THE SOUTH CHILCOTIN SUB REGIONAL PLAN

Table of Contents

1 CARIBOO CHILCOTIN LAND USE PLAN

1.1 90-DAY IMPLEMENTATION REPORT

On October 24, 1994, the Provincial Government announced the Cariboo Chilcotin Land Use Plan (CCLUP). A 90-day Implementation Process was initiated to develop technical details, including resource targets for the plan. Three resource management zones, Special Resource Development, Integrated Resource Management, and Enhanced Resource Development, were established for sustainable natural resource development and recreational activities.

The CCLUP is designated as a "higher level plan" under the Forest Practices Code Act and guides the application of the Code in all CCLUP land use zones.

As a result of consultation and technical analysis, integrated land-based resource targets and strategies have been established for timber, range/grazing, mining, fish, wildlife, biodiversity conservation, water management, tourism, recreation, agriculture and wildcraft/agro-forestry, in the three land-use zones. The resource targets are consistent with the general directions provided by the CCLUP. The strategy statements express management objectives and actions necessary for the implementation of the CCLUP and the achievement of the resource targets.

The CCLUP includes specific guidelines that have been produced for managing development within the Special Resource Development Zones. In addition, the report identifies specific management policies for various new Protected Areas.

Technical details presented in the CCLUP 90-Day Report make up a template for the long term implementation of the Land Use Plan which, in turn, guides the application of legislation and the development of sub-regional plans.

1.2 INTEGRATION REPORT

The CCLUP 90-Day Implementation Report (1994) identified the need to complete additional work to improve land use certainty over the next few years. To do this, a test of the CCLUP targets was required. Thus, the Integration Report was developed to ensure the Plan was capable of delivering a balance of environmental sustainability, community stability and economic security.

In 1996, the scope of the Integration Report was expanded to develop a system that balances all of the strategies and targets developed by government agencies for the achievement of timber access, biodiversity, mule deer and caribou targets. The impact assessment reports completed for fisheries and visual resource targets were included in this task.

Under the direction of the Inter-Agency Management Committee, adjustments to the strategies were made, where required, to achieve all of the targets in a balanced manner. The analysis included consideration for the overlapping requirements among the strategies. The assumptions and strategy adjustments are the foundation for the Integration Report and subsequent implementation of the report.

The purpose of the integration process was to develop a management strategy that provided direction to Sub-Regional Planning and advice to operational planning and the establishment of landscape unit objectives with respect to achievement of all of the CCLUP targets.

The Integration Process is a regional strategic level analysis. Inherent in a process of this scope is limitations on the ability of the analysis to anticipate and resolve all site-specific issues that arise. Therefore, it is at the Sub-Regional Planning level that the assumptions used in the Integration Process can be confirmed through the completion of a more site-specific spatial analysis (see Appendix V). The Integration Report, April 6 1998, was intended to give strategic direction to the Sub-Regional Plan exercise but not restrict the ability of planning teams to develop innovative, site-specific solutions to integrated resource management issues.

1.3 REGIONAL RESOURCE BOARD/INTER-AGENCY MANAGEMENT COMMITTEE

The Inter-Agency Management Committee (IAMC) and the Regional Resources Board (RRB) were given the responsibility, by government, to jointly implement the CCLUP.

The IAMC is comprised of managers representing government agencies in the Cariboo Chilcotin. The RRB is made up of members representing labour, small business, conservation, ranching, First Nations, forestry, mining, tourism, trapping, guide/outfitters, recreation and the Cariboo Economic Action Forum.

1.4 STATUTORY DECISION MAKER DIRECTION

The District Manager for the Williams Lake Forest District and the Designated Environment Official for the Cariboo Region, both Statutory Decision Makers, accept Section 4 of the Integration Report as appropriate advice and direction for achieving the overall objectives of the CCLUP.

Section 4 describes the key components of the integrated strategies and how they are to be applied to achieve an integrated CCLUP over the short and long term. Application of the strategies described is the basis for meeting the zonal timber access targets at the operational level.

2 FIRST NATIONS

The Government is committed to working with First Nations on a government-to-government basis without prejudicing aboriginal rights or treaty negotiations. The Government has a legal commitment to ensure that First Nations' rights are addressed and considered in the planning process. First Nations have been encouraged to participate in the planning process however, they chose not to become involved in this Sub-Regional Plan on a regular basis. A traditional use study is ongoing with the Tsilhqot'in Nation. Traditional use study projects have been completed with the Esketemc (Alkali Lake) and Xat'l'em/Stwec'emc (Dog Creek/Canoe Creek) communities.

First Nations with asserted traditional territories in the plan area include the Esketemc (Alkali Lake Band), High Bar Band, Tl'esqox (Toosey Band), Yunesit'in (Stone Band), Ts'kw'aylaxw (Pavilion Band), Xat'l'em/Stwec'emc (Dog Creek/Canoe Creek Band), and Whispering Pines Band. Three of these First Nations — Esketemc, Ts'kw'aylaxw and Xat'l'em/Stwec'emc (participating through the Cariboo Tribal Council) — are in stage 4 of the British Columbia treaty process.

3 SOUTH CHILCOTIN SUB REGIONAL PLAN

Map Reference: Appendix III Map 1 Geographic Location and Map 2 Base Map

3.1 PLANNING AREA CHARACTERISTICS

The area within the South Chilcotin Sub-Regional Plan (SCSRP) is largely undeveloped, and has high backcountry recreation and tourism values, wildlife and fisheries values, cultural/heritage and archaeological values, as well as important resource values for timber, range and mining. This area has been the focus of extensive public planning processes. The SCSRP area overlaps four Local Resource Use Plans (LRUP): the Churn Creek Local Resource Plan that met from December 1993 to December 1996, the Hungry Valley LRUP which was completed in November 1993 and the Big Creek LRUP that was active from April 1990 to October 1992. The Yalakom LRUP (Lillooet Forest District) previously extended into the SCSRP area, but the boundary was revised in December 1996 to follow the Lillooet District boundary. The SCSRP was initiated in October 1996.

The area encompassed by the plan is approximately 131,971 hectares and includes:

- The entire South Chilcotin Special Resource Development Zone (SRDZ)
- The West Churn Creek drainage within the Gaspard Enhanced Resource Development Zone (ERDZ) following the draft Dash landscape unit boundary
- The entire Churn Creek watershed with the exception of that portion that lies in the Churn Creek Protected Area
- Tributaries within the SRDZ which flow directly into the Fraser River, and
- The portions of the Big Creek watershed that are within the SRDZ.

Aside from the northwest corner, the plan area follows draft landscape unit boundaries. Included in the planning area are four entire draft landscape units: Koster-Lone Cabin, Churn, Upper Churn, and Dash and two partial landscape units: Upper Big Creek and Big Creek.

3.2 CARIBOO-CHILCOTIN LAND USE PLAN DIRECTION

The Cariboo-Chilcotin Land Use Plan (CCLUP), a Higher Level Plan under the *Forest Practices Code of British Columbia Act* (FPC), established targets, land use designations and provided direction to develop strategies to meet these targets. The purpose of sub-regional planning is to coordinate the implementation of these strategies and targets on an area-specific basis to provide recommendations for landscape unit and/or operational planning. The sub-regional planning process does not revisit the land use designations, targets or strategies, identified in the CCLUP as these decisions have been made and signed off. Further, the planning process does not determine how much timber volume, or allowable annual cut, will be harvested from the SCSRP area.

Using known and locally supplied resource information, the SCSRP addresses the resource targets and strategies outlined in the CCLUP applicable to the plan area, and ensures consistency with the CCLUP as a higher level plan under the FPC. This in turn will provide direction for integrated land use at the operational level. The CCLUP targets are designed to give strategic direction to the sub-regional planning exercise, but not to restrict the ability of planning teams to develop innovative, site-specific solutions to integrated resource management issues. The SCSRP is consistent with the Regional Resource Board (RRB) and the Inter-Agency Management Committee (IAMC) Sub-Regional Planning Strategy and fits within the framework of the strategy.

3.3 PLANNING PROCESS

3.3.1 Terms of Reference

The Terms of Reference for the South Chilcotin Sub-Regional Plan are found in Appendix I of this report.

3.3.2 Planning Procedure

The RRB/IAMC Sub-Regional Planning Strategy provided direction for this sub-regional plan with respect to reporting relationships, input from local communities, decision-making, and dispute resolution

A consensus approach was used throughout the planning process. The following definition of consensus is from the *Commission on Resources and Environment, Strategic Land Use Planning Source Book*, March 1996:

General agreement on a package of provisions to the extent that, although parties to the agreement may not agree to every aspect of the package, they do not disagree enough to warrant their opposition to the overall package. Consensus outcomes reflect agreements that each participant in the negotiations can support without sacrificing their principle. Planning processes based on 'transactive planning theory,' 'interest-based negotiation,' or 'shared decision-making' principles that involve face-to-face discussions among stakeholder representatives accept consensus as the planning process goal.

This approach provided an opportunity for participants to work together as equals to realize acceptable actions or outcomes without imposing the views or authority of one group over another. It also meant that general agreement had been reached and that there was evident group solidarity in either substance or sentiment. Participants may not have agreed with all aspects of the agreement, but consensus was reached if the participants were willing to live with the "total package". If only one or a very few participants were in the position of preventing a consensus being reached, it was their responsibility to either show why they were differentially impacted by a situation or that the matter was one of such principle that they had to prevent consensus. If unable to demonstrate one of these conditions, they were expected to abstain from opposing a consensus. Where consensus was not reached, the table agreed to attach all viewpoints to the final report.

All Table meetings were open to the public, government agencies and stakeholders and held in a round-table fashion as dictated by the consensus approach. While preferable to have a consistent membership in this type of planning process, every effort was made to update newcomers in the process as to procedure and to advise them of the progress to date.

