



YESAB Executive Committee  
Yukon Environmental and Socio-economic Assessment Board  
Suite 200-309 Strickland Street  
Whitehorse, Yukon, Y1A 2J9

March 8, 2021

RE: YESAB Executive Committee Screening Report and Recommendation for Kudz Ze Kayah Project (YESAB File No. 2017-0083) and Federal Decision Bodies Referral for Reconsideration (YESAB File No. 2017-0083-47207).

Dear Executive Committee,

Thank you for the opportunity to submit comments on the Kudz Ze Kayah Project (hereafter 'Project'). We are submitting these remarks in our capacity as conservation scientists on behalf of Wildlife Conservation Society (WCS) Canada. WCS Canada is a national non-government organization of scientists conducting research on species and ecosystems to inform conservation decisions. Our role is to provide long-term, site-based, research and syntheses of science that inform policy and practice and that support the implementation of effective conservation measures. We do this by providing technical advice and by engaging relevant decision-makers at all levels, from local to federal. WCS Canada scientists have been working in Yukon since 2004 on land use and protected areas planning, land and water management, wildlife conservation research, and policy applications for conservation science. Dr. Hilary Cooke has contributed scientific expertise to land use planning and management, wildlife policy, and environmental assessments in Yukon since 2010. Dr. Justina Ray has several decades of science and recovery experience related to caribou in Canada, as well as impact assessment processes, including cumulative effects assessment.

**Although we have expertise in other areas related to this assessment process, we are focusing our limited capacity at this time on potential impacts of the Project on the Finlayson Caribou Herd (FCH) in particular, given the concerns that have been raised.**

The Executive Committee (EC) Screening Report and Recommendations (hereafter 'Report') for proposed Kudz Ze Kayah Mine finds the Project will have significant and adverse effects to the

Finlayson Caribou Herd (FCH) through habitat loss, disturbance, and displacement<sup>1</sup>. Their finding is based on the following circumstances: a declining population; limited habitat availability; and project overlap (both mine site and access corridors) with key habitat features, particularly for post-calving and rutting, and movement corridors between summer and winter range.

Despite the finding of significant adverse effects, the EC concludes these can be ‘eliminated, controlled or reduced’ through mitigation measures. For the FCH, the EC recommends: a program of seasonal monitoring; an oversight body for identification of risk and implementation of mitigation measures; and development of a long-term range management plan.

Following our careful review of the available materials, we have concluded that there remains insufficient information on the potential effects of the Project on FCH or the efficacy of proposed mitigation measures.

Although we agree that it is most unusual for the Federal Decision Bodies (FDB) to refer this case back to YESAB, we support this move. We agree in particular that the supporting analysis as to how impacts to FCH will be “eliminated, controlled or reduced” by the EC-recommended mitigation measures and how Kaska rights and interests were considered in the EC Recommendation for this Project to proceed are both inadequate<sup>2</sup>.

## **Baseline Assessment**

Regarding the sufficiency of information and analysis in the baseline assessment, we find:

1. **Insufficient or outdated spatial information on important habitat areas for FCH.** Based on the information presented we do not have confidence that the habitat models are accurate enough to identify important habitat areas or to evaluate the potential direct and indirect effects of the Project on FCH. As noted by the Proponent, the most accurate location data is from a satellite-collaring study however this information is of limited use as only 3 FCH individuals were collared and they were associated with the Nahanni herd during the study<sup>3</sup>. Locations from a VHF telemetry study are dated (1982-1986) and with low accuracy (estimated at 200m) so of limited value in identifying areas that are currently of high habitat value in any season. The most extensive location dataset is from aerial surveys. These data were used to evaluate the seasonal habitat suitability models, which involved comparison of caribou locations with 200-m accuracy with predicted habitat suitability within 25-m grid cells. The difference in resolution and low accuracy minimize the effectiveness of this evaluation. Finally, the expert-based habitat suitability maps rely on a Predictive Ecosystem Map that does

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<sup>1</sup> Yukon Online Registry (YOR) #2017-0083-2748

<sup>2</sup> YOR 2017-0083-47207

<sup>3</sup> YOR 2017-0083-0984

not differentiate among coniferous forest types or seral stages, which is critical for identifying highly-suitable winter habitat which is limiting for the FCH.

