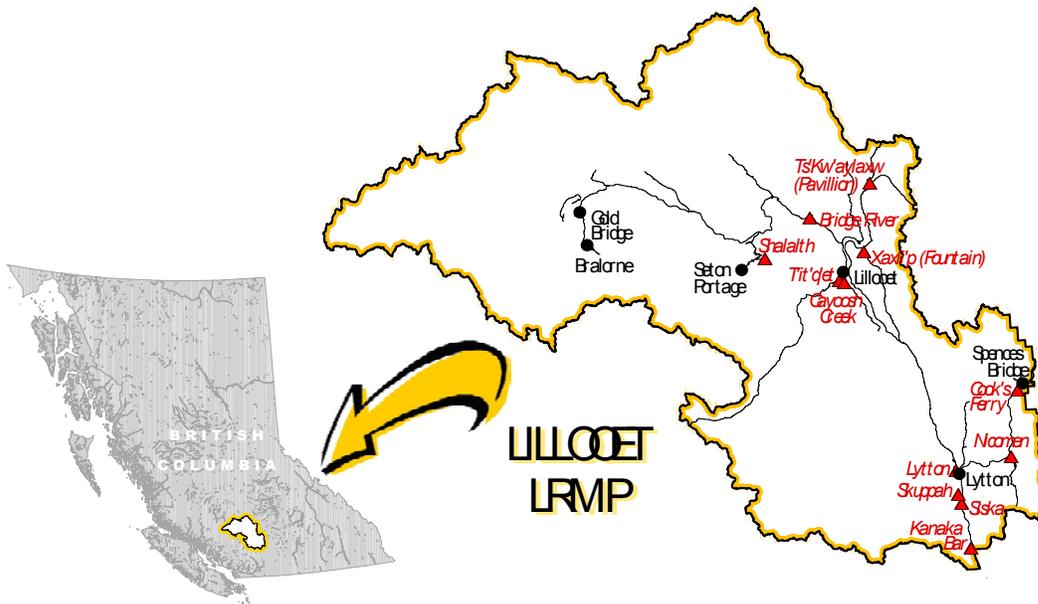


# DRAFT LILLOOET LAND AND RESOURCE MANAGEMENT PLAN

## Summary of Socio-Economic and Environmental Implications



Ministry of Sustainable Resource Management

22 July 2004

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# **Draft Lillooet Land & Resource Management Plan Summary of Socio-Economic and Environmental Implications**

## **I. Introduction**

The Lillooet Land and Resource Management Plan (LRMP) process began in November 1995 when a multi-stakeholder “table” was charged with the task of recommending to the provincial government a management plan for Crown land and resources in a 1.1 million hectare planning area in south western British Columbia. Between June 1996 and March 2001 the plan was developed by a round-table style of public committee (the LRMP “Table”).

In October 2000, government gave the Table a March 2001 deadline to complete the plan. Since a full land use plan was not attainable, the Table adopted a phased approach. Phase 1 was to include recommendations on major land and resource management issues, including protected areas. Phase 2 was to refine management direction and develop strategies for plan implementation.

The Table was unable to reach consensus on a single land use scenario. In March, 2001, two groups (the Lillooet Communities Coalition and the Conservation, Recreation, Tourism and Community group) submitted separate recommendations to government, with the understanding that all Table members would support whichever option was accepted in its entirety.

In April 2001, government announced its approval in principle of recommendations from the Conservation, Recreation, Tourism and Community group. Following the May 2001 election, government reviewed the Phase 1 decision and directed the Ministry of Sustainable Resource Management (MSRM) to complete the LRMP. MSRM prepared two discussion drafts, drawing on the extensive work of the LRMP Table, as well as input from First Nations, the public and government agencies.

Following public consultation on the discussion drafts, MSRM revised the LRMP to reflect new results-based regulations (e.g., Forest and Range Practices Act) and new policies (e.g., working forest initiative; two zone system for minerals; Heartlands Strategy). Following consultations with First Nations, the draft will be revised and submitted to Cabinet for review and approval.

