise the public awareness.

There is a problem in that the ABCFP does not appear to monitor nor enforce its members to follow the precautionary principle. Nor does the ABCFP appear to actively educate its members of the precautionary principle.

1. Government should ensure the ABCFP promotes to its membership the importance of the precautionary principle.

## Appendix 5

### **The importance of maintaining old forest within the natural range of variation**

The location, size, contribution to connectivity and old characteristic representation becomes less critical as the area retained approaches the maximum area and quality that occurs naturally, as the required combinations are more likely to happen by happenstance. In other words, it is easier to be lucky if you are provided more chances to get lucky. The less the area being retained, the less the opportunity that the required combinations will occur by happenstance.

Thus, where the target retention is less than the maximum area and quality that occurs naturally, a spatially explicit strategic approach may slow down the loss of benefits obtained from areas with old characteristics. Or another way of looking

at this, is for the same permitted loss of old characteristic benefit, the level of harvest could likely be greater than if a non-spatial approach is taken.

The following is an assessment of the social, economic and environmental balance of the proposed old growth protocol:

Forest Practices Code of British Columbia Biodiversity Guidebook, September 1995 is possibly the first time the natural range of variability was used as a benchmark for establishing seral stage objectives across BC landscapes. Reductions below the natural range of variability for old forest were implemented during the drafting of the Biodiversity Guidebook, resulting in the following:

- **High biodiversity emphasis** old forest targets were set 34% below the natural range of variability ( $100\% - ((100\% - 12\%) * 75\%) = 34\%$ ), and mature forest targets were set 25% below the natural range of variability for forests composing 10% of the timber harvesting land base;
- **Intermediate biodiversity emphasis** old forest targets were set to 56% below the natural range of variability ( $100\% - ((100\% - 12\%) * 50\%) = 56\%$ ), and mature forest targets were set for 50% below the natural range of variability for forests composing 45% (plus or minus) of the timber harvesting land base;
- **Low biodiversity emphasis** old forest targets were set to 56% below the natural range of variability ( $100\% - ((100\% - 12\%) * 50\%) = 56\%$ ), and mature forest targets were set to 75% below the natural range of variability for forests composing 45% (plus or minus) of the timber harvesting land base.

In an attempt to alleviate fear of large reductions to the AAC in a few jurisdictions in the province, the government announced a 6% cap to the timber supply impacts associated with the implementation of the Forest Practices Code - of which the Biodiversity Guidebook was a part. It also became permissible to reduce the old forest targets in areas with a Low biodiversity emphasis to 1/3 of the target with in jurisdictions where it would alleviate the AAC from being immediately reduced by more than 10%. This has the effect of reducing the old

forest targets to 85.3% below the natural range of variability ( $100\% - (((100\% - 12\%) * 50\%) * 1/3)) = 85.3\%$ ).

In light of this provincial timber supply cap, the Chief Forester provided direction that the “mature plus old” forest targets not be applied in timber supply analysis if it resulted in reductions to the 200+ year harvest forecast. As a result many timber supply reviews in BC have not included the “mature plus old” forest targets. This policy direction is potentially supporting existing AACs greater than would otherwise be considered sustainable.

It is interesting to note that the provincial AAC and the Timber Supply Review projected Provincial long-term harvest level increased substantially since the implementation of the Forest Practices Code of British Columbia Biodiversity Guidebook in September of 1995 (at least until recent reductions following uplifted AACs in response to the mountain pine beetle). Even so, the seral targets are continuing to be reduced below naturally occurring levels to satisfy political aspirations of the day, even though the science indicates the seral targets need to be increased.

Weakening biodiversity as a result of political aspirations - examples of weakening biodiversity as a result of political aspirations are:

1. it is apparent from AAC determinations made by BC’s Deputy Chief Foresters that increasing AACs for a jurisdiction is acceptable even if it results in further reducing the old forest targets in areas of Low Biodiversity emphasis.
2. it appears the proposed old growth protocol is setting the stage for areas of High and Intermediate emphasis to be further reduced to 86.8 and 91.2% below the natural range of variability.  
 $(100\% - (((100\% - 12\%) * 75\%) * 20\%)) = 86.8\%$  and  
 $(100\% - (((100\% - 12\%) * 50\%) * 20\%)) = 91.2\%$

Recent science indicates managing to levels of 30% less old seral than occurs naturally might be acceptable within some ecosystems. As such, it is advisable to rewrite the proposed old growth protocol.