

TECHNICAL MEMORANDUM

DATE June 21, 2022

Project No. 22532418

TO Jennifer Dallaire, Project Manager, Prairie and Northern Region
Impact Assessment Agency of Canada / Government of Canada

CC Michael Taylor, Francois Quinty, WSP

FROM John Virgl and Michelle Bacon

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LAMBERT PEAT ENVIRONMENTAL IMPACT STATEMENT – REVISED APPROACH TO CARIBOU ASSESSMENT

1.0 INTRODUCTION

Woodland caribou (*Rangifer tarandus caribou*) is listed under Schedule 1 of the federal *Species at Risk Act* (SARA) as Threatened (Government of Canada 2021) and are provincially ranked as S3 (i.e., vulnerable/rare to uncommon; SKCDC 2021). Woodland caribou is important ecologically, culturally, and socio-economically, and caribou were traditionally harvested by Indigenous Groups in Saskatchewan. Lambert Peat's proposed Project is located within the Boreal Plain (SK2) Woodland Caribou Conservation Unit, and more specifically, the SK2 Central Caribou Administration Unit (SK2 Central range). Specific Caribou Habitat Management Areas (CMHA) have been delineated in the SK2 Central range, and have been prioritized based on different management goals and strategies and their known importance to caribou (ENV 2019). Currently, the proposed footprints of the Project's Cluster 3 is within Tier 2, Cluster 4 overlaps Tier 1 and Tier 3, and Clusters 10 and 11 are within Tier 3. Tier 1 areas are of highest importance to caribou, with these areas having high to moderate habitat potential, high levels of observed caribou use, and low levels of anthropogenic disturbance. Tier 2 areas have high to moderate habitat potential, with observed caribou use but higher levels of disturbance. Tier 3 areas represent general habitat and connectivity between Tier 1 and Tier 2 areas. Management strategies for all CHMA include access management and offsetting (ENV 2019).

Lambert Peat acknowledges that the draft Environmental Impact Statement (EIS; draft dated March 25, 2021) reviewed by the Impact Assessment Agency of Canada (IAAC) erroneously identified Clusters 3 and 4 as fully within Tier 3 CMHA, based on data gathered prior to the development of the current CHMA boundaries, and therefore, could not provide sufficient analysis to make conclusions about the potential effects of the proposed Project on woodland caribou. This memo details how the caribou assessment will be completed in a subsequent revision of the EIS. The approach outlined below has been used by other proponents that have approved projects in Saskatchewan's caribou range, and is expected to meet the requirements of the IAAC, Environment and Climate Change Canada (ECCC), and the Saskatchewan Ministry of Environment (ENV).

2.0 REVISED APPROACH TO ASSESSMENT

2.1 Spatial and Temporal Boundaries

The assessment of caribou will be completed at multiple spatial scales to fully understand the effects of the Project on the individual-level behaviour, population-level dynamics, and resource management requirements.

Spatial boundaries for the assessment would likely include site and local study areas, caribou home range study area, and the SK2 Central range. The temporal boundary would include the construction, operation, and closure and reclamation phases of the Project and the time required to restore critical caribou habitat.

2.2 Habitat Mapping

Habitat suitability mapping for the study areas would follow the approach used by Environment Canada (EC 2011; ECCC 2020) and ENV (2019). Habitat suitability maps were developed by ENV to provide a simplified classification of caribou habitat into high, moderate, and low-suitability values (ENV 2019). Habitat values were assigned to forest stands based on the forest ecosite classification system (McLaughlan et al. 2010), and account for varying seasonal habitat values associated with foraging, calving, and predator refuges.

Caribou habitat suitability mapping would include fire and anthropogenic disturbance data. Fire and anthropogenic disturbance data would be acquired from best available sources and applied as separate layers to the study areas. Fire disturbance would be categorized into age intervals (e.g., recent burns, early-stage regeneration, late-stage regeneration). Anthropogenic disturbances would include linear (e.g., highways, secondary roads, trails) and non-linear (e.g., forest harvest blocks, communities, oil and gas) features.

A 500 m buffer would be applied to all anthropogenic disturbances and affected habitat types, including waterbodies. Ecosites burned by fire in the last 40 years would be also classified as disturbed, but no buffer applied (ECCC 2020). The habitat within the 500 m buffer is assumed to be functionally unavailable to caribou (i.e., converted to unsuitable indirect disturbance) due to its proximity to anthropogenic disturbance and associated increase in perceived predation risk or sensory disturbance.

2.3 Assessment of Existing Conditions

Existing conditions would be described and include the absolute and relative amount (%) of each study area disturbed by anthropogenic infrastructure and by fire within the last 40 years and the total disturbance would be calculated. The amount of undisturbed or critical habitat (low, moderate, and high suitability) and water would also be provided. The density of different types of linear features and the total density of linear features would be estimated for each study area.

2.4 Project Interactions and Residual Effects Analysis

The Project would be added to the landscape and changes in the amount of disturbance, critical habitat, and linear feature density would be estimated to predict effects from the Project on caribou. The assessment would also include cumulative effects from the Project and other known and applicable future developments and climate change within the study areas, where information is available.

2.5 Determination of Significance and Offsetting

Currently, woodland caribou is Threatened under SARA and is considered as likely as not self-sustaining in the SK2 Central range, because the current amount of natural and anthropogenic disturbance (42.8% disturbed; ENV 2019) exceeds the threshold of 35% disturbed critical habitat, which has been identified as unlikely to support a self-sustaining population (ECCC 2020). Most of the disturbance in the SK2 Central range is due to anthropogenic features such as forest harvest blocks and roads. Therefore, any amount of incremental habitat loss from any development, including residual losses of habitat associated with the proposed Project, would be considered significant for woodland caribou.

An offset requirement would be expected for woodland caribou for the Project to meet the requirements outlined in the provincial Range Plan for Woodland Caribou in Saskatchewan for the SK2 Central range (ENV 2019). Through engagement with the ENV and Indigenous Groups, Lambert Peat would develop a Caribou Mitigation and Offsetting Plan to offset adverse residual effects from the Project.

3.0 CLOSURE

We trust the above meets your present requirements. If you have any questions or require additional details, please contact the undersigned.

WSP Canada Inc.

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4.0 REFERENCES

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