## **Socio-Economic and Environmental Assessment**

This summary provides a preliminary assessment of the socio-economic and environmental implications of the draft Lillooet LRMP for the forestry, mining, and tourism and recreation sectors. MSRM’s Guiding Principles (MSRM, 2003b) and Guidelines for socio-economic and environmental impact assessment (MSRM, 2004b *forthcoming*) discuss how impacts of a land use plan are to be assessed relative to a “benchmark” or “base case” scenario - the land and resource management regime that is most likely to be in place in the absence of a land and resource management plan. The analysis presented in this summary uses the Lillooet LRMP Socio-Economic &

Environmental Base Case (Robinson Consulting and Associates Ltd. et al., 2001) as the benchmark against which the LRMP is compared. That is, the LRMP is compared to the pre-2001 conditions (i.e., conditions in place before government established the Spruce Lake Order-in-Council). The analysis also draws on a September 2001 report detailing the socio-economic and environmental implications of the earlier Table proposals (MSRM et al., 2001). Additional analyses were conducted to supplement existing information, and these are noted in the discussion below.

## **II. Socio-Economic Implications**

The socio-economic implications presented below were prepared by MSRM with the assistance of Robinson Consulting and Associates. The following is a summary of findings for the forest, mineral and tourism/recreation sectors.

### **A. Forestry**

In 2001, the forest industry accounted for 19% of the employment (600 jobs) and 21% of the income (\$25.2 million) in the Lillooet LRMP area (MMS, 2004). The major timber processing facilities are Ainsworth's veneer mill in Lillooet, Lytton Lumber's sawmill and value added facility in Lytton, and the value-added plant operated by Bridgeside Higa Forest Industries in Lillooet.

The AAC of tenures in the Lillooet LRMP area (equal to the Lillooet TSA) is 635,900 m<sup>3</sup>. Harvest volumes over 1998-2002 averaged 443,000 m<sup>3</sup>.

Based on this harvest level, the LRMP area has an estimated 300 person years (PY) of direct forest sector employment and a further 125 PY of indirect/induced ("spin-off") employment. In the province as a whole (including the LRMP area), the Lillooet area harvest is associated with 535 PY of direct employment and 600 PY of indirect/induced employment.

The LRMP area has almost all of the harvesting jobs and about 35% of the milling jobs associated with the harvest. Eighty percent of the indirect/induced jobs are outside the LRMP area, reflecting spending patterns of forest companies and workers. The recent harvest level has generated an average of about \$3 million per year in stumpage revenue for the provincial government.

### **Timber Supply Impacts**

Timber supply analysis of the impacts of the LRMP was prepared by Timberline Forest Inventory Consultants, in consultation with MSRM and MOF (Timberline Forest Inventory Consultants Ltd., 2004). The analysis built on work completed for the Timber and Economic Recovery Plan underway in the Lillooet TSA (Timberline Forest Inventory Consultants Ltd., 2003).

A "Pre-LRMP" scenario was compared with an "LRMP" scenario. In the "Pre-LRMP" scenario, the recommended protected areas (including the Spruce Lake area) contributed to the Timber Harvesting Land Base (THLB) and pre-LRMP management direction was assumed. In the "LRMP" scenario, the recommended protected areas were removed from the THLB and further reductions related to LRMP management objectives for spotted owl, grizzly bear, ungulate winter range, and visual quality (in so far as these can currently be assessed). Both scenarios included revised estimates of forest inventory, based on a recent MSRM study which concluded that volumes in existing natural stands had previously been underestimated by approximately 13% (MSRM, 2003a).

The analysis indicated that the LRMP would reduce timber supply overall by 11% (an average of 62,408 m<sup>3</sup>/year). The overall impact is calculated as a proportional reduction to the harvest level across the planning horizon. The 11% overall impact

