

Report on Personal Opinions Regarding Old Growth Forests: Old Growth Protection

Prepared for: Government of British Columbia,
Ministry of Lands, Forests, Natural Resource
Operations and Rural Development

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1.0 Introduction: Personal Information and Experience

- I am a Professional Forester, graduated from University of British Columbia in 1962. My Registration Number is RPF #481.
- I live in Terrace, BC and have practiced forestry in this northwest part of our Province since 1962.
- I operate a forestry consulting business, Philpot Forestry Services (1977) Ltd., and have been a forestry consultant since 1969.
- My experience includes the full range of field forestry operations, for numerous companies.
- For the past eighteen years, my work has been primarily for First Nations—mainly Gitanyow and Gitxsan First Nations—in preparation and implementation of Land Use Plans (LUP) and assisting the First Nations in consultations with Forest Licensees, BC Hydro, and various mining and LNG companies regarding their implementation of indigenous LUPs.
- Since 1962, I have worked throughout northwest BC and participated in the liquidation of old growth forests. Increasingly over the last twenty-five years, I have begun to realize the value of and growing threat to old growth forests, and would like to present my opinions to the Province to assist in better management and protection of the remaining old growth forests.

2.0 Views Regarding Old Growth Forests: Values and Management

2.1 The term “old growth” means to me:

- Primarily old forests and single trees, generally greater than 250 years, but not necessarily that old depending on forest structure, species, biogeoclimatic classification.
- Old growth forest structure is generally:
 - Uneven aged
 - Uneven canopy development
 - Large trees, understory trees, mixed species – generally shade-tolerant trees
 - Numerous snags, windfalls, decadent trees
 - Thick forest floor
 - Inhabited by wildlife species that prefer or require habitats provided by older, shade-tolerant, decadent trees

2.2 Values of Old Growth Forests

In my opinion, based on my lifetime education and personal observation, the most valuable functions of old growth forests, listed in order of importance, are:

- **Support of biodiversity.** Old growth forests support higher levels of biodiversity than younger forests, fewer large animals such as moose, deer, bear, mountain lion etc. but more species of invertebrates, insects, lichens, mosses, fungi etc.
- **Storage of carbon to mitigate climate change.** Within old forests, in the established vegetation of the forests, the forest floor, and the soils supporting the forest, far more carbon has been sequestered and stored over time than is present in younger, growing forests. Young forests

may grow faster than the already established old forests but contain less already-sequestered and stored carbon, and will take many decades to sequester and store the carbon that already exists in the current old forests.

- **Regulate water storage and flow.** Old forests regulate water storage and flow more efficiently (without industrial disturbance) than do young forests that have been disturbed by road and pipeline construction, timber harvesting, land clearing etc. Within intact old forests, ground water has not been intercepted and diverted, siltation and landslides have not been caused, streams, lakes, wetland vegetation has not been removed; water flow and hydrologic regimes are still intact and streams, lakes, and wetlands remain as properly functioning water bodies.
- **Old forests continue to support traditional, spiritual, and cultural uses.** Old forests, including the streams, lakes, wetlands contained within the forests, continue to provide spiritual values, food and medicinal plants. These values will be **lost** during disturbance of old growth forests and not regained for many decades, if ever, through replanting and development of younger forests.

2.3 Risks to Old Growth Forests

- In my opinion, the greatest risks (currently) to old growth forests, and which are synergistic in their impacts, are **climate change, logging, and other industrial activity**. Climate change presents the greatest risk, but climate change is **driven and exacerbated by** logging and other industrial activity worldwide.
- Climate change presents risks to old growth forests through increased incidence and severity of wildfires and insect attacks, and creation of negative impacts to the ability of forests to adapt or migrate to keep pace with changing temperatures and moisture regimes. Old forests **may not** be able to successfully adapt to climate change and may be replaced by younger forests of different species including brush and grasslands. In any case, climate change may create negative changes to the old forests that will reduce and modify existing biodiversity values, create loss of existing stored carbon and thus accelerate climate change, result in deterioration of water quality, create drought conditions and loss of water quantity, and result in loss of existing cultural, spiritual, subsistence, medicinal, and cultural heritage values.
- Timber harvest and other industrial developments pose a **very high risk** to all old growth forests. Old growth forests that are harvested or otherwise lost to industrial land clearing will **never** be allowed to develop over time to regain old growth structure and values. They will continue to be re-harvested on short rotations or re-cleared for other industrial projects.
- Low elevation, valley bottom old growth forest ecosystems are at **greatest risk** to ecosystem function and loss, as these are the richest growing sites, most productive, and most economical to develop for harvesting or other industrial uses. These old forests are forest ecosystems that support ecological values and provide ecological services for human and wildlife species that will not be present in younger replacement ecosystems. Many of these old growth, low elevation, valley bottom ecosystems are now effectively extinct and will never be allowed to develop again over time.
- Environmental, social, cultural, and economic interests are all important, but social, cultural, and economic interests are all **dependent upon** environmental health and values; social, cultural, and economic interests are **supported by** the environment and develop as a result of