Meetings were held monthly at various locations in Williams Lake, with the exception of two meetings, which were held at Riske Creek early in the process. Written minutes of the meetings were taken and distributed by mail to approximately 100 people and groups. For the list of plan participants, see Appendix II.

Taped records of most Table meetings were kept as backup from October 1997 onwards. This was done to verify discussions and comments made at the meeting. In cases where someone felt the minutes of the meeting did not reflect what was said, the person questioning the minutes was allowed to review the tapes and report back to the Table. Corrections to the minutes were made based on the reviewer's version of what was said.

In addition, notes of items and points discussed at the meetings were recorded as Draft Discussion Notes. This was done to have records of the things decided at the various meeting and to facilitate final report write-up. All participants accepted these notes as "draft" and subject to change as a result of future discussions and decisions.

Various sub-committees that reported to and operated under the direction of the Table were struck to deal with specific issues. These groups met to provide recommendations to the Table on their specific area of concern (e.g. recreation or technical analysis).

Throughout the process, the three person Implementation Committee comprised of representatives from the Ministry of Environment, Lands and Parks, Ministry of Forests and the Land Use Co-ordination Office were consulted for advice and interpretative guidance.

The SCSRP Table received direction from, and reported to both the RRB and the IAMC. The Regional Resources Board adopted the South Chilcotin Sub-Regional Plan in June 1999. The IAMC provided the plan as information to the Statutory Decision Makers (the District Manager for the Williams Lake Forest District and the Designated Environment Official for the Cariboo Region) in September of 1999.

3.3.3 Participants and Groups

Appendix II gives a detailed list plan participants. Generally, participants represented the following groups:

British Columbia Assets and Lands Corporation
B.C. Parks
Community Associations
Department of Fisheries and Oceans
First Nations
Local Residents
Major Forest Licensees
Members of the Public
Ministry of Environment, Lands, and Parks
Ministry of Energy and Mines
Ministry of Forests
Ministry of Small Business, Tourism and Culture
Recreation Organizations
Special Interest Organizations

3.3.4 Success/Consensus

As stated earlier, this Sub-Regional Plan was based on consensus process, which meant agreeing on the final product. In the end, determination of success or failure rested with each plan participant. For some, any deviation from what they felt was acceptable meant that the plan was unsuccessful. For the majority however, it was expected that success was determined by having developed a plan that met the goals and objectives of the CCLUP. The final agreement and the signatories to the plan are included in this report as Appendix IV.

3.4 RESOURCE ISSUES

As mentioned previously, the South Chilcotin Plan area has high recreation, tourism, wildlife and fisheries values, cultural/heritage and archaeological values and substantial resource values in range, timber and minerals.

Currently, the area is considered relatively undeveloped and this presents a spectrum of planning opportunities. The targets in the CCLUP however, govern these opportunities.

To current recreational users and some potential users, the targets set out in the CCLUP set the stage for significant alteration of an area that they have used, often for decades, that have never seen change.

On the industrial side, more opportunities exist for economic stability and growth. For others, implementation of the SCSRP will bring higher costs and more restrictions. And, for some, a potential exists for the erosion of their lifestyle and livelihood.

For land managers and others at the Table, the issue was how to balance the impacts of increased access, industrial activity, timber harvesting and altered landscapes on current users, wildlife and other natural resources while still meeting the targets set out in the CCLUP.

4 SOUTH CHILCOTIN GOAL 2 PROTECTED AREA

Map Reference: Appendix III Map 3 Big Basin

British Columbia's Protected Areas Strategy

British Columbia's Protected Areas Strategy (PAS) is the key policy that guides the planning, management and identification of parks and protected areas in British Columbia. PAS sets out government's commitment to protect 12 percent of the province on a representative basis by the year 2000. PAS has two main goals:

Goal 1: To protect viable, representative examples of the natural diversity of the province, representative of major terrestrial, marine, and freshwater ecosystems, characteristic habitats, hydrology and landforms, and characteristic backcountry recreational and cultural heritage values.

Goal 2: To protect special natural, cultural heritage and recreational features, including rare and endangered species and critical habitats, outstanding or unique botanical, zoological, geological and paleontological features, outstanding or fragile cultural heritage features and outstanding recreational features.

Cariboo-Chilcotin Land Use Plan Direction

In 1994, the CCLUP created 17 large new Goal 1 Parks and Protected Areas, including Big Creek Provincial Park and Churn Creek Protected Area. These new protected areas, combined with existing parks, totaled 11.75 percent of the region. As part of government's 12 percent commitment, the remaining 0.25 percent of the region (22,000 hectares) was allocated to the smaller Goal 2 areas. Goal 2 areas were to be identified during Sub-Regional Planning processes according to the following CCLUP guidelines:

- Of the 22,000 hectares to be allocated to Goal 2 areas, only 75 percent (16,500 hectares) would be available to the planning tables to address park and protected area recommendations. The remaining 25 percent (5,500 hectares) would be retained by the Interagency Management Committee and Regional Resources Board (IAMC/RRB) to address regional priorities.
- The available Goal 2 area that each sub-regional planning table would use was determined by multiplying the total allocation (16,500 hectares) by the size of the sub-regional planning area and then dividing by the size of the Cariboo Forest Region. For the SCSRP area, Goal 2 allocation translates to 270 hectares.

4.1 GOAL 2 RECOMMENDATION: BIG BASIN

The South Chilcotin Sub-regional Planning Process examined 11 areas for potential protected area status. These can be found in Appendix VI. The table developed four options to address its 270 hectare Goal 2 allocation:

Option 1 - Full Use of Goal 2 Allocation
- Use full 270 hectare budget for Protected Areas.

Option 2 - Partial Use of Goal 2 Allocation
- Protect one or two small areas and give back unused hectares into regional Goal 2 allocation.

Option 3 - Use None of the Goal 2 Allocation

- Decide none of the areas are critically important to protect and give back unused 270 hectares into regional Goal 2 allocation.

Option 4 –Request Additional Area

- Request an additional 200 hectares from IAMC/RRB to create a larger protected area.

Each of the areas was examined and eliminated because they did not meet PAS criteria or the Table considered 270 hectares was simply not enough to create a park or protected area with viable boundaries. The Table recommended that all the rejected protected area candidates (see Appendix VI) be managed for integrated resource use with no special resource management considerations other than those that might be applied through the general recommendations of this plan. The Table further recommended that the existing Study Area at East Churn be removed once the plan is approved and that all existing No Staking Reserves that cover these candidates be removed.

However, the Table believed one area - Big Basin - remained worthy of protection. The Table therefore recommended Option 4 to be applied to Big Basin. If this recommendation is not acceptable to IAMC/RRB, the Table suggested that Option 3 be adopted as an alternative.

The Table recommended use of the 270 hectares and requested an additional ± 200 hectares from IAMC/RRB in order to make a viable protected area in Big Basin. If the IAMC/RRB do not approve the additional 200-hectare request, the Table recommended that the 270 hectares be returned to the regional allocation and that designation of a Goal 2 Protection Area for the SCSRP area not be pursued.

4.1.1 Big Basin Description

The Big Basin Goal 2 area (Appendix III Map 3 Big Basin Goal 2 Candidate) is comprised of a small (± 500 hectare) area bounded on the east side by Churn Creek and the west side by a basalt cliff and scree slope. The north boundary is a small ridgeline leading in an easterly direction from the cliff to the creek. The southern boundary is an irregular line beginning at the confluence of Fairless and Churn Creeks, and then leading in a westerly heading just south of a wetland complex to join the rimrock.

A diverse and regionally unique forest cover of aspen, spruce, pine, fir and grasslands characterizes the area. The gently sloping slump terrain of the area has created a number of small wetland drainage areas and three small lakes. There is a natural scree slope at the base of the rimrock on the west side of the area. Numerous wildlife trails lead through the area.

The area is located in the Chilcotin Plateau (CHP) Ecosection, which is currently underrepresented in the protected areas system, with only 3.9 percent currently protected. The area is in the Interior Douglas-fir dry cool (IDFdk4) biogeoclimatic subzone, which is also underrepresented, with only 8744 hectares or 2.34 percent protected in the CHP Ecosection.

The important natural values of the proposed Goal 2 area include wetlands, habitat for mule deer, sheep, waterfowl and birds and a diversity of forest cover.

The recreational values of the proposed protected area in Big Basin are:

- A 4x4 trail and a horse trail leading from a break in the rimrock and meandering through the area to Churn Creek; and
- Opportunities for hiking, fishing, hunting, wildlife viewing, and horseback riding.

4.1.2 Placer Claim

A placer claim is located adjacent to Churn Creek near the confluence of Fairless Creek. This is accessed by a small trail/road leading through the candidate area from the rimrock. The Table recommends that the Big Basin protected area boundary encompass this placer claim (Appendix III Map 3 Big Basin Goal 2 Candidate), but that the claim be "save and excepted" from the legal description of the protected area. The save and except excludes the placer claim from being in the protected area but allows the feature to be added to the protected area if the claim lapses or is abandoned at some point in the future. Only the portion of the claim that will ultimately be included in the protected area will be affected by the recommendation. Land outside the protected area will remain available for future placer mining, unaffected by the presence of the protected area.

Traditional road access to this placer claim will be guaranteed through the protected area. The rationale for including the claim inside the protected area boundary and then "save and accepting" it is that the claim boundary has not been surveyed, and therefore cannot be "found" on the ground, making it impossible to draw a legally accepted protected area boundary. The Ministry of Energy and Mines regulates mining and access for mining.

4.1.3 Big Basin Goal 2 Area Management Objectives and Strategies

If the Table recommendation for the Goal 2 area is endorsed by RRB/IAMC, then the following objectives and strategies shall apply to the area. Development of a management plan for Big Basin Goal 2 will take place in conjunction with the Churn Creek Protected Area planning process.