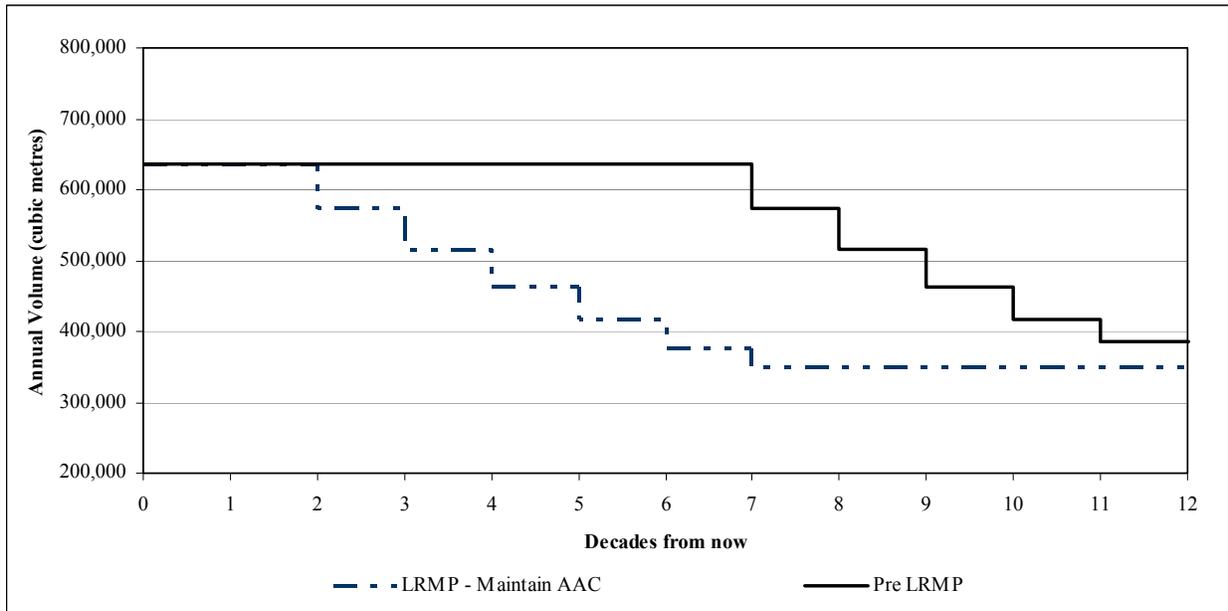
comprises 8% due to THLB reductions for Protected Areas (Spruce Lake and 8 others) and 3% related to the management objectives for spotted owl, grizzly bear, ungulate winter range, and visual quality.

Further analysis by Timberline indicated how the 11% overall impact of the LRMP could occur over time (see “LRMP – maintain AAC” line in the graph below). The analysis follows Ministry of Forests modelling policy for harvest flow projections, which requires the current AAC to be maintained for as long as possible (to minimise short-term impacts), while limiting the harvest declines between decades to no more than 10% and maintaining a smooth transition to the long-term level.

In the “Pre-LRMP” scenario, harvest flow over time remains at the level of the current AAC (635,900 m<sup>3</sup>) for 7 decades, then declines by 10% in each of decades 8,9,10 and 11, before reaching a steady long-term level of 384,900 m<sup>3</sup> in decade 12. By comparison, in the “LRMP” scenario the AAC level can be maintained for two decades, followed by 10% declines, reaching a long-term level of 349,900 m<sup>3</sup> in decade 8.

The actual impact of the LRMP on AAC will not be known until the Chief Forester makes an AAC determination that considers the LRMP as a higher level plan order (AAC determination due by 2007).

**Lillooet LRMP Timber Supply Projections:**



## Employment and Provincial Government Revenue Impacts

Forest sector employment and provincial government revenue impacts of the LRMP, based on the timber harvest flows, are presented in the table below.

Decade		1	2	3	4	5	6	7	8	9	10	11	12+
<b>Timber Supply Projections</b>													
"Pre-LRMP"	'000 m <sup>3</sup>	636	636	636	636	636	636	636	572	515	464	417	385
	% Decline		0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	8%
"LRMP"	'000 m <sup>3</sup>	636	636	572	515	464	417	376	350	350	350	350	350
	% Decline		0%	10%	10%	10%	10%	10%	7%	0%	0%	0%	0%
Timber Impacts	'000 m <sup>3</sup>	0	0	64	121	172	219	260	222	165	114	67	35
(Pre-LRMP - LRMP)	Percent	0%	0%	10%	19%	27%	34%	41%	39%	32%	25%	16%	9%
<b>Employment Impacts (PY)</b>													
LRMP Area	Direct	0	0	42	81	115	146	174	149	110	76	45	23
	Indirect/Induced	0	0	18	34	48	61	73	62	46	32	19	10
	Total	0	0	60	115	163	207	247	211	157	108	64	33
Province	Direct	0	0	77	147	209	265	316	270	200	138	82	42
	Indirect/Induced	0	0	86	164	234	297	354	302	224	154	91	48
	Total	0	0	164	311	443	562	670	572	425	292	173	90
Stumpage @ \$6.82/m <sup>3</sup>	(\$mil./year)	\$0.0	\$0.0	\$0.4	\$0.8	\$1.2	\$1.5	\$1.8	\$1.5	\$1.1	\$0.8	\$0.5	\$0.2
	Present Value @ 3%	\$0.0	\$0.0	\$0.2	\$0.3	\$0.3	\$0.3	\$0.3	\$0.2	\$0.1	\$0.0	\$0.0	\$0.0