2. **Insufficient information on movement corridors/connectivity between late winter and calving periods, and post-rut and early winter periods.** The Project is located within/between the known general movement patterns of FCH between Pelly Mountains south of the Project area (calving, post-calving, and rutting life stages) and the Pelly River lowlands (winter range). Specific movement patterns and key corridors have not been evaluated or considered by the Proponent despite potential for impacts from the Project<sup>4</sup>.
3. **Underestimation of Project effect.** A Zone of Influence (ZOI) is used to assess indirect habitat loss due to caribou disturbance and displacement associated with anthropogenic footprint and activity. The Proponent applied a 3-km and 1.5-km buffer around the Project infrastructure and Tote Road, respectively, to estimate functional loss of late winter, post-calving, and rutting habitat. The scientific study referenced to support this buffer distance<sup>5</sup> reports varying disturbance distances up to 9-km depending on season, level of activity, and disturbance type. The actual disturbance distances for the proposed infrastructure and activities of this Project are unknown, but a more conservative estimate should be applied given the declining population status of this herd. To illustrate the uncertainty and potential underestimation of Project effect, an increase in the ZOI from 3 to 15-km increases overlap with moderately-high to highly suitable habitat from 4 to 29 percent for post-calving and 5 to 28 percent for rutting<sup>6</sup>.
4. **Insufficient assessment and consideration of cumulative effects.** The Proponent assumes that assessment of cumulative effects is unnecessary, given the spatial separation of wildfire impact to predominantly winter range and anthropogenic impact predominantly to spring, summer, and fall range<sup>7</sup>. A cumulative effects assessment is a systematic process of identifying, analyzing, and evaluating the cumulative effects of a proposed project and requires taking a holistic view of the region by looking at the overall impacts of all disturbances on the landscape, regardless of their occurrence spatially or temporally. Thus, any natural or human-caused disturbance that directly or indirectly affects the FCH during any season or life stage must be considered as part of a cumulative effects assessment of the Project.

To support a conclusion of less than 10% change in suitable habitat (which is the effects threshold set by the Proponent), the Proponent reduces the calculated area of human

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<sup>4</sup> YOR 2017-0083-226-1, YOR 2017-0083-227-1

<sup>5</sup> Polfus, J.L., Hebblewhite, M., Heinemeyer, K. 2011. Identifying indirect habitat loss and avoidance of human infrastructure by northern mountain woodland caribou. *Biological Conservation*, 144, 2637-2646.

<sup>6</sup> YOR 2017-0083-0984

<sup>7</sup> YOR 2017-0083-0984

disturbance from 12% to below 10%; argues that burns do not greatly affect key seasonal ranges for spring, summer, and fall; and reduces the area impacted by wildfire to a decadal average<sup>8</sup>. The EC comes to a different conclusion, postulating that the Project exceeds the Proponent's effects threshold for change in suitable habitat within the FCH range based on a combined range-wide loss of habitat of 24% due to wildfire (12% burned in last 50 years) and human activity (12%, including roads, communities, and mineral properties)<sup>9</sup>. The EC concludes the Project will 'contribute to a high potential magnitude of effect on caribou abundance' and notes that substantial risk of further population decline exists. This conclusion is inconsistent with the EC recommendation for the Project to proceed.

### **Mitigation Measures**

The EC provides a number of measures meant to mitigate the impact as stated: “[t]he herd continues to decline without agreed upon management objectives regarding harvest and land-use, and insufficient knowledge to identify range-level drivers and associated management thresholds”<sup>10</sup> We find the following insufficiencies:

1. Despite lengthy descriptions of the likely impacts of the Project on FCH, the recommended mitigation measures are listed in the Report in sequence or in diagram with no clear links to impacts and with no supporting evidence for their efficacy.
2. Many of the measures offered carry with them only brief descriptions, absent necessary detail (e.g., limiting of speeds on the access road [how much, when?], “Restrictions on flights based on daily timing windows” [when and what window?]).
3. The implementation of mitigation measures and monitoring of their effectiveness is to be the responsibility of an oversight body, however there is very little information on the actual functioning and authority of this organization.
4. The EC recommends a ‘long-term range management plan for the FCH’ as a mitigation measure for the Project. Given the uncertainties of the causes of population decline, a long-term range management plan should be a prerequisite to Project approval, not a mitigation measure. It should be developed by Yukon Government and well-supported with scientific and Traditional knowledge.

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<sup>8</sup> YOR 2017-0083-0984

<sup>9</sup> YOR 2017-0083-2748

<sup>10</sup> YOR 2017-0083-2748

## **Conclusion and Recommendations**

Overall we find there is insufficient information to fully assess effects of the Project to FCH and whether proposed mitigation measures are sufficient to reduce risk. Given the poor status of the herd; its cultural importance; the high uncertainty around key habitat areas, migratory pathways, causes of mortality, and efficacy of mitigation measures; and the EC finding that the Project is likely to have significant and adverse effects on FCH, we recommend the EC either 1) conclude that that Project should not proceed or 2) refer it to review by a Panel of the Board.

Thank you for your consideration of our comments.

Sincerely,

Dr. Hilary A. Cooke

Associate Conservation Scientist

Dr. Justina Ray

President and Senior Scientist