Goal 2 Area Objectives	Goal 2 Area Strategies
A. Protect the natural, cultural and recreational features located in the Big Basin Candidate Area.	1. Establish Big Basin as a Protected Area in recognition that the placer claim is accessed through the candidate area and that placer mining shall continue. 2. Develop a fire management plan - initial attack in the interim. 3. If the placer claim is abandoned, add the "save and excepted" area to the protected area. 4. Sign Protected Area boundaries.
B. Maintain the area's wilderness character.	1. Use of All Terrain Vehicles (ATVs) and snowmobiles is restricted to existing permitees. 2. Zone in conjunction with Churn Creek P.A.
C. Honour commitments to the CCLUP.	1. Existing activities, including grazing, commercial tourism, trapping, hunting and fishing are allowed to continue.

5 BIODIVERSITY

Map Reference: Appendix III Map 4 Biodiversity with Landscape Units

Background Information

Biodiversity is the diversity of plants, animals, and other living organisms in all their forms and levels of organization, and includes the diversity of genes, species, and ecosystems, as well as the evolutionary and functional processes that link them.

The impact of forest management practices and other human development activities on many species is not fully understood. Actions, which benefit one species, can be detrimental to another. The recommended approach to manage ecosystem diversity is to maintain ecosystem representation and integrity. This approach, commonly referred to as ecosystem management, is designed to provide suitable habitat conditions for all native species over their historical range through time.

The Forest Practices Code (FPC) Biodiversity Guidebook (BG)in conjunction with the Regional Biodiversity Conservation Strategy (RBCS) provides guidance on objectives for forest ecosystem diversity. The ecosystem based approach rests on the principle of managing to mimic natural disturbance such as fire, wind, insects, and disease while considering other values. The more that managed forests resemble the forests that were established from natural disturbances, the greater the probability that all native species and ecological processes will be maintained.

Cariboo-Chilcotin Land Use Plan Direction

The Cariboo Chilcotin Land Use Plan (CCLUP) and the Forest Practices Code (FPC) provide guidance on the conservation of Biological Diversity. The South Chilcotin Sub-Regional Plan (SCSRP) process evolved from direction in the CCLUP. A key component of the SCSRP is to integrate the direction provided in the FPC and the CCLUP, to provide decision-makers with recommendations on how this area should be managed. Through the application of the FPC Biodiversity Guidebook and the specific direction in the CCLUP regarding this zone, recommendations have been made.

To draft landscape units and biodiversity emphasis options, the District Manager, Williams Lake Forest District has used the Regional Biodiversity Conservation Strategy (RBCS) and direction from the Chief Forester. The SCSRP has also used this information for the analytical basis for biodiversity objectives. Based on our analysis there is a shortfall of identified Old Growth Management Areas (OGMA) indicated in the Dash landscape unit. This shortfall will be addressed within the Gaspard Enhanced Resource Development Zone portion of the landscape unit.

5.1 OVERLAP OF INTERESTS

The concept of management of overlap is very substantive for biodiversity conservation. For example: many of the aspects of grizzly bear and furbearer management are taken care of through the biodiversity targets with some stand level modification. Areas managed to protect mule deer winter range may contribute to mature forest targets, view shed protection, forest ecosystem networks, timber availability, and recreation opportunities. These areas of overlap have been used to the greatest extent possible without compromising the objectives for any specific resource value.

5.2 LANDSCAPE LEVEL BIODIVERSITY PLANNING

The goal of the biodiversity objectives listed in the SCSRP is not to maintain all elements of biodiversity on every hectare, but to minimize risk to native organisms by maintaining suitable habitat for all native species, over their historic range, in appropriate size, through time.

5.2.1 Landscape Level Objectives and Strategies

Landscape Level Biodiversity Objectives	Landscape Level Biodiversity Strategies
A. Maintain ecological processes and related biodiversity within the plan area.	1. Apply seral representation guidelines and stand level objectives as recommended by the Biodiversity Guidebook, Biodiversity Conservation Strategy, and Integration Report (see Appendix IX) 2. Recommend that Statutory Decision Makers (SDM) consider establishing OGMAs consistent with the impact and assumptions of Scenario 5 final. Recommend that use of the draft OGMA (see map 4, Appendix III) as the basis for discussions and, that OGMAs be established by the SDM as soon as possible. 3. Establish landscape unit boundaries and biodiversity emphasis as recommended by the RBCS and the Integration Report 4. Where required, establish Forest Ecosystem Networks through landscape unit planning. 5. Ensure that species at risk are identified and provided protection. 6. Establish OGMA to meet old requirement in montane spruce subzone of the Gaspard ERDZ portion within the SCSRP.

5.3 STAND LEVEL BIODIVERSITY PLANNING

A fundamental premise for maintaining biological diversity is to implement strategies at both the landscape and stand level. There is a linkage between how much retention of stand structure is required at the stand level and how much should be retained at the landscape level (*Biodiversity Guidebook*). Wildlife Tree Patches (WTPs) are the tools for retention of this stand structure. The SCSRP recognizes this need and developed objectives and strategies to ensure this vital component is properly managed.

It is recognized that the percentage of Wildlife Tree Patch requirements will not be fixed either through time or by Landscape Unit. SDM have identified their expectations for this area in terms of WTP percentage retention and these are noted in Appendix VIII. The SCSRP planning group recognized that over the long term these percentages would decrease after Landscape Unit objectives are set. Therefore, for modeling purposes, the percentage of WTP required is less than current direction.

5.3.1 Stand Level Biodiversity Planning Objectives and Strategies

Stand Level Biodiversity Objectives	Stand Level Biodiversity Strategies
A. To maintain or restore, in managed stands, important structural attributes such as wildlife trees (including standing dead and dying trees), coarse woody debris, tree species diversity, and understorey vegetation.	1. Apply the requirement for WTP as directed by the SDM at the individual cutblock or at the cutting permit level. 2. WTP should be composed of trees that represent the size, structure and species found in the mature and/or old component of the stand, and should include the upper 10% of the diameter distribution to over represent the stand's highest value wildlife trees, as described in the Biodiversity Guidebook. 3. WTP should follow natural boundaries where possible. 4. Design of WTP should incorporate windfirm attributes to avoid unnecessary windthrow within WTP. Straight edges and rectangular shapes should be avoided. 5. Riparian reserves and other suitable reserve areas that are within or immediately adjacent to the cutting boundary should be utilized for WTP. 6. The 500- metre maximum distance between WTP and suitable habitat should be adhered to unless there are overriding resource management concerns. Only WTP greater than 2 hectares are considered sufficient to address the 500-metre maximum guideline. 7. 75% of all WTP identified within the area of the SCSRP will be at least 2 hectares in size as modeled in Scenario 5 Final. The minimum width to meet this requirement is 100 metres. 8. Consult other strategies such as Grizzly Bear, Moose, and Visual Management for additional information on WTP placement. 9. WTP should be located outside the right-of-way due to the Workers' Compensation Board requirement to fall snags adjacent to logging roads. 10. District Habitat Protection staff should be consulted during development of Wildlife Tree Patch proposals, only when the proposal varies from these objectives or where there are identified concerns.

6 RIPARIAN MANAGEMENT

6.1 RIPARIAN AREAS

Riparian areas occur next to the banks of streams, lakes and wetlands and include both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it. Riparian ecosystems contain many of the highest value non-timber resources in the natural forest. Streamside vegetation protects water quality and provides a 'green zone' of vegetation that stabilizes stream banks, regulates stream temperatures and provides a continuous source of woody debris to the stream channel. The majority of fish food organisms come from overhanging vegetation and bordering trees while leaves and twigs that fall into streams are the primary nutrient source that drives aquatic ecosystems. Riparian areas frequently contain the highest number of plant and animal species found in forests and provide critical habitats, home ranges, and travel corridors for wildlife. Biologically diverse, these areas maintain ecological linkages throughout the forest landscape, connecting hillsides to streams and upper headwaters to lower valley bottoms. There is no other landscape feature within the natural forest that provides the natural linkages of riparian areas.

The Riparian Management Area (RMA) consists of a Riparian Management Zone (RMZ) and, where required by regulation, a Riparian Reserve Zone (RRZ). Within the management zone, constraints to forest practices are applied. The width of these zones is determined by the attributes of streams, wetlands or lakes, and adjacent terrestrial ecosystems.

RMA objectives are implemented:

- To minimize or prevent impacts of forest and range uses on stream channel dynamics, aquatic ecosystems and water quality of all streams, lakes and wetlands;
- To minimize or prevent impacts of forest and range use on the diversity productivity and sustainability of wildlife habitat and vegetation adjacent to streams, lakes and wetlands with reserve zones or where high wildlife habitat values are present; or,
- To allow for forest and range use that is consistent with either of the above bullets.

6.1.1 Streams

As it relates to the South Chilcotin Sub Regional Plan (SCSRP) area, stream locations and lengths were taken from the 1:20,000 scale forest cover maps (FC1 database). This analysis assumes that stream locations and the location of the forested edge are accurately represented on the FC1 files.

Stream classifications for the Churn Creek watershed are from the 1996 Forest Renewal BC Reconnaissance Level Stream Inventory whereas, stream classifications for the area east of the Black Dome height of land are from the 1994 Ministry of Environment, Lands, and Parks fish survey. For the purposes of this analysis, tributaries that were not surveyed or included in the above assessments were assumed to be S6 streams (i.e. non-fish streams, 3 metres or less in width).