**Note:** Figures rounded to simplify presentation. LRMP area employment impacts calculated using coefficients of 0.36 PY per 1,000 m<sup>3</sup> for harvesting, 0.31 per 1,000 m<sup>3</sup> for processing, and 0.28 per 1,000 m<sup>3</sup> for indirect/induced. Provincial impacts (including LRMP area), were calculated using coefficients of 0.39 per 1,000 m<sup>3</sup> for harvesting, 0.83 per 1,000 m<sup>3</sup> for processing, and 1.21 per 1,000 m<sup>3</sup> for indirect/induced. PY coefficients for direct jobs are based on employment data in Lillooet TSA Timber Supply Review (MOF, 2001) and Lillooet LRMP Socio-Economic & Environmental Base Case (Robinson et al, 2001). PY coefficients for indirect/induced jobs are based on employment multipliers of 1.42 for the LRMP area and 2.12 for the whole province. The multipliers were derived from BC STATS economic dependency data (MMS, 2004) and data in the Lillooet LRMP Socio-Economic and Environmental Assessment of Phase 1 Framework Proposals: Final Report (MSRM et al., 2001).

**No Impacts For Two Decades** – There would be no impacts in the first two decades, as timber supply in both scenarios remains at the current AAC level.

**Decline in Timber Supply Occurs Sooner** – Under the LRMP, timber supply starts to decline 5 decades earlier than the Pre-LRMP scenario. In the LRMP area, in decade 3, the 10% (64,000 m<sup>3</sup>) reduction in timber supply under the LRMP would be associated with an estimated reduction in direct forest sector employment of 42 PY, and a further 18 PY of indirect and induced employment. At the provincial level (including the LRMP area), the decade 3 impacts would be 77 PY (direct) and 86 PY (indirect/induced). The impacts presented are based on the assumption that the AAC is fully harvested.

**Larger Impacts In Longer Term** – Impacts would grow larger over the following decades, as the timber supply under the LRMP declines while the "Pre-LRMP" timber supply remains at the AAC level. (Note that deferring impacts for the first two decades means that later impacts would be larger than otherwise, i.e. if the harvest flow for the initial decades were lower, it would be possible to extend the lower level beyond 2 decades). The difference between the LRMP and Pre-LRMP timber supply begins to diminish after decade 7 as the LRMP timber supply is at the steady long-term level while the Pre-LRMP timber supply continues to decline before reaching a steady long term level in decade 12.

**Stumpage Impacts** – Stumpage would be unaffected for two decades. In decade 3 the provincial government would receive \$400,000 less in annual stumpage revenue, \$800,000 less in decade 4, and \$1.2 million less in decade 5. However, as indicated in the table, the present value of the impacts is considerably lower.

**Qualifications To Analysis** – Estimates for periods beyond the second decade are subject to considerable uncertainty due to the changes that are sure to occur in market conditions, industry structure, technology, social conditions, and knowledge about the land base.

**Fewer Impacts Relative To Current Harvest Levels** - As mentioned above, actual timber harvest levels in the Lillooet LRMP area averaged 443,000 m<sup>3</sup> during the five year period 1998-2002. It is likely that the LRMP will result in improved access to the timber harvesting land base, so it is reasonable to conclude that the LRMP will result in somewhat higher levels of timber harvesting than would occur in the absence of the LRMP. To the extent that this occurred, the LRMP would lead to higher levels of employment and stumpage revenues. While it is not possible to accurately quantify future harvest levels, if harvests fall between the current five year average and the AAC, this would support about 300 to 425 direct forest sector workers in the LRMP area.

