Unit 103 – 4622 Greig Avenue, Terrace, British Columbia, Canada, V8G 1M9
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Attn: engagefrpa@gov.bc.ca July 15, 2019

Re: FRPA submission providing comment on British Columbia's Discussion Paper: Forest and Range Practices Act Improvement Initiative.

Thank you for taking the time to review our comments and recommendations relating to the improvement of FRPA – 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.

Climate Change and Resilient Landscapes:

Forest practices are currently a large source of greenhouse gas emissions in the province that are not being incorporated into climate goals and action plans. The CleanBC climate strategy neglects to account for the carbon emissions from forests (and wildfires). Natural forests sequester carbon for many decades. There is an immediate benefit and importance to protecting B.C.'s old growth forests and halting deforestation of carbon rich forests, in particular coastal temperate rainforest, wet subalpine, and inland temperate rainforest.

The following list of steps should be taken to more sustainably manage forest resources, specifically forest carbon:
• Develop and implement a strategy for forest carbon stewardship.
• Broaden core protected areas into a climate conservation network.
• Reduce energy consumption and increase its efficiency, conserve existing natural forests, restore/rehabilitate disturbed or degraded forests.
• Reduce the allowable annual cut (AAC) to sustainable levels.
• Do more partial cutting and less clearcutting, especially in primary forests.
• Manage more commercial forests on extended rotations.
• Reduce the amount of slash burning.
• Continue planting trees to remove CO2 from the atmosphere in the future.
• Care for the forests that we still have and avoid converting them to alternative uses.

Wildfire Risks:

Strategic inventory and mapping of fuels surrounding communities and associated fuel management programs are required throughout the northwest portion of the province. Increased levels of deciduous stand retention and recruitment near communities would be

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a possible management approach. Spacing and thinning of high density stands in proximity to communities would be another possible management approach.

Landscape-level Planning:

Comprehensive landscape level inventories for all values managed under FRPA should be developed, implemented, and maintained.

Information on the condition and quantity of fish habitat is of particular importance in the landscape-level planning process. The following information discusses how habitat pressure indicators and thresholds established under the federal Wild Salmon Policy should be integrated into the Timber Supply Review process in order to better manage for fish and aquatic values, including species at risk.

Integrating Wild Salmon Policy Habitat Pressure Indicators into the Timber Supply Review process under FRPA:

Wild Salmon Policy Habitat Pressure Indicators Associated with Forest Development:

Habitat pressure indicators and associated thresholds relating to fish-forestry interactions have been established by the federal Wild Salmon Policy Habitat Working Group with additional work undertaken by the Pacific Salmon Foundation Salmon Watersheds Program, Pacific Salmon Commission Habitat and Restoration Technical Committee, and Pacific Fisheries Resource Conservation Council.

Habitat pressure indicators relating to forest development activities have been grouped into the following ten categories (specific measurable indicators for each category are cited in brackets):

- Human Development Footprint (Total Land Cover Alteration; Linear Development Density)
- Hydrologic Processes (Forest Disturbance; Equivalent Clear-Cut Area)
- Fish Passage/Habitat Connectivity (Properly Functioning Stream Crossings; Stream Crossing Density)
- Linear Developments (Road Density; Surface Erosion; Linear Development Density other than roads)
- Vegetation Quality (Riparian Disturbance; Insect and Disease Defoliation)
- Water Quantity (Instream Flow; Flow Hydrology; Licensed Water Use Permits)
- Key Salmon Habitat Quantity (Area of Spawning Habitat; Channel Width to Depth Ratio; Reduction in Range; Change in area, distribution, and types of tidal and submerged habitats and litter; % of Estuary Area Modified; Accessible Spawning Habitat)
- Water Quality (Stream Crossing Density; Spawning area Water Quality; Temperature; Chemical Water Quality Index; Biological Water Quality Index; Change to load, distribution/movement patterns, settlement/resuspension rates, grain size of suspended or settled sediments; Change in extent of mud flats, marshes, banks; Total bacterial toxins entering the estuary, nutrient/oxygen levels; log boom sites; Change in median freshwater input; Change in seasonality of freshwater input; Total Suspended Sediments)

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- Large Woody Debris (Presence of Large Woody Debris)
- Future Habitat Pressure Indicators (Proposed resource developments)

Table 1 outlines the various habitat pressure indicators and accompanying thresholds/benchmarks associated with each indicator, where thresholds have been established.

Integrating Wild Salmon Policy Habitat Pressure Indicators into the Timber Supply Review process under FRPA:

The BC Forest and Range Practices Act (FRPA) is intended to be a results-based legislative tool that encourages innovation in resource management while continually evaluating the effectiveness of the legislation in meeting objectives set out for the eleven values explicitly managed under FRPA.