In this analysis, prescribed RRZ and RMZ widths are consistent with those detailed in the FPC Operational Planning Regulation for each specific stream class and are assumed to be measured over the horizontal distance. For operational purposes it should be noted that the Forest Practices Code (FPC) dictates that slope distance shall be used when establishing appropriate RMZs and RRZ buffers. Within Scenario 5 Final (Appendix 5 Page) dated February 9, 1999, the area

encompassed by RRZs was modeled as exclusion to the land base (i.e. contributed to the overall Equivalent Excluded Area for the SCSRP area). For the area included within prescribed RMZ, the analysis assumed the implementation of best management practices as defined by the FPC RMA Guidebook. Prescribed retention percentages within RMZ's Scenario 5 Final, were assumed to translate [in a linear fashion] into equivalent area deductions and, as such, were again modeled as an exclusion to the land base; (e.g. over one rotation, 50% retention within an RMZ equates to 50% of the zone being excluded from harvest).

Stream Class	Dimensions (m)	Reserve Zone Width (m)	Management Zone Width (m)	Assumed Retention Within the RMZ (%)
S1	> 20	50	20	50
S2	> 5 to 20	30	20	50
S3	1.5 to 5	20	20	50
S4	< 1.5	0	30	25
S5	> 3	0	30	25
S6	3 or less	0	20	5

I. Streams classified as S1 through S4 are fish bearing whereas; S5 and S6 streams are not.

II. RMZs for S6 streams were not modeled in the analysis because the retention level is minimal (estimated to be 5% as described above) and because there is a strong belief that the number of S6 streams is overestimated on the forest cover maps.

III. One hundred percent of the area within RRZs contributes to the old seral requirement within applicable landscape units (only applied where there is a net old seral requirement remaining after accounting for the old seral contribution from the parks).

6.1.2 Wetlands

Wetlands include shallow open water (up to 2 metres in depth), swamps, marshes, fens and bogs. Supplement to this, the Forest Practices Code includes shrub-carrs as wetlands due to their close similarity to and association with wetlands. Shrub-carrs occur primarily in broad depressions and low-lying areas where forest development is limited by cold, periodically saturated soils. Shrub-carrs are characterized by shrub-dominated vegetation (primarily scrub birch and willow) up to 2 metres tall and often with widely scattered taller trees.

As with streams, the prescribed Riparian Reserve Zone (RRZ) and Riparian Management Zone (RMZ) widths are consistent with those detailed in the FPC Operational Planning Regulation for each specific wetland class and are assumed to be measured over the horizontal distance. The

area encompassed by RRZs and the equivalent area deductions for RMZs (e.g. 50% retention within an RMZ equates to 50% of the zone being excluded from harvest) were again modeled as exclusions to the land base. That is, they contributed to the overall Equivalent Excluded Area for the SCSRP. (See Appendix V)

For analysis purposes, only 20 % of the RMZ area and 8% of the RRZ area (35% in Hungry Valley) west of Churn Creek are included in the modeling data base (i.e. contributed to EEA calculations) for the SCSRP. Using forest inventory information for swamps and non-productive timber types (i.e. non-productive and non-productive brush polygon labels) was believed to be an inaccurate estimate of wetlands as defined by the FPC. This inaccuracy was confirmed through an air photo review process. For the indicated area, it was this air photo review process that ultimately generated more realistic numbers for RMZ and Riparian Reserve Zone Equivalent Excluded Area contributions (see Appendix XIII).

Non-stream RMA Equivalent Excluded Area contributions within the Sub-Boreal Pine-Spruce (SBPS) and Interior Douglas-fir (IDF) biogeoclimatic zones were not included in the SCSRP analysis because of the small contribution of area (Interior Douglas fir) or because of the low retention levels within applicable RMZs (SBPS – 10%).

Riparian Class	Dimensions (ha)	Reserve Zone Width (m)	Management Zone Width (m)
W1	> 5	10	40
W5	Wetland Complex	10	40
W3	> 1 to 5	0	30

I. There are no W2 or W4 wetlands within the SCSRP planning area.

II. Within RMZs, the retention levels used are those described in the ‘Best Management Practices’ section of the FPC RMA Guidebook.

III. One hundred percent of the area within RRZs contributes to the old seral requirement within applicable landscape units (only applied where there is a net old seral requirement remaining after accounting for the old seral contribution from the parks).

6.1.3 Lakes

Lakes greater than five (5) hectares were classified through the ‘Williams Lake Forest District Lake Classification Process’ and, as such, are not addressed in this section. Management implications associated with these water bodies are described in this document: Section 9.4 Lakes Classification.

6.1.4 Riparian Management Area Objectives and Strategies

Riparian Management Objective	Riparian Management Strategies
A. Establish RMZs along streams, lakes and wetlands such that adequately accommodate riparian habitat.	1. Ensure that RRZs are established in a manner consistent with recommendations supplied in FPC RMA Guidebook. 2. Ensure that RMZs are established in a manner consistent with recommendations supplied in the 'Best Management Practices' section of the FPC RMA Guidebook.

7 RANGE MANAGEMENT

Map Reference: Appendix III Map 5 Range Units

Cariboo-Chilcotin Land Use Plan Direction

The legislation, regulations and policies in place as of October 24, 1994, including the Forest Practices Code of BC Act (July 1994) constitute a baseline for the ranching industry, from which AUM levels and other management measures have been established. The Land Use Plan decision of October 24, 1994 assures the industry of land base stability and provides for enhancement opportunities through the Grazing Enhancement Fund. It is not the intention of government to introduce regulatory measures that are contradictory to the spirit and intent of the Land Use Plan with respect to this sector or any other. In future, should management issues arise that are not appropriately addressed by the Plan, the Province is committed to consulting with the ranching industry to identify appropriate solutions.

Improve management of cattle particularly with respect to riparian, alpine, and grasslands; much of this would be accomplished through the application of the Forest Practices Code and the Biodiversity and Riparian Guidelines and through the Grazing Enhancement Fund. The Biodiversity and other guidelines should provide the guidance for protecting environmental and conservation values.

In this region the agriculture sector uses Crown land for grazing, hay production and opportunities for expansion of operations. Cattle grazing will continue at existing or increased levels in the Special Resource Development, Integrated Resource Management and Enhanced Resource Development Zones. Maintain the approximate current geographic distribution of animal unit months by range unit.

The grazing targets are not as closely tied to land area as the other resource targets. For the purposes of this Land Use Plan, grazing is considered to be generally compatible with many of the other resource uses. Therefore these targets are expressed in terms of maintaining or enhancing the current authorized levels of “Animal Unit Months” (AUMs) in their approximate regional distribution.

Grazing strategies focus on:

- Development of land-based targets through the production of Range Use Plans.
- Promotion of sound, sustainable practices and land stewardship within the industry.
- Utilization of the Grazing Enhancement Fund to enhance the resource and address environmental issues.

In addition to grazing, agriculture strategies focus on:

- Maintaining the existing level of hay production from Crown land.
- Ensuring that the industry has the continued opportunity for expansion of their land base onto suitable agricultural lands.
- Promoting sound, sustainable practices and land stewardship within the industry.

All range fences should be wildlife safe according to the 1996 Cariboo Wildlife Safe Fence Guidelines.

Current (October 24, 1994) government eligibility for Crown lands under the agriculture lease-to-purchase program will remain in effect and be applicable in all zones except protected areas.

Resource development activities - such as forestry, mineral exploration and mining development, cattle grazing, tourism, wildcraft/agro-forestry, fishing and hunting - will be carried out in a manner, which respects sensitive natural values. Mining, agriculture, tourism, wildcraft/agro-forestry, fish and wildlife, and recreation will have full access to the zone.

Forestry, mineral/placer exploration and mining development, cattle grazing, tourism, recreation, wildcraft/agro-forestry, fishing, trapping and hunting are appropriate activities.

The initial focus of enhancement activities will be aimed at creating new jobs by increasing the productivity of forests, increasing management and productivity of grazing lands for the ranching industry, and developing recreation and tourism opportunities.

7.1 RANGE USE WITHIN THE SOUTH-CHILCOTIN SUB-REGIONAL PLAN

7.1.1 Range Tenures

As the ranches vary in their use within the plan area, each ranch is discussed in Appendix VII, Range Users within the SCSRP Area.

There are currently seven grazing tenures within the area covered by the South Chilcotin Sub-Regional Plan: Gang Ranch (Gang Ranch Ltd.), Empire Valley Ranch (John Holmes and Joyce Sapp), Sky Ranch (50 Ranch Ltd), Saugstad Ranch (Randy and Gay Saugstad), Joan Fisher, Reynolds Ranch and Ron Cable. The latter two are administered by the Lillooet Forest District and will not be discussed.

All users, except Empire Valley Ranch, have been issued ten year “evergreen” licenses, which means that the tenure must be renewed every ten years unless the Regional Manager determines that the area will no longer be used for grazing. Empire Valley Ranch has only been issued a one year permit with no expectations of renewal. Empire Valley Ranch is within the Churn Creek Protected Area and is owned by BC Parks. BC Parks is in the process of creating a management plan, which will outline the future of the ranch, including the buildings, hayfields, irrigation ditches etc. Once BC Parks has determined the future of the ranch, a longer grazing tenure may be considered.

7.1.2 Range Management Objectives and Strategies

Range Management Objectives	Range Management Strategies
A. Replace natural barriers to cattle movement that are removed through timber harvesting or mining operations.	1. Use remedial fencing to act as a substitute for the natural barriers that are removed.

Range Management Objectives	Range Management Strategies
B. Minimize the spread of hound's-tongue from Empire Valley to other areas.	1. Grass seed any disturbed areas as soon as possible. Strategies for management for hound's-tongue in Churn Protected Area will be described in Churn Protected Area Management Plan.
C. Minimize or prevent impacts of range uses on stream channel dynamics, aquatic ecosystems, and water quality of all streams, lakes, and wetlands.	1. Use guidelines for range use in riparian areas as described in the Forest Practices Code RMA Guidebook.
D. Minimize changes to the Alpine Tundra ecosystem that may be caused by livestock grazing.	1. Use guidelines for the management of livestock in alpine tundra areas as described in the Forest Practices Code Biodiversity Guidebook.