## **B. Tourism and Recreation**

The Plan area's mix of climate, land forms and resources support a range of outdoor interests and opportunities. River rafting, fishing, hiking, trail riding, highway and off-road touring are popular summertime activities. Heli-skiing, ski touring and snowmobiling are popular winter recreational pursuits. Tourism is a large and growing part of the economy of the LRMP area. In 2001, Lillooet's tourism industry accounted for about 15% (458 jobs) of the Plan area's employment and 5% (\$5.8 million) of the employment income (MMS, 2004).

The South Chilcotin area contains high value back-country commercial recreation and public recreation features. The land also supports an array of wildlife values. Relative to the base case (which assumes no new protected areas), the South Chilcotin area will be subject to a park management plan that will recognize its environmental values and promote orderly activity associated with commercial and public recreation uses.

With reference to commercial backcountry tourism and public recreation, the LRMP honours pre-existing rights and tenures in new protected areas, and accommodates historic uses (hunting, fishing, and certain types of recreation) that are compatible with protected status. These features are important to existing businesses, suggesting that current operations (hence employment and income) will continue. New investment in facilities and new entrants to the tourism industry will be subject to approval by BC Parks in the context of the respective management plan.

The LRMP designates three Mining/Tourism Permitted areas adjacent to the South Chilcotin Park where commercial forest harvesting is not permitted. A sub-regional management plan is to be formulated for addressing tourism and mineral development interests. The sub-regional plan may provide direction for managing conflict and competition among tourism/recreation interests, similar to a park plan. Given these considerations, the designation on these lands likely better protects tourism/recreation values than might be obtained under base case assumptions.

The Mining / Tourism Permitted areas are contained in the Spruce Lake OIC area; consequently, mineral development in these areas is currently prohibited. Considering the area's recreation/tourism values in isolation, the OIC boundary offers greater protection for tourism values than the mining/tourism designation under the LRMP.

In sum, the LRMP allocates a higher share of the plan area land base with important tourism/recreation values to a compatible management regime as compared to base case conditions. The LRMP also indicates a heightened awareness of tourism/recreation values on the lands subject to integrated resource management.

## C. Mining

The LRMP area currently has two operating mining properties: the limestone quarry at Pavilion and the recently re-opened gold mine near Bralorne. At the 2001 Census, about 40 persons resident in the area were employed in the mining industry, accounting for about 2% of the area's employment (50 jobs) and employment income (\$2.5 million) (MMS, 2004). This was a large increase from the previous census.

Historically, exploration and mining greatly contributed to economic development in the LRMP area and the province. The Bralorne area is the most prolific gold producer in the Province's history. In the LRMP area, land under mineral tenure fell almost 40% during the 1990s. Much of this reduction was attributable to forfeiture of tenure subject to the no staking reserve established over the Spruce Lake Study Area in 1994.

In 2003, exploration in the South-Central region of the province (which contains the LRMP area) was at its highest level in six years, and there are active exploration programs on several other properties in the LRMP area.

The following table compares the distribution of mineral indicators under the LRMP relative to the base case.

### Distribution of Mineral Indicators in Lillooet LRMP Area

Indicator	Base Case	LRMP			% available in LRMP
		Proposed Protected Areas	All Resource Uses Permitted	Mining/ Tourism Areas	
<b>Mineral Statistics (#)</b>					
Current producers	1	0	1	0	100%
Past producers	31	0	31	0	100%
Developed prospects	22	0	22	0	100%
Prospects	52	3	44	5	94%
Showings	150	5	143	2	97%
<b>Mineral Titles (hectares)</b>					
Mineral Tenures	22,877	0	22,773	104	100%
Placer Tenures	560	0	560	0	100%
Crown Grants	12,098	506	11,102	490	96%
<b>Mineral Potential (hectares)</b>					
Metal: High	473,989	65,669	397,424	10,896	86%
Metal: Moderate to High	362,940	10,390	352,476	74	97%
Industrial: High	308,264	50,228	247,140	10,896	84%
Industrial: Moderate to High	485,080	25,814	459,192	74	95%

**Note:** Mineral potential statistics are based on data available as of June 2004. The Ministry of Energy and Mines is currently conducting an audit of this data.