The Timber Supply Review (TSR) process refers to the mechanism by which resource management decisions relating to forest values are evaluated and established. Specifically, the Timber Supply Review process determines the Allowable Annual Cut (AAC) for a given timber management unit, referred to as a Timber Supply Area. The TSR for each TSA determines the sustainable amount of timber that can be harvested from a given administrative unit annually. This determination of the sustainable AAC for a TSA must be based on sound information relating to the health and productivity of the forest (timber and non-timber forest values) as well as information relating to risks to the future health and productivity of the forest, such as those risks posed by climate change and the cumulative impacts of development pressure on the landbase.

Given the accepted correlation between forest development activities and the habitat pressure indicators identified in the Wild Salmon Policy (WSP), the next step toward integrating this knowledge into resource management decisions would be to include analysis of habitat pressure indicators (as identified in the WSP) in the Timber Supply Review for each Timber Supply Area.

In order to demonstrate due diligence in managing for fish and fish habitat, the Timber Supply Review process for each Timber Supply Area must include analysis of the status of each habitat pressure indicator identified in the WSP. Analysis of each habitat pressure indicator at the TSA level would produce a value that could be compared to established thresholds for the indicator. For example, the established thresholds for the habitat pressure indicator 'Road Density' are as follows:

- Road Density less than 0.40 km/km^2 is considered 'Low Risk', meaning fish habitat within the administrative unit under analysis (watershed, TSA, etc.) is at low risk of being negatively impacted by the effects of the habitat pressure indicator Road Density.
- Road Density greater than or equal to 0.40 km/km^2 is considered 'Moderate Risk'.
- Road Density greater than 1.2 km/km^2 is considered 'High Risk', meaning fish habitat within the administrative unit under analysis (watershed, TSA, etc.) is at high risk of being negatively impacted by the effects of the habitat pressure indicator Road Density.

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Fish-forestry interactions are present on the landbase and specific habitat pressure indicators relating to forestry have been identified in the Wild Salmon Policy (WSP). Further work building on the WSP has been conducted and has resulted in established thresholds or benchmarks relating to each of the habitat pressure indicators. Table 1 outlines each of the Habitat Pressure Indicators cited in the WSP and identifies established thresholds relating to each indicator (where thresholds have been established).

The scope of work for the Forest and Range Evaluation Program (FREP) could be expanded to include analysis of WSP habitat pressure indicators at the TSA level; this information could be shared between FREP managers and decision makers involved in the TSR process for each TSA, thereby informing the TSR process on the status of habitat pressure indicators associated with fish-forestry interactions on the landbase.

Analysis of WSP habitat pressure indicators within a Timber Supply Area at the time of the Timber Supply Review would enable resource management decision makers to make more informed decisions relating to acceptable harvest levels, given specific information about the relative health or status of habitat pressure indicators in relation to established thresholds.

Public Engagement in Planning Process:

B.C. government needs to engage communities that can share additional local perspectives and value priorities. Engaging early is important. Landscape level plans are a key place for inclusion and community engagement which will also help build public trust. There also need to be provisions that ensure these inputs are reflected back in the plans. There already exist a couple of models of public engagement for implementation in larger Land and Resource Management Plans that could be used for landscape-level planning. Namely, the Bulkley Valley Community Resources Board (in Smithers) and Kalum LRMP Plan Implementation Committee (PIC) (in Kitimat).

Resource Roads:

Roads and stream crossings present the greatest risk to fish and aquatic habitat of all forest development activities. The Federal Wild Salmon Policy established a number of Habitat Pressure Indicators and accompanying thresholds linking fish habitat to forest development activities. Habitat Pressure Indicators associated with resource roads are as follows:

- Linear Developments (Road Density; Surface Erosion; Linear Development Density other than roads
- Fish Passage/Habitat Connectivity (Properly Functioning Stream Crossings; Stream Crossing Density)
- Human Development Footprint (Total Land Cover Alteration; Linear Development Density)

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Habitat Pressure Indicators described in the Wild Salmon Policy and other work done by the federal Wild Salmon Policy Habitat Working Group, the Pacific Salmon Foundation Salmon Watersheds Program, Pacific Salmon Commission Habitat and Restoration Technical Committee, and Pacific Fisheries Resource Conservation Council should be analyzed at the time of Timber Supply Review and the condition/status of these indicators should inform the AAC determinations. AAC determinations informed by analyses of Habitat Pressure Indicators associated with fish-forestry interactions would better protect fish and water values on the landscape. For example, if a given watershed was already at capacity (or exceeding the threshold) for linear development that is concurrent with sustainability then a decision would need to be made to either deactivate some linear development or not build new road in the watershed until some other linear development could be reclaimed.

Under FRPA, resource roads must either be maintained or deactivated, however there is limited monitoring of road maintenance which means licensees have few incentives to deactivate roads. There is also limited data collected on deactivation of roads. Temporary roads should be deactivated but a lack of clarity in direction means many are not. Many resource roads are damaging to fish and fish habitat, in particular from sediment and unmaintained fish culverts. More direction to deactivate roads is needed (criteria is weak), particularly in areas where these have negative impacts on water quality, fish habitat and wildlife. Deactivation could also include planting of resource roads for future carbon sequestration and habitat restoration. Policies should also be developed to help minimize the development of new roads, give preference to using existing corridors, and set out road mitigation requirements.