8 MINERAL EXPLORATION AND DEVELOPMENT

Map Reference: Appendix III Map 6 Mineral and Placer Tenures

8.1 MINERAL RESOURCES

8.1.1 Bedrock Geology

The South Chilcotin Sub-Regional Plan (SCSRP) Area is underlain by fault-bounded sequences of volcanic and sedimentary rocks that range in age from Permian to Pliocene. Most of the older strata can be assigned to the predominantly sedimentary Jurassic-Cretaceous Relay Mountain and Cretaceous Skeena formations, with a minor exposure of Upper Cretaceous Midnight Peak volcanic rocks. These have been intruded by mid to late Cretaceous dioritic and granitic plutons and capped by volcanic rocks of the early Tertiary Kamloops Group and late Tertiary Chilcotin Group. Pleistocene to Holocene glacio-fluvial deposits cover and obscure much of the bedrock.

8.1.2 Mineral Deposits and Mineral Potential

Known precious and base metal deposits (MINFILE database) are found near some Cretaceous plutons and in volcanic rocks of the Kamloops Group. Important discoveries to date include the Poison Mountain copper-gold deposit with estimated reserves of 175 million tonnes (grading 0.33 % copper, 0.015% molybdenum and 0.3 grams per tonne gold) and the Blackdome gold deposit, a past and present producer. Among industrial minerals, the Frenier perlite deposit has been worked. There is potential for a variety of others including gemstones such as agate and opal, zeolites and clays. Several creeks in the area have been and continue to be worked for placer gold: Churn, Borin, Fairless, and Poisonmount.

The whole area is rated as having a moderate to high mineral potential rating. That is ; there exists a probability of discovering economically significant new mineral deposits. Thick glacial overburden and lack of detailed geological maps have hindered mineral exploration.

8.1.3 Exploration History

The area has had a long history of mineral exploration and development, which continues to this day. Government records (ARIS database) show that since 1959 at least 84 mineral exploration campaigns have been conducted, mostly in the 1980s. Activity has concentrated in the southern and eastern parts of the plan area.

8.2 MINERAL TENURE

Current tenures include Crown Granted mineral claims, located (i.e., staked) mineral and placer claims, and mineral and placer leases. Most mineral claims are concentrated around Blackdome and Poison mountains. Placer claims are located at the confluence of Churn, Borin and Fairless creeks and on the upper slopes of Blackdome.

The entire SCSRP area is open for mineral claim staking, exploration and development. Also, most of the SCSRP is a designated placer claim area and is open for placer claim staking, exploration and development. The only exception to this are no-staking reserves that have been established on some Goal 2 protected area candidates for the purposes of land use planning. In the event that these areas are not recommended as protected areas, the no-staking reserves will be rescinded.

It should be noted that claim staking is at an historic low point in the province. Mineral tenure is subject to change without notice. At time of writing (December 1998) mineral tenure holdings are very low relative to historic levels. In the mid 1980s almost the whole of the area was covered by mineral tenures. Many claims have lapsed for a number of reasons including uncertainty during land use planning processes (CCLUP), depressed metal prices, and lack of investor confidence.

8.3 MINERAL RESOURCE MANAGEMENT

Mineral resource management is driven by the relative rarity of high quality, economically viable mineral deposits that can be profitably developed at any one time. There are static and dynamic elements to managing this resource: static, in that mineral deposits are hidden and fixed in place and dynamic, in that the socio-economic context of mining is highly variable. Supply and demand, product substitution, technology, prices, costs, expertise, skilled labour, social acceptability, and regulatory requirements largely determine what gets mined, when and where. Changes in these can shift a specific mineral deposit across the threshold from uneconomic to economic and vice versa. Management needs to be adaptive and flexible to realize economic benefits during the all too brief times that windows of opportunity are open.

The Ministry of Energy and Mines (MEM) is the government agency responsible for the management of the Province's mineral, placer, coal, petroleum, natural gas and geothermal resources. Mineral exploration and development ("mining") are appropriate activities in 100% of the SCSRP area outside of parks. For greater certainty this includes, for example, old growth management areas, no-harvest areas, RMAs, stream and lakeshore management zones, forest ecosystem networks, wildlife habitat areas, wildlife corridors, environmentally sensitive areas, roadless areas, wilderness areas, community watersheds, forest recreation sites and areas, and any areas with identified visual quality objectives, biodiversity emphasis options, recreational opportunity designations and the like, except where prohibited by law.

The objectives and strategies outlined below are intended to ensure that mineral exploration and development activities are conducted in a manner that considers the overall objectives for the SCSRP area as established in the CCLUP. Note that, for greater certainty, "mining" includes exploration for and development of hardrock, placer, aggregate, coal, geothermal, and petroleum resources.

Mineral exploration and development ("mining") will proceed in the SCSRP area subject to the Mineral Tenure Act, the Mines Act, the Health, Safety and Reclamation Code for Mines in British Columbia, the Mining Rights Amendment Act and the Mineral Exploration Code as well as other applicable laws and regulations. Effective April 1998, mineral exploration and development will be regulated by the Mineral Exploration Code (MX Code). MX Code standards will apply to all exploration activities. Access to mineral tenure will be subject to the Mining Rights Amendment Act (proclaimed January 1999).

Specific operational guidelines, namely, the objectives and strategies listed in the whole of this plan will be considered through standard permit review and approval processes such as inter-agency referral, regional mine development review committee, or Environmental Assessment Office. In case of a conflict between anything set out in this plan and the provisions of statutes and regulations, such as those mentioned above, the statute or regulation will govern. Nothing in this plan should be construed to fetter the discretion of a statutory decision maker.

Discovery of significant mineral resources may require changes to current patterns of resource management and use (e.g., access patterns). New patterns may require adaptations to resource use for periods of time measured in decades. Adaptive, integrated resource management implies recognition of such changes and utilizes a variety of means to offset impacts for the duration of mineral resource activities. Referrals and review processes ensure that impacts are co-operatively managed and mitigated so that other resource values are not unduly compromised or degraded. MEM will continue to refer exploration and development proposals involving surface disturbance to MELP and MOF, First Nations and local governments as appropriate.

8.3.1 Mineral Resource Management Objectives and Strategies

The purpose of these objectives is to foster and support an economically healthy, sustainable, and environmentally responsible mineral industry in the plan area.

Mineral exploration and mine development ("mining") are allowable land uses, encouraged and permitted in all parts of the planning area where tenure may be acquired. Mining will be managed in a way that considers strategic environmental, social or economic values identified and defined in this plan. Mining will be subject to laws and regulations of general application, including, where appropriate, review and approval processes (e.g., inter-agency referral, regional mine development review committee, or Environmental Assessment Office) for activities that involve mechanical disturbance of the surface. The Ministry of Energy and Mines principally regulates mining activities.

Mineral Resource Management Objectives	Mineral Resource Management Strategies
A. Maintain and/or enhance the opportunity for exploration, development, production and processing of mineral resources throughout the planning area.	1. Ensure land use designations support investment confidence. 2. Ensure that surface land and resource uses are integrated with long-term access to geological resources, including development opportunities of known mineral resources. 3. Ministry of Energy and Mines will distribute mineral industry objectives to other (lower level or local) planning processes. 4. Ministry of Energy and Mines shall ensure that mineral resource values and interests are integrated with other (lower level or local) planning processes. 5. Ministry of Energy and Mines will inform mineral industry of other land use planning processes, which may affect them.
B. Ensure that appropriate levels of access for exploration, development, production and processing of geological resources are applied throughout the plan area.	1. Ministry of Energy and Mines will inform the mineral industry of existing management plan for the area. 2. Ensure that access management plans and regulatory controls on access reasonably accommodate present and future mineral exploration and development activities.

Mineral Resource Management Objectives	Mineral Resource Management Strategies
C. Maintain viability and/or integrity of geological resource tenures.	1. Respect rights of mineral tenure holders. 2. Ministry of Energy and Mines will ensure prompt and fair compensation for tenures alienated or made unworkable through land use planning processes.
D. Ministry of Energy and Mines will ensure a stable fiscal and regulatory regime in which mineral exploration and development can proceed.	1. Ministry of Energy and Mines will streamline permitting processes for exploration. 2. Ministry of Energy and Mines will pursue funding for a share of the revenues derived to the Province from the mineral industry to create financial incentives for exploration and development (e.g., prospectors' grants, tax credits, etc).
E. Ministry of Energy and Mines will maximize the mineral land base.	1. Ministry of Energy and Mines will ensure that lands closed to mineral and placer staking (through no-staking reserves) are periodically reviewed, that reasons for reserves are documented and where possible recommend amendments.
F. Ministry of Energy and Mines will enhance knowledge to support present and future opportunities for geological resource development, informed resource management decision making, and public education.	1. Ministry of Energy and Mines will conduct scientific research, geological mapping, ground and airborne geophysical and geochemical studies, property examinations, technical papers, etc.
G. Ministry of Energy and Mines will create and enhance opportunities for recreational / commercial placer mining.	1. Create panning reserves for recreational panning. 2. Expedite staking and permitting on land not currently designated placer land.
H. Ministry of Energy and Mines will encourage mining-based tourism opportunities (historical and contemporary).	1. Erect roadside signs. 2. Provide information centres with geological and mining literature. 3. Create and/or advertise recreational gold panning reserves. 4. Promote mine tours.

Mineral Resource Management Objectives	Mineral Resource Management Strategies
I. Subject to Access Management Plans, maintain or enhance access to Crown land for public, recreational (i.e., untenured) activities involving the use of mineral resources: i.e. rock, mineral and fossil collecting; gold panning.	1. Erect roadside signs. 2. Provide information centres with geological and mining literature. 3. Create and/or advertise recreational gold panning reserves. 4. Promote mine tours.