The LRMP has been designed to provide mineral exploration and development opportunities while maintaining tourism/recreation opportunities and managing risks to environmental values. All the areas around current and past producers can be developed, as can the areas around 94% of existing prospects and 97% of existing showings. Eighty-six percent of high metallic mineral potential areas are available, as

are 97% of moderate-to-high metallic mineral potential areas, 84% of high industrial mineral potential areas, and 95% of moderate-to-high industrial mineral potential areas. This represents a significant increase in mineral opportunity relative to the current situation in which the whole Spruce Lake OIC protected area is off limits to mineral exploration and development.

Relative to the base case (which assumes mineral exploration could take place throughout the area currently designated as a protected area under the Spruce Lake OIC), the LRMP results in a somewhat diminished probability of finding a mineral deposit. Overall, there is about a 15% reduction in the highest potential lands for discovering metals (e.g. gold, silver, copper) and industrial minerals, mostly a result of the recommended South Chilcotin protected area. However, compared to the current situation where the entire Spruce Lake OIC area is closed to exploration, the probability of locating an economic deposit is increased under the LRMP.

Adjacent to the proposed South Chilcotin park are three land units with high mineral potential, high tourism/recreation value, and areas important for managing access to the proposed park. Following the LRMP, a sub-regional plan will be developed with the objective of optimizing potential economic returns from these lands. This sub-regional plan must be flexible enough to maintain tourism opportunities while simultaneously signalling to investors that the area is open for mineral exploration and development. It should be noted that even if the area is available and is explored, a mine may not be developed due to external factors such as metal prices.

The tourism and mining sectors signed a Memorandum of Understanding in 2004. The MOU provides a framework for the two users of the Crown land base to address their potentially conflicting business interests and should contribute to investment security for both sectors.

### III. Environmental Risk Assessment

An Environmental Risk Assessment of the Lillooet LRMP was prepared by Eliot Terry M.Sc., R.P.Bio. (Terry 2004) The following is a summary of findings.

Overall, the management objectives and measures developed by the Lillooet LRMP would pose less risk to environmental values than would the base case. Many of the LRMP provisions adopt current management practices (e.g., forest biodiversity), which may not provide adequate protection to maintain all elements of biodiversity (e.g., connectivity, seral stage distribution, small streams). In addition, risk will be reduced as some of the LRMP objectives for environmental values will become legal objectives under the Forest and Range Practices Act and/or the Land Act. As shown in the table below, the base case would involve high and high/moderate risk to almost all indicated environmental values, while under the LRMP these risks would be reduced in most cases to low/moderate levels.

The LRMP proposes THLB allowances which provide increased protection for mule deer, grizzly bear as well as Spotted Owl. How the budgets are spatially distributed will largely determine how effective they are at reducing risks. Some of the budgets may not be adequate to meet the landscape and stand level requirements (e.g., grizzly bear, Spotted Owl).

Risks to environmental values, especially near the proposed South Chilcotin park, will increase in the Integrated Management Area (IMA) if there is a significant increase in mineral exploration and development activities. Risks may be partly reduced through adhering to the management objectives and measures proposed for non-mineral resource values by the Lillooet LRMP as well as any future more detailed planning processes (e.g. Sustainable Resource Management Plans).

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
<p><b>Biodiversity</b></p> <ul style="list-style-type: none"> <li>▪ Ecosystem Representation</li> <li>▪ Riparian Habitat</li> <li>▪ Red and Blue-Listed Species</li> </ul>	<ul style="list-style-type: none"> <li>• Significant gaps in ecosystem representation.</li> <li>• Mature and Old forest outside THLB as well as current practices (e.g., Riparian Reserve Zones, WTPs, OGMAs, IWMS 2004) partly reduces risks to some environmental values (e.g., water quality, fish habitat, certain red and blue-listed species).</li> <li>• S4-S6 streams remain vulnerable from development activities due to lack of riparian buffers.</li> </ul> <p>➤ <b>RISK: High</b></p>	<ul style="list-style-type: none"> <li>• Increased representation for provincially under-represented ecosystems.</li> <li>• Old growth is at greater risk in identified parts of the Plan Area.</li> <li>• Landscape and stand level biodiversity as well as riparian areas managed as in Base Case.</li> <li>• Risks to riparian values partially reduced as a portion of riparian ecosystems captured in proposed protected areas (PPAs).</li> <li>• Red and Blue-listed species managed as per current provincial policy (IWMS 2004)).</li> </ul> <p>➤ <b>RISK: Moderate</b></p>

