

KBHLPO Variance 4 (Objective 3 Caribou) Implementation Policy

January 15, 2004

This policy provides guidance for the implementation of the Caribou objective outlined in Variance KBHLP- 4.

1. This Implementation Policy applies to all caribou habitat mapped in the Purcell mountains south of Findlay Creek to the US border and the Selkirk mountains south of the West Arm of Kootenay Lake.

Description	Strategies	Best Management Practices
<p>Core Habitat This is key habitat in or adjacent to areas of known caribou activity. It includes high elevation habitat above the caribou line (1994 operability line), as well as parts of the ESSF and upper ICH below the operability line. A small portion is heavily used valley crossings near the heads of valleys. Recent cutblocks surrounded by high caribou activity and suitable habitat are also included if they provide capable habitat.</p>	<p>A. Maintain contiguous habitat over the majority of stand types used by caribou to fulfill their life requirements (foraging, reproducing, avoiding predation).</p> <p>B. Enhance caribou habitat in previously harvested areas.</p> <p>C. Minimize fragmentation caused by timber harvest.</p> <p>D. Avoid increasing the risk of a mountain pine beetle outbreak impacting large amounts of caribou habitat at one time by limiting the amount of mature pine dominated stands.</p>	<p>1. Above the Caribou (1994 Operability)Line</p> <ul style="list-style-type: none"> • Avoid road construction to the greatest extent possible. When previously harvested stands reach maturity, reserve or harvest these stands with silviculture systems aimed at minimizing non-caribou ungulate use and enhancing the habitat value to caribou, as per the guidelines outlined below for Se/BI or PI dominated stands. <p>2. Below the Caribou Line –</p> <ul style="list-style-type: none"> • Prior to harvest consideration, Pine leading stands should be assessed for early winter habitat value using the Kinley Habitat Field card. Stands rated as higher value early winter habitat should be reserved from harvest unless there is epidemic MPB infestation in them, in which case the probability of the infestation spreading to other stands will be minimized with the least impact treatment, from single tree salvage to stand salvage. • Protect healthy understory trees as much as logistically practical, especially those with lichen present. • Reserve tree species other than pine if Windthrow Hazard Assessment indicates that the windthrow potential is acceptable for the site conditions, particularly those with high lichen. • Reforest to a future Se/BI dominated stand if ecologically suited to site. On drier sites, PI may have to be planted in conjunction with the Se to ensure survival. It may take more than one rotation to achieve a Se/BI dominated stand • Encourage the development of old stand features (large trees, gaps) within the stand. • Minimize the value of the stand as good habitat for deer, elk, and moose by minimizing the amount of edge and good forage conditions created. • Aggregate harvesting in time and space over short time periods (5 years) to reduce fragmentation.

		<ul style="list-style-type: none"> • Minimize road access and utilize legislation to control recreational access into core habitat areas. • In previously harvested areas, encourage the development of old stand features (large trees, small gaps) and SeBl trees within the stand. • When previously harvested areas reach maturity, reserve or harvest them in accordance with the recommendations as for SeBl stands above.
<p>Supporting Habitat This is typically located downslope of the core habitat zone and closer to headwaters than the Connectivity zone. It is located in areas with fewer caribou locations than core habitat, but represents habitat that is likely used to an extent for foraging and movement, and may be important for predation avoidance.</p>	<ol style="list-style-type: none"> 1. Ensure that forest management activities adjacent to high value core habitat do not significantly increase predation risk to caribou in the core habitat. 2. Maintain or enhance caribou habitat adjacent to high use areas. 3. Maintain the ability of caribou to move among core habitat polygons with low predation risk. 	<p><i>Above the Caribou (1994 Operability)Line</i></p> <ul style="list-style-type: none"> • Avoid road construction to the greatest extent possible. When previously harvested stands reach maturity, reserve or harvest these stands with silviculture systems aimed at minimizing non-caribou ungulate use and enhancing the habitat value to caribou, as per the guidelines outlined below for SeBl or PI dominated stands. <p><i>Below the caribou line -</i></p> <p>A. SeBl dominated stands. For harvest, follow general harvest guidelines of Steventon et al. 2001, but account for effects of safety and slope on harvesting logistics, and minimize the amount of roads and landings created.</p> <ul style="list-style-type: none"> • Slope 0-30 %, use group cuts of 0.20 – 1.5 ha, average 1 ha • Slope > 30 % group cuts up to 5 ha, average < 3 ha • In both cases, protect healthy conifer understory as much as logistically practical, and reforest to a future Se/Bl dominated stand if ecologically suitable to enhance caribou habitat. Encourage the development of old stand features (large trees, gaps) within the stand. • Minimize road access and, in collaboration with MSRM and MWLAP, utilize legislation, to control recreational access into core habitat areas. • In previously harvested stands, encourage the development of old stand features (large trees, small gaps) within the stand. • When previously harvested SeBl stands reach maturity, reserve or harvest them in accordance with the recommendations listed above. <p>PI dominated stands. Stands should be harvested and managed to enhance caribou habitat following the guidelines given for PI stands in the Core Habitat. Prior to harvest consideration stands should be assessed with the Kinley Habitat Field card. High value Pine stands should be reserved from cutting, unless there is epidemic MPB infestation in them, in which case the probability of the infestation spreading to other stands will be minimized with the least impact treatment, from single tree salvage to stand salvage.</p>