9 RECREATION AND TOURISM

The major recreation resources within the South Chilcotin SRDZ (SCSRP area) are the trails, recreation corridors, lakes, unique geological features, relatively remote and undeveloped terrain, and the opportunities for a recreational experience in a natural or natural appearing environment.

Cariboo-Chilcotin Land Use Plan Direction

Visual quality

In the South Chilcotin Special Resource Development Area the direction is to maintain the visual quality in the areas adjacent to the Big Creek Protected Area (Park).

For the Gaspard Enhanced Resource Development Zone (West Churn Creek), the direction is to maintain the visual quality in the viewshed of key lakes.

For tourism, the direction is to maintain the visual quality in the viewshed surrounding existing tourism operations.

Backcountry condition

Maintain 30% of the South Chilcotin Special Resource Development Zone in a backcountry condition. In order to be compatible with the timber targets this includes areas above 5,000 feet, and is mainly located in the western portion of the SRDZ, adjacent to the Big Creek Protected Area (Park).

Maintain 2% of the Gaspard Enhanced Resource Development Zone in a backcountry condition in order to provide for recreation trail networks.

Tourism development

Promote tourism development in this SRDZ, and focus tourism use and development on the backcountry areas identified in the recreation targets.

9.1 BACKCOUNTRY AREA

Map Reference: Appendix III Map 7 Backcountry Area

Backcountry Definition

Current public and commercial activities within the SCSRP focus on the same or complementary outdoor activities, and thus the same natural features. By managing backcountry areas, opportunities for both new recreation and future tourism development will be maintained and enhanced.

In this context, reference to recreation includes public and commercial recreation.

The goal in delineating backcountry is to provide areas, in the most natural state available, where there are opportunities for a spectrum of recreation and commercial tourism activities, which take their meaning from the natural environment.

Government clarification of the CCLUP interprets backcountry to mean a combination of Recreation Opportunity Spectrum experience classes “primitive, semi-primitive non-motorized, and semi-primitive motorized” as well as a wide range of values including: relatively undisturbed

viewscapes, watercourses, wildlife populations, recreational features and some level of limited access.

Backcountry does not mean roadless in all circumstances and forest harvesting will occur in these areas over time, changing the existing character and quality of backcountry over time.

In order to remain compatible with other Land Use Plan targets; backcountry areas were overlapped with as much other non-timber targets as possible. Some of these included:

- Other areas with harvesting strategies compatible with backcountry: OGMA, riparian areas, and areas with high wildlife values
- Areas managed for visual quality objectives
- Classified lakes
- Tourism use areas
- Recreation use areas. and
- In addition, Wildlife Tree Patches are to be optimized to contribute to visual management.

Methodology of Backcountry Area Selection

The selection of backcountry areas followed four steps:

Step One: Mapping of specific CCLUP direction

Areas over 5,000 feet (1524 metres), mainly located in the western portion of the polygon, adjacent to the Big Creek Park were mapped.

Step Two: Information gathering

Recreation inventory and analysis studies were completed by L.A. West (Churn area), Viewpoint Consulting (west of Churn), and J.S. Hart and Associates (trail inventory and assessment). Public input was gathered which included location of trails, campsites, significant viewscapes and important recreation use areas. Current patterns of use e.g. horseback use, hunting, snowmobiling, trail bike use, 4X4 expeditions, etc. were also interpreted.

Step Three: Correlation of information

The recreation and visual subcommittee appointed by the Table mapped all areas with significant recreation and tourism values and established a hierarchy of importance and values based on the information received. Following direction from the CCLUP, and subsequently the Interim Interpretative Guide (April 4, 1996) provided by the IAMC and the RRB as direction; the Analysis Committee, while recognizing the unique values in the SCSRP, presented options to the Table incorporating the values that would integrate well with other resource targets and objectives.

As much as possible, overlaps with other non-timber values (such as areas with high wildlife values and OGMA) were optimized.

Step Four: Strategy Development

Backcountry management strategies were developed based on the information mentioned above.

9.1.1 Identification of Area

The Backcountry Area includes the area adjacent to Big Creek Park south of Piltz Peak, Hungry Valley, Upper Dash Valley, Lone Valley, the Mud Lakes road, alpine areas in the vicinity of Quartz Mountain, Red Mountain, and the trail connection to Churn Creek Protected Area along

Lone Cabin Creek. Using the CCLUP backcountry target for South Chilcotin Special Resource Development Zone of 30% or 36,310 hectares, the Table identified a backcountry area of 32% or 38,515 hectares within the South Chilcotin Special Resource Development Zone.

The backcountry strategy created two zones within the backcountry area:

- Core Backcountry Area
- Connection Backcountry Area

9.1.2 Core Backcountry Area

Map Reference: Appendix III Map 7 Backcountry Area

Map Reference: Appendix III Map 8 Recreation Corridors and Destinations

Core Backcountry Area includes the area adjacent to Big Creek south of Piltz Peak, Hungry Valley, upper Dash Valley and Lone (Beaver) Valley.

9.1.2.1 Core Backcountry Area Management Objectives and Strategies

Goals:

- Use temporary industrial access.
- Manage for: natural appearing environment, low interaction with other people, high probability of experiencing solitude and closeness to nature, self-reliance and challenge.
- Establish recreation facilities only where required for safety and sanitation.
- Place higher emphasis on visual management.
- Use motorized restrictions/non-motorized zones.

Refer also to the Access Management Plan in Section 12 for further information.

Note: The following guidelines do not apply to snowmobiles unless they are specifically mentioned.

Core Backcountry Area Management Objectives	Core Backcountry Area Management Strategies
A. Recognize existing trails in the backcountry.	1. Do not construct new trails, unless relocation is necessary to prevent environmental degradation. Cutting of new trails is prohibited. (Section 102 of the Forest Practices Code Act) (Subject to Objective D below.) 2. Advise ATV and motorcycles to stay on the trails and that cutting of new trails is prohibited. (Section 102: Forest Practices Code Act)
B. Protect sensitive alpine habitats from damage.	1. Use Section 105 of the Forest Practices Code Act to exclude ATV and motorcycles from the alpine and alpine forest (above 6,000 feet: 1828m), other than on existing trails (see Section 12). Note - This guideline will also apply to alpine areas outside of the backcountry area (Access Management: Section 12).

Core Backcountry Area Management Objectives	Core Backcountry Area Management Strategies
C. Protect important wetland and riparian habitats in Hungry Valley from degradation.	1. Advise the public of the sensitivity of the Hungry Valley wetlands and that Section 102 of the Forest Practices Code Act, which deals with the protection of recreation resources, may be invoked if damage becomes excessive.
D. Provide for a range of recreational activities from 4WD to non-motorized access, and to minimize conflicts between users. **See Appendix III Map 8** Trail Map for details on trail sections.	1. Allow ATVs and motorcycles to use: a. The trail through Hungry Valley to Big Creek Park boundary: Trail section 3-6-7). b. The trail to the east of Hungry Valley to the Dash Valley: Trail section 8-11. c. The trail from Swartz Lake through Lone Valley to Prentice Lake: Trail section 15-13-14. d. The trail from Lone Valley to Dash Valley cabins: Trail section 13-11 This use will be subject to review at a future date if the levels of use result in unacceptable impacts on other resources. 2. ATVs and motorcycles are not allowed into the upper Dash Valley (Trail section 11-9-10, and 11-12) or on the trail connecting upper Dash to Fish Lake (Trail section 6-9). The traditional recreational use on the above trails is horse pack trips. ATV access is difficult on these trails and current ATV use is reported to be minimal.
E. Avoid wildlife/recreation conflicts in Hungry Valley	1. Exclude snowmobiles from Hungry Valley wetlands from December 1 to March 31 to protect identified moose habitat. Snowmobile access to Hungry Mountains would be permitted (on the trail at the east end of Hungry Mountains). This restriction applies to all snowmobiles, not just to recreational snowmobilers. Snowmobilers will have alternate access to areas in the vicinity of Hungry Valley on operational roads, which will be constructed outside of the wetlands.
F. Avoid overuse of natural forage in the vicinity of camps.	1. Inform the public that the Gang Ranch horse pastures are critical to the ranch's ability to manage Crown Range. 2. Monitor use levels. If problems are identified, a further action plan is to be developed.

Core Backcountry Area Management Objectives	Core Backcountry Area Management Strategies
G. Inform the public of access restrictions.	1. Place signs at the following locations: a. Where Prentice Lake trail enters the Williams Lake Forest District (stay on existing trails). b. Where the Lone Valley trail forks off of the Swartz Lake road (stay on existing trails). c. Where trails intersect the alpine (stay on the trail). d. At the entrance to Hungry Valley from Gaspard Lake where road forks to Mud Lake and Fish Lake (sensitive wetlands). e. Start of non-motorized trail segments (no motorized access). f. Gang Ranch horse pastures (critical forage issues).

9.1.3 Connection Backcountry Area

Map Reference: Appendix III Map 7 Backcountry Area

This area includes Quartz Mountain, Red Mountain, Mud/Swartz Road, portions of the Dash/West Churn trail, and Lone Cabin Trail connection to Churn Creek Protected Area.

9.1.3.1 Connection Backcountry Objectives and Strategies

Goals
- Manage trails, focusing on the trail's feature
- Manage visuals from trail corridors; and
- Use temporary access roads. Use deactivation techniques.

Refer also to the Access Management Plan in Section 12 for further information.

Note: The following guidelines do not apply to snowmobiles unless they are specifically mentioned.