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
<b>Mule Deer</b>	<ul style="list-style-type: none"> <li>• 2.6% of mule deer winter range in existing PAs.</li> </ul> <p>➤ <b>RISK: Moderate-High</b></p>	<ul style="list-style-type: none"> <li>• Additional 2.7% of mule deer winter range allocated to PPAs.</li> <li>• Proposed management objectives and strategies (e.g., snow interception cover, access management provisions) and THLB allowance (6000 ha) suggest reduced risks to mule deer winter range over long term.</li> </ul> <p>➤ <b>RISK: Low-Moderate</b></p>
<b>Bighorn Sheep</b>	<ul style="list-style-type: none"> <li>• No sheep winter range/lambing areas in fully PAs.</li> <li>• Potential establishment of WHAs (IWMS) to protect portions of summer or spring ranges.</li> <li>• Lack of protection for winter ranges, as well as a lack of landscape-level direction to maintain connectivity between seasonal ranges (i.e. grasslands to alpine), suggest bighorn sheep remain vulnerable to resource and agricultural development over the long term.</li> </ul> <p>➤ <b>RISK: Moderate-High</b></p>	<ul style="list-style-type: none"> <li>• 6.8% of winter range/lambing areas allocated to PPAs.</li> <li>• Portion of known migration corridor captured in Yalakom PPA.</li> <li>• LRMP provides direction to restrict activity during critical lambing periods.</li> <li>• Management direction and PPAs suggest reduced risks to bighorn sheep habitat.</li> </ul> <p>➤ <b>RISK: Low-Moderate</b></p>
<b>Mountain Goat</b>	<ul style="list-style-type: none"> <li>• 8.3% of mountain goat winter/kidding range occurs in existing PAs (Stein and Duffey Lake Parks).</li> <li>• Increased road access into remote areas suggests mountain goats remain vulnerable over large areas.</li> <li>• Potential establishment of WHAs (e.g., kidding areas, IWMS) may provide some stand-level and site specific protection.</li> </ul> <p>➤ <b>RISK: High-Moderate</b></p>	<ul style="list-style-type: none"> <li>• Additional 6.8% of winter/kidding range captured in PPAs.</li> <li>• Portions of mountain goat habitat remain vulnerable to mining and tourism development in upper Slim Creek and Eldorado Mountain.</li> <li>• 1.2% of winter range captured in proposed Cayoosh Wildlife Management Area (WMA).</li> <li>• Measures that reduce the risks to mountain goats including forest cover constraints and seasonal restrictions during critical kidding periods.</li> </ul> <p>➤ <b>RISK: Moderate</b></p>
<b>Moose</b>	<ul style="list-style-type: none"> <li>• No moose winter range in PAs.</li> <li>• A relatively large proportion of moose winter range also occurs on the timber harvesting land base (59%), which suggests moose are at moderately high risk from forest harvesting activities over the long term.</li> </ul> <p>➤ <b>RISK: Moderate.</b></p>	<ul style="list-style-type: none"> <li>• 6.1% of moose winter range allocated to PPAs.</li> <li>• Management objectives for Moose Management Units and riparian areas (e.g., 67% retention) provide enhanced protection for moose.</li> </ul> <p>➤ <b>RISK: Low-Moderate</b></p>