Public Trust:

In order to be meaningful, plans and decisions must report back on how public input was taken into account. Communities should be informed about wild salmon values, drinking water and water quality impacts, wildlife habitat areas, species at risk, and recreation access in order to be able to effectively weigh in to the planning process. Of importance to include within FRPA, is an ability for the community to modify where forestry happens on the land base.

Forest Licensees should be required to share their operational plans with the community quarterly. It is important for stakeholders to know in advance of a cutting permit application where forest development activities are planned. Maps of proposed forest development activities at least four months in advance of any cutting permit application would be useful to help plan and assess any values at risk there may be from a community or conservation perspective.

Resource Values and Objectives:

FRPA sets out several management objectives, including to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity within riparian areas. However, not without “unduly reducing the supply of timber from British Columbia's

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forests"8. This constraint must be removed from all FRPA legal objectives and from the Government Actions Regulation (GAR). This has been a prohibiting factor to using existing tools (such as Fisheries Sensitive Watersheds and Wildlife Management Areas) and actually managing for these value components in a way that protects ecosystem values over timber.

The Federal Government developed, with agreement from multi-stakeholders, the Wild Salmon Policy that the B.C. Government has agreed to help implement. This is an important tool to incorporate into forest management. Habitat pressure indicators and associated thresholds relating to fish-forestry interactions have been established by the federal Wild Salmon Policy Habitat Working Group and others. Salmon habitat impact assessment analyses should be done for each Timber Supply Area and fed into the tenure review process every five years. The Timber Supply Review process evaluates a sustainable amount of harvest within a Timber Supply Area (TSA) that determines the Annual Allowable Cut. This review and determination must take into account habitat pressure indicators for each TSA. Integration of the Wild Salmon Policy into BC forest management should be done by way of including landscape (or TSA) level analyses of Habitat Pressure Indicators associated with fish-forestry interactions into the Timber Supply Review process and subsequent AAC determination. These analyses should also inform landscape-level plans and be a factor of decision-making in forest management.

Currently FRPA does not require licensees to address the cumulative effects of forestry activities on hydrology, fish passage, sedimentation, stream channels and fish habitat. The Wild Salmon Policy can play a role but we also need legal objectives to manage the amount and rate of development at the watershed level. A watershed level assessment (potentially part of the landscape level assessments recommended) could also help minimize the risks of development on fish habitat values by assessing and mitigating for the cumulative effects. There are also a few underutilized tools that could help improve protection of riparian areas and fish habitat. One of them is designating "temperature sensitive streams". The designation would require retention of riparian vegetation to provide shade and thermal buffering around streams. To date there were no temperature sensitive streams designated under FRPA (or MOE) despite both climate change impacting water levels and temperatures, and evidence that tree buffers prevent loss of stream functioning and fish habitat.

At the watershed scale, the GAR designation specific to fish habitat is the Fisheries Sensitive Watershed (FSW). Watersheds must meet the test of having significant fisheries values and watershed sensitivity. The designation in turn requires strategies within Forest Stewardship Plans although these are not required to be science-based and effectively monitored. The definition of fish habitat also needs to include and be updated to reflect the new Federal Fisheries Act. This designation is also underutilized, only having 14 designations since 2005, six of which were added in the past year, and a number of proposals awaiting approval. With the removal of the "unduly" clause referenced above, there should be more designations under these existing tools.

Climate and carbon are not yet included values under FRPA and there are no legal regulations pertaining to climate change. We recommend developing legal objectives for

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climate and carbon associated with forest development and integrating them into the Forest Planning & Practices Regulation and to the FRPA.

Oversight and Accountability:

There are gaps in monitoring FRPA effectiveness at the watershed level for fish/riparian values. There needs to be a robust monitoring system established so the government can assess how forest development activities are changing the condition of fish habitats and when the cumulative effects of development are putting fish habitats at risk.

1. Before approving operational forestry plans and before cutting or road permits are issued, require provincial decision-makers to determine whether proposed forest operations are consistent with:
a. maintaining and where necessary restoring healthy, fully functioning forest ecosystems that support ecological, social and cultural resiliency, and
b. the United Nations Declaration on the Rights of Indigenous Peoples.
2. Provide that statutory decision-makers may not approve an operational plan that proposes timber harvesting or road-building in an ecosystem that it is at high risk. High risk ecosystems must be defined to include:
a. Ecosystems in which spatially explicit old growth retention targets are not being met with forests of representative productivity.
b. Critical habitat of a species at risk or habitat necessary to meet provincial wildlife and habitat objectives.
c. If proposed logging would involve clearcutting in a domestic use watershed.
3. Fully implement any other FRPA-related recommendations in the 2018 Professional Reliance Review.

Thank you for the opportunity to provide feedback on British Columbia's Discussion Paper: Forest and Range Practices Act Improvement Initiative.

Sincerely,

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