Connection Backcountry Management Objectives	Connection Backcountry Area Management Strategies
A. Recognize existing trails in the backcountry.	1. Do not construct new trails, unless relocation is necessary to prevent conflicts with other values. 2. Advise ATV and motorcycles to stay on the trails. Cutting of new trails is prohibited. (FPC Act Section 102)
B. Protect sensitive alpine habitats from damage.	1. Exclude ATV and motorcycles from the alpine and alpine forest (i.e. Above 6,000 feet, 1828 metres), other than on specified trail connections. Note - This guideline will also apply to alpine areas outside of the backcountry area (see Access Management, Section 12).

Connection Backcountry Management Objectives	Connection Backcountry Area Management Strategies
C. Provide for a range of recreational activities from 4WD to non-motorized access, and to minimize conflicts between users.	1. The upper Lone Cabin Creek horse trail and the Swan Lake trail are in the Gaspard-Churn Creek ATV restricted area (see Current Road and Vehicle Restrictions, Section 12)
D. Inform the public of access restrictions.	1. Place signs at the following locations: a. Where existing trails intersect the alpine (Stay on the trails) b. Gaspard-Churn Creek ATV restricted area.

9.1.4 Recreation Destination Points

Map Reference: Appendix III Map 8 Recreation Corridors and Destinations

The following list was prepared by the Recreation Subcommittee. An asterisk * denotes tourism operation destination.

- Fish Lake in Hungry Valley*
- Swartz Lake adjacent to the Lillooet Forest District*
- Lone (Beaver) Valley Cabin at the mouth of Panlos Creek
- Prentice Lake north of Relay Creek
- Dash (Lost) Valley Cabins and the Upper Dash Meadows*
- Hunting camps at the upper end of West Churn Creek
- Roaster Lakes north of Red Mountain
- Clear Lake adjacent to Churn Protected Area
- Koster Lake
- Base of French Mountain on the south fork of Lone Cabin Creek*
- Big Basin/Little Basin
- Junction of Lone, Dash and Prentice Trails
- Campsite in the vicinity of the Swartz lake trail crossing of Lone Valley Creek

9.1.5 Recreation Site Development

Development of recreation sites is not considered to be necessary at this time with the current levels of recreational use. Any future recreation site development in the backcountry will incorporate the following to provide a primitive, rustic atmosphere:

- Develop sites only where required to prevent unacceptable environmental damage.

- Screen sites from the trail by foliage wherever possible.
- Erect no tables unless necessary.
- Install outhouses only where necessary.
- Install rock fire rings to reduce forest fire potential and to help identify suitable campsites - no metal fire rings.
- Use the “minimum tool” required for all site work.
- Use natural, rustic materials wherever possible.

9.2 RECREATION CORRIDORS

Map Reference: Appendix III Map 8 Recreation Corridors and Destinations

Definition

These are connectivity corridors along trails or roads. Most of these are within the Backcountry Area.

9.2.1 Recreation Corridor Objectives and Strategies

The goal of recreation corridors is to provide a continual backcountry experience while moving between areas of high recreational and backcountry value, including Big Creek Park and Churn Creek Protected Area.

The Table has identified the primary recreation corridors (See Appendix III Map 8). These are a combination of motorized and non-motorized routes. The corridor width along the 4WD roads will be a minimum of 60 metres. For all other trails, the total width of the trail corridor will generally be 200 metres. For management options within the management corridor, see objectives and strategies below. This corridor width may be altered to fit site specific circumstances. The majority of the trails were originally cleared for livestock movement purposes and it is recognized that this traditional use will continue.

Some specified "Recreation Corridor Segments" will be managed to achieve a retention visual quality objective. See Recreation Corridor Viewshed Polygons, Section 9.3.3 for information on the location of the "Recreation Corridor Viewshed Segments".

These guidelines apply to logging, mining and other industrial activities that may impact on the historical and recreational values of the designated recreation trails.

Recreation Corridor Management Objectives	Recreation Corridor Management Strategies
A. Maintain the opportunities for the traditional recreational, ranching, hunting and commercial tourism activities.	1. Retention levels adjacent to the trail may be higher 2. The recreation corridors will be managed using modified harvesting techniques. The preferred silvicultural systems within the recreation corridors in the backcountry area (Montane Spruce Zone and Engelmann Spruce Subalpine Fir Zone) are small group selection or small patch cutting. Partial cutting is also an option.
B. Provide for a range of recreational activities from 4WD access to non-motorized experiences.	3. Small group selection means harvesting in small, irregular openings of one to two tree lengths in size, depending on the aspect. This silvicultural system is designed to manage the area as an uneven-aged stand. These openings would be unevenly distributed within the corridor so that they appear more natural from high elevation viewpoints.

Recreation Corridor Management Objectives	Recreation Corridor Management Strategies
C. Minimize conflicts between users by encouraging the separation of uses into different areas. D. Ensure that traditional cattle access is not compromised on existing trails. E. Minimize the impact of resource development on recreation corridors. F. Minimize the impact of recreation corridors on resource development by developing a strategy that can achieve the objective within one rotation using modified harvesting techniques.	1. Small patch cutting is designed to manage the area as an even-aged stand. The maximum patch size should be up to 0.5 ha. (i.e. 50 m. x 100 m.). Patch cutting could be done in narrow, sinuous and irregular strips with varying widths. The strips could be tapered in width where they intersect the trail. Patches should be placed at irregular intervals along the trail. 2. Recreation corridors within the Interior Douglas-fir biogeoclimatic zone (i.e. Little Churn Creek corridor) may be managed under a single tree selection or shelterwood system, or according to the objectives outlined in the Handbook for Timber and Mule Deer Management Co-ordination on Winter Ranges in the Cariboo Forest Region. 3. For aesthetic purposes, old trees (i.e. open grown veterans, or trees of unusual form) should be retained along trail margins, wherever possible. 4. Where appropriate, use placement of WTP, alteration of road locations and block boundaries as other methods of achieving objectives of minimizing the impact on the trail corridor 5. A priority will be placed on clean logging practices 6. Leave large diameter trees along the trail where possible 7. If possible, log only on one side of a trail at one time (i.e. small opening boundary runs along the trail). The other side of trail should not be logged until green-up of previously logged side is visually acceptable. 8. No haul roads or landings will be constructed within the recreation corridors unless where no other option is feasible. Harvested timber will be removed to locations outside of the corridors. 9. Harvesting trails between openings will be as narrow as possible. 10. Orientation of skid trails will be parallel to the trail where possible. 11. Limit trail crossings by equipment so that the trails and vegetation are damaged as little as possible. These crossings should be located where the least amount of damage will occur to the trails and to vegetation. Trail crossings must be cleaned up as soon as possible after logging.

Recreation Corridor Management Objectives	Recreation Corridor Management Strategies
(Strategy F Continued) Minimize the impact of resource development on recreation corridors.	15. Where an industrial road must cross a trail, the grade in the trail must be restored. The sight distance along the industrial road must be minimized by crossing the trail at an angle or by designing a small jog in the industrial road where it crosses the trail. Timely (off-site) slash disposal and early grass seeding are required along industrial road right-of-ways where they intersect recreation corridors. 16. Deactivate any short-term resource roads once the use is complete. When the roads are deactivated, trail crossings should be restored to their original condition before the next operating season. 17. Exempt 3 metre pine sanitation adjacent to recreation corridors where possible, with approval of District Manager. 18. Silvicultural and other post-logging activities should respect the integrity of the trail and the trail corridor. 19. Harvested areas within recreation corridors should be planted as soon as possible.
G. Maintain forest health	1. Where identified as a priority for resource management harvesting will be directed toward early control of any insect infestations, and clean up of blowdown patches. Control measures should be sensitive to recreation and visual values.
H. Maintain a natural appearance for the recreation corridors when viewed from high elevations.	1. The outer boundaries of the recreation corridors should be irregular to avoid a narrow ribbon appearance from high elevation viewpoints.
I. Minimize the impact on the viewshed along the recreation corridors.	1. Maintain some screening of broad, expansive views.
J. Inform the public of access restrictions, road/trail locations etc.	1. A Recreation Brochure should be prepared for the SCSRP area and be available at the Williams Lake District office.

9.2.2 Recreation Corridor Identification

Map Reference: Appendix III Map 8 Recreation Corridors and Destinations

Trails **Appendix X: Detailed trail descriptions**	**Map Reference**	**Length (km)**	**Non-Motorized**	**Inventoried**	**Viewpoint # Appendix III Map 10**
Priority 1					
Hungry Valley - Big Creek	3 - 4 - 6 -7	10	No	No	Fish Lake, Mud Lake, 28
*Lone (Beaver) Valley	13 - 15	10.5	No	Yes	6,24,27
Prentice Lake	13 - 14	6	No	Yes	6,22,11
*Upper Dash	10-9-11	13.1	Yes	Yes	1,5,4,3,25
*Dash (Lost) - Lone (Beaver) Valley	11 - 13	8.8	No	Yes	3,6
Dash - West Churn	8 - 11	17	No	Yes	26,7,8,9,10,25,3
Sky Ranch - Scallon Meadows	1 - 2	14	No	No	Not inventoried
*Lower Lone Cabin	19 - 21	11	Yes	Yes	17,20,19,18
*Red Mountain	18 - 19	13.8	Yes	Yes	12,13,14,15,16,17
Swan Lake	19 - 20	5.5	Yes	Yes	17,21
Dash (Lost) Cabin - Dash Hill	11 - 12	10	Yes	No	3
Priority 2					
Mud Lake - Big Creek	4 -5	9	No	No	Mud Lake
Little Churn Creek - Big Basin	22 - 23	26	Yes & No	No	Not inventoried
Churn Creek - Quartz Mountain	16 - 17	4	No	No	Not inventoried

* Indicates the recreation corridors which link Churn Creek Protected Area to Big Creek Park

Recreation Corridor Identification

Map Reference: Appendix III Map 8 Recreation Corridors and Destinations

4WD Roads	Map Reference	Length (km)	Non-Motorized	Inventoried	Viewpoint # Appendix III Map 10 Major (Minor)
Priority 1					
Gaspard Lake - Hungry Valley	A - B	15	No	No	Not inventoried
Swartz Lake - Poison Mountain	C -D -E	10	No	No	Not inventoried
Yodel Cabin	H - I	15	No	No	Not inventoried
Priority 2					
Windy Ridge	D - H	9	No	No	Not inventoried
Poison Mount. - Churn Creeks	E - F	6	No	No	Not inventoried
Koster - Clear Lakes	J - K	16	No	No	Not inventoried

9.2.3 Non-Designated Trails Objectives and Strategies

Not all existing trails within the sub-regional planning area have been designated as recreation corridors. Some of these are stock trails, others may be old, indistinct trails not generally known or used by recreationalists. Existing trails, which are not designated as recreation corridors, will not be subject to the management guidelines for recreation corridors.