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
<b>Grizzly Bear</b>	<ul style="list-style-type: none"> <li>• 16% of Very High Conservation Priority Areas in existing PAs.</li> <li>• Although some stand-level management is expected (e.g., WHAs, buffering of avalanche chutes), lack of management direction from a Higher Level Plan poses increased risks to grizzly bears over the long term.</li> </ul> <p>➤ <b>RISK: High-Very High</b></p>	<ul style="list-style-type: none"> <li>• Additional 11% of Very High Conservation Priority Areas allocated to PPAs.</li> <li>• 1.0% also designated to the Cayoosh WMA.</li> <li>• 2.7% THLB allowance (8000 ha) reduces risks to critical grizzly bear habitat. Some uncertainty regarding how well the allowance will meet grizzly bear objectives in both Grizzly Bear Population Units (South Chilcotins and Stein/Nahatlatch).</li> <li>• LRMP provides general objectives, but lacks specific strategies and clear higher level plan direction needed to maintain landscape as well as stand level habitat requirements.</li> <li>• A lack of legally binding objectives contributes to uncertainty and estimated risk levels. However, Lillooet Grizzly Bear Working Group initiatives may partly reduce risks over time.</li> </ul> <p>➤ <b>RISK: Moderate-High</b></p>
<b>Spotted Owl</b>	<ul style="list-style-type: none"> <li>• No confirmed or Spotted Owl habitat (Long Term Activity Centres) in PAs.</li> <li>• Although other on-going initiatives (e.g., Spotted Owl Recovery Plan) in surrounding areas may help spotted owl conservation efforts, basic inventory information for this species within the Lillooet Plan Area is required before conservation strategies may be developed.</li> </ul> <p>➤ <b>RISK: High</b></p>	<ul style="list-style-type: none"> <li>• No Spotted Owl habitat (Long Term Activity Centres) designated to PPAs. However, small amount captured in Cayoosh WMA (108 ha)</li> <li>• Although the 1.7% (5000 ha) THLB allowance is an incremental benefit compared to the Base Case, it is unlikely it will meet Spotted Owl population management objectives over the long term.</li> </ul> <p>➤ <b>RISK: Moderate-High</b></p>
<b>Fisheries</b>	<ul style="list-style-type: none"> <li>• Existing habitat protection guidelines reduce impacts for some stream classes; however, small streams in upper reaches remain vulnerable.</li> <li>• Priority fisheries watersheds require enhanced riparian protection and watershed level assessments if risks are to be reduced over the long term.</li> </ul>	<ul style="list-style-type: none"> <li>• LRMP partly reduces risks to fisheries values over portions of the plan area due to the establishment of new parks which captures fisheries priority watersheds.</li> <li>• Other measures reducing risks to fish habitat include: commitment to address the needs of bull trout and white sturgeon which should reduce the risk to these vulnerable species compared to the Base Case.</li> <li>• Small streams remain vulnerable to development activities.</li> <li>• LRMP adopts current</li> </ul>

	➤ <b>RISK: High</b>	riparian/fisheries management practices, which suggests risks to fish habitat will be reduced in parts of the Plan Area, but remain high in others. ➤ <b>RISK: Moderate</b>
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## IV. CONCLUSION

The LRMP will provide benefits to the forest sector in the form of greater land use certainty, faster approval of forest development plans, support for product certification initiatives, and improved relationships with community stakeholder groups and First Nations. There would be no timber supply impacts, forest sector employment impacts or government stumpage revenue impacts for two decades. There would be longer term impacts after the first 2 decades. It is likely that the LRMP will result in improved access to the timber harvesting land base and this could result in higher levels of timber harvesting, and associated employment and government revenues, than would occur in the absence of the LRMP.

The LRMP has been designed to provide mineral exploration and development opportunities while maintaining tourism/recreation opportunities and managing risk to environmental values. Taken together, the resolution of the South Chilcotin issue, focused efforts to implement the Two Zone System, and industry-led initiatives (e.g., the Mining-Tourism MOU), will improve land use certainty locally and across the province and, consequently, the attractiveness for investment in mineral exploration in the LRMP area.

The LRMP allocates a higher share of the plan area land base with tourism/recreation values to compatible management regimes as compared to base case conditions. The plan also indicates a heightened awareness of tourism/recreation values on the lands subject to integrated resource management.

The Lillooet LRMP would decrease the overall risk to environmental values. Without the LRMP there would be high and high/moderate risk to almost all indicated environmental values, while under the LRMP these risks would be reduced in most cases to low/moderate levels.

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