<p>Meta-population Connectivity These are areas most likely for infrequent, long-distance movement of caribou, which connect otherwise isolated sub-populations, e.g. across the St. Mary River. Movement has not been observed with radio-collared caribou, but was likely in the past and may be very important for genetic transfer among populations and long-term viability of the herds.</p>	<ol style="list-style-type: none"> 1. Provide habitat that does not impede movement or significantly increase the risk of predation to caribou during infrequent, large-distance movements. 2. Avoid creating large tracts of young, thick stands which impede caribou sightlines, or stands with large amounts of CWD which make movement difficult. 	<p>Develop harvesting and silviculture plans that will achieve the stated goals. Avoid creating dense young stands; spacing and thinning is encouraged to provide long sight lines. Minimize excessive CWD, dense tall shrub development, and road access.</p>
<p>Intra-population Connectivity These are areas used for short-distance cross-valley movement that connect core areas (e.g., across Hellroaring or Buhl Cr.). Caribou use is evident from radio-telemetry data.</p>	<ol style="list-style-type: none"> 1. Provide habitat that does not impede movement or significantly increase the risk of predation to caribou while moving cross-valley. Avoid creating large tracts of young, thick stands which impede caribou sightlines, or stands with large amounts of CWD which make movement difficult. 	<p>At any given time, at least 33 % of each corridor should be in stands age class 5 or greater with < 800 stems /ha, connecting cross-valley. This area can be reserved or group/partial cut, with emphasis on maintaining open mature/old forest characteristics. In the rest of the corridor, avoid creating dense young stands with limited sightlines; spacing and thinning is encouraged. Minimize excessive CWD, dense tall shrub development, and road access.</p>
<p>Population Recovery Zone This zone includes areas with characteristics similar to those in the core habitat and having high suitability, but in which there is historic but little or no known recent activity (and no radio-collar locations). Most of it is above the caribou line, but it includes portions of the ESSF and ICH below the line.</p>	<ol style="list-style-type: none"> 1. Maintain habitat that would likely be used by a caribou population greater than 100 individuals, and which could be very important in sustaining a viable, recovered caribou population. 	<p><i>Above the Caribou (1994 Operability)Line –</i></p> <ul style="list-style-type: none"> • Avoid road construction to the greatest extent possible. • When previously harvested stands reach maturity, reserve or harvest these stands with silviculture systems aimed at minimizing non-caribou ungulate use and enhancing the habitat value to caribou, as per the guidelines outlined below for SeBl or Pl dominated stands. <p><i>Below the caribou line -</i></p> <p>A. SeBl dominated stands. For harvest, follow general harvest guidelines of Steventon et al. 2001, but account for effects of safety and slope on harvesting logistics, and minimize the amount of roads and landings created.</p> <ul style="list-style-type: none"> • Slope 0-30 %, use group cuts of 0.20 – 1.5 ha, average 1 ha • Slope > 30 % group cuts up to 5 ha, average < 3 ha • In both cases, protect healthy conifer understory as much as logistically practical, and reforest to a future Se/Bl dominated stand if ecologically suitable to enhance caribou habitat. Encourage the development of old stand features (large trees, gaps) within the stand.

		<ul style="list-style-type: none"> • Minimize road access and, in collaboration with MSRM and MWLAP, utilize legislation, to control recreational access into core habitat areas. • In previously harvested stands, encourage the development of old stand features (large trees, small gaps) within the stand. • When previously harvested SeBl stands reach maturity, reserve or harvest them in accordance with the recommendations listed above. <p>PI dominated stands. Stands should be harvested and managed to enhance caribou habitat following the guidelines given for PI stands in the Core Habitat. Prior to harvest consideration stands should be assessed with the Kinley Habitat Field card. High value Pine stands should be reserved from cutting, unless there is epidemic MPB infestation in them, in which case the probability of the infestation spreading to other stands will be minimized with the least impact treatment, from single tree salvage to stand salvage.</p>
--	--	--

2. The most current forest cover inventory as defined by MSRM must be used for determining forest cover age classes. These age classes are intended to identify stands with characteristics suitable for Caribou. Where a stand is found to mistyped for age, it should be reviewed by a Registered Professional Biologist to determine whether it has suitable characteristics for Caribou. If it does it should still be considered to contribute to the forest cover requirements. If it does not then it should considered to be a younger age class and where recruitment is required be considered for recruitment based on its revised age class.