Non-Designated Trail Objectives	Non-Designated Trail Strategies
A. Accommodate the traditional users of non-designated trails.	1. Non-designated trails must be cleaned off after harvest. 2. If possible, log only one side of a trail at one time (i.e. Cutblock boundary runs along the trail). 3. If an industrial road must cross a trail, the sight distance along the industrial road should be minimized. For example; design a small jog in the industrial road where it crosses the trail.

Non-Designated Trail Objectives	Non-Designated Trail Strategies
A. Accommodate the traditional users of non-designated trails.	4. When spur roads are no longer required for industrial access, a small earth mound may be made where the trail is crossed. 5. If a cutblock does cross a trail, the trail location within the cutblock should be marked for the convenience and safety of traditional users. Non-designated trails that traverse cutblocks shall be identified by stubbing trees to a height <5 metres on both sides of the trail at a distance of approximately 50 metres between trees.

9.3 VISUAL RESOURCE MANAGEMENT

Map Reference: Appendix III Map 9 Visual Management
Map 10 Viewpoints and Lake Viewsheds

Cariboo-Chilcotin Land Use Plan Direction

The CCLUP (The CCLUP 90-Day Implementation Process, Final Report: pages 10, 12 and 13) identifies recreation and tourism targets and strategies, which focus on the following factors:

- Maintenance of backcountry recreation opportunities along regionally significant rivers and trails
- Maintenance of backcountry recreation opportunities in a significant portion of the areas of the region that are presently in a backcountry condition, principally in the Special Resource Development Zone; and
- Management for the retention of visual qualities over key recreation resources, including key lakes
- Maintenance of visual quality surrounding existing tourism facilities and key tourism areas.
- Maintenance of tourism industry development opportunities in association with backcountry areas.

The importance of recreation and visual quality is acknowledged in the CCLUP for the Special Resource Development Zones (SRDZ) with the following direction for Tourism and Recreation:

- Tourism development is to be directed to the SRDZ, with a focus on the "backcountry" areas identified.
- Backcountry recreation opportunities, outside of parks and protected areas, exist primarily in the South Chilcotin and Taseko Lake SRDZs of the Williams Lake Forest District.

The Interim Interpretive Guide (April 4, 1996) presented from the IAMC and the RRB as direction subsequent to the CCLUP, states: "The following principles should be used in applying visual targets:

- Where recreation or tourism targets state "to maintain visual quality", it is not assumed that the entire viewshed would automatically fall into any one category of the Visual Quality Objectives[1] (VQOs) of the Ministry of Forests Visual Management Guidelines. Rather it is assumed that further, localized planning processes will determine the appropriate mix of VQOs over a specific viewshed, while still meeting all other targets for the subzone.
- It was specifically not assumed that an entire viewshed would be assigned a Retention VQO, or that no activity would ever be visible. Rather it was assumed that the viewsheds would be managed for visual quality, and that management could include some change, to varying degrees, to the existing landscape".

[1] **Visual Quality Objectives (VQO):** a resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area.

9.3.1 Recreation Corridor Viewsheds

To maintain the visual quality, backcountry and recreational values of the Recreation Corridor Viewshed Polygons is the goal of visual management around the unique features in the South Chilcotin SRDZ.

Direction from the CCLUP and Interim Interpretive Guide was the basis for the methodology used for establishing recreational viewshed management guidelines and objectives and subsequently, the Visual Quality Objectives (VQO's) within the Backcountry Area and around the Recreation Corridor Viewscapes.

The analysis committee, in recognition of the unique values in the South Chilcotin SRDZ, presented options to incorporate these values that would integrate well with other resource targets and objectives to the Table. This represents the Scenario 5 Final or final consensus scenario. (Appendix V).

Methodology for Defining Recreational Viewsheds

The following section describes how the recreation corridor viewshed management guidelines and objectives were developed, and provides recommendations for monitoring the achievement of these objectives.

1. An extensive inventory and public input process was conducted.
2. Initial landscape inventory, recreation inventory, and recreation analyses were conducted:

a. L.A. West Landscape Architects (1994/1995, primarily Churn block), and

b. Viewpoint Recreation and Landscape Consulting (1995/1996, primarily the Western side of the SRP area).

3. Visibility Analysis from Big Creek Park was done in co-operation with Ministry of Small Business Tourism and Culture. The objective was to identify the views from selected points within the Big Creek Park that were outside of the Park and within the SCSRP area.
4. Review of high and low elevation viewpoints was conducted. High Elevation Viewpoint Guidelines were developed (March 1997).
5. Trails and 4x4 roads were identified, roughly plotted, viewshed estimated, and ranked. Input was received from the public regarding location, use patterns, and priority ranking.
6. Proposed Recreation Corridor Management Guidelines were developed.
7. Landscape inventory was done for the viewsheds of Roaster and Koster Lakes under the Lignum Limited Good Stewardship Program. Viewshed of Mud/Swartz Lake was estimated using site lines, until a proper inventory can be done.
8. Trail inventory of specific trails conducted by Fritz Mueller, J.S. Hart and Associates Ltd. (1997/1998).
9. Intensive review and analysis of the viewshed as seen from selected trails was completed. Digital modeling to support visual estimates of viewsheds as seen from priority viewpoints was done. Visual screening along corridors was considered as viewpoints were identified, plotted and ranked.
10. For analysis purposes, the viewsheds as seen from the priority routes were broken into separate polygons. Non-spatial percentages of retention, partial retention, and modification

were assigned to each Recreation Corridor Viewshed Polygon depending on the priority ranking of the trail, visual screening available, back country emphasis, current and potential use, priority ranking of the viewpoints and recreation potential. (Details Section 9.3.3 pages 49 to 57) For recreation corridor viewsheds polygons 1A, 1C(a), and 1C(b) objectives have been designed to accommodate high wildlife value areas in addition to visual values.

11. Achievement of the objectives for polygon viewsheds 1A, 1C(a), and 1C(b) will be assessed using percent alteration from the planimetric view. The achievement of the objectives for all other recreational corridor viewshed polygons will be assessed using perspective views from identified viewpoints.

9.3.2 Recreation Corridor Viewshed Management Objectives and Strategies

Recreation Corridor Viewshed Objectives	**Recreation Corridor Viewshed Management Strategies**
A. Develop a visual management strategy that can be utilized and measured for use in forest and other resource development planning processes. This strategy will reflect varying levels of visual quality objective mixes that will address the goals of the recreation corridor viewsheds and other visual areas.	1. Viewpoints were identified, numbered and ranked. 2. On areas with high visual sensitivity and backcountry values the recommended visual quality objective mixes are more restrictive. 3. In areas with lower visual sensitivity, the recommended visual quality mix is less restrictive but will still achieve the intent of the backcountry and visual objectives. 4. These areas may be established as "Scenic Areas" at the discretion of the District Manager.
B. Complete visual landscape inventories.	1. Ensure adequate funding is made available to complete the landscape inventory as soon as possible.
C. Establish visual quality objectives in visually sensitive areas as identified in the completed landscape inventories.	1. The results of the completed landscape inventories and final recommended visual quality objectives are expected to be consistent with the results of Scenario 5 Final analysis. Any variation from the Scenario 5 Final analysis will require a review by the IAMC and the RRB. Recommend that visual quality objectives be established by August 2002.
D. Define a visual strategy for the Recreation Corridor Viewshed Polygons, which includes approved Visual Quality Objectives.	1. Process to develop visual strategy: a) Establishment of a "scenic area" without VQO's over the visual areas identified. b) Conduct landscape inventories, as funding permits c) Review and analyze inventories, establishment of visual quality objectives. The target date for the establishment of VQOs is August 2002.

Recreation Corridor Viewshed Objectives	Recreation Corridor Viewshed Management Strategies
E. Proposed harvesting prescriptions will be evaluated to ensure that visual values and quality identified for the Recreation Corridor Viewshed Polygons are considered.	1. Blocks will be designed and evaluated primarily from the identified viewpoints (see Appendix III Maps 9 and 10, and Appendix XII.) Digital Terrain Models, or other appropriate tools, will be used to aid in design. If the identified viewpoints are not appropriate, alternate viewpoints will be recommended for establishment by mutual agreement between Agencies and Licensees. 2. For visually sensitive areas not yet inventoried, licensees and agency staff will work together to ensure that appropriate viewpoints are established. Priority will be given to areas where harvesting is approved in current forest development plans. 3. Review visual design proposals to ensure the objectives of recreation viewshed corridor polygons are achievable and consistent with the results of Scenario 5 analysis. 4. Until Visual Landscape Units are defined through on-the-ground inventories and visual quality objectives (VQOs) are established, there will be a heavier reliance on the intent of each VQO class definition.
F. Maintain the backcountry visual experience for the trail adjacent to Big Creek.	1. A more detailed visual landscape inventory may be completed