environmental conditions. Environmental health and existing functional ecosystems support and allow/control development of social, economic, cultural interests; they are not equal in value. A healthy and functional environment is **absolutely necessary** for social, cultural, and economic development; these values cannot develop or survive without a healthy environment.

2.4 Proposed Management of Old Growth Forests

- Managing of old growth forests must include retention of large and connected areas of old growth forest throughout all landscapes.
- The term “*managing*” is frequently considered as a part of harvest operations. However, managing does not mean harvesting, as opposed to retention and protection of old growth. Protection and retention is a legitimate practice terminology and is a crucial part of managing forests at a landscape level.
- Development of Land Use Plans is crucial to land management and must be the initial step of land management.
- Land Use Plans must be long-term (150+ years) and landscape level, include planning for all land within the landscape, not just industrial forest land, and be focussed on long-term sustainability for future generations.
- Land Use Plans must focus as first priority on what land and ecological resources need to be protected and sustained before there is any planning for industrial, recreational, agricultural, or other disturbances or activities.
- Land Use Plans must be ecosystem-based.
- Conservative science-based research indicates that:
 - 1) For most species, presence of less than 30% of the total habitat of any given ecosystem within a given landscape equates to **high** risk to function of that ecosystem within that landscape.
 - 2) For most species, presence of greater than 60% of the total habitat of any given ecosystem within a given landscape equates to **low** risk to the function of that ecosystem within that landscape.
 - 3) Ecological risk assessment evaluates the chance that management activities will have a significant negative impact on ecological integrity. Risk to ecological function increases as the amount of natural forest decreases.
- Retention for protection and management of old growth forest ecosystems must include all biogeoclimatic zones and all levels of site productivity, not just focussed on retention of operationally inaccessible and lower economic value forests.
- Old growth forests are at the highest risk of forest ecosystems and must be managed to retain old growth forests at a risk to ecosystem function that is no greater than medium risk (45-50% retention of total habitat) and preferably at low risk.
- Forests retained for protection and management of old growth ecosystems must, to the greatest extent possible, be selected to provide a multi-functional forest at the landscape level. For example, old growth ecosystems representing moderate-to-rich valley bottom sites could be selected to protect floodplains, water quality and hydrology, high value fish and wildlife habitats along riparian areas, protect cultural sites, provide connectivity through valley bottoms and upslope toward alpine ecosystems, and serve as Ecosystem Networks, Water Management

Units, and Carbon Storage Units. Old forests can provide multiple values across the landscape, as well as serving the purpose of old forest ecosystems representation, and contribute towards sustainability of resources for future generations to the greatest extent possible. That is the art and science of landscape-level planning.

- In order to connect currently fragmented old forests, younger forests not presently possessing old growth characteristics can be included with the retained old forest to provide connecting links to the old forest ecosystems and be allowed to mature over time to develop old forest characteristics and connectivity.

3.0 Summary

- I do not believe that every old growth tree remaining throughout British Columbia need to be preserved.
- I do believe that forest management in BC should have a high priority and emphasis on identification and designation of sufficient representative old growth forests throughout BC to protect, conserve, retain, or re-establish over time, old growth forests that will preserve and retain functional old growth forests at a no lower than moderate risk to ecosystem function and will represent all biogeoclimatic zone ecosystems from highest to lowest growth potential.
- Retention of old growth forests should, as a priority, focus on valley bottom, low elevation ecosystems, as they are the richest growing sites, present the lowest operating costs, provide the best timber stands, and are therefore currently at the greatest risk to ecosystem function from industrial development.
- To be retained, old growth forests must be selected as part of long-term, landscape-level plans that provide functional Land Use Plans throughout all watersheds and upslope to alpine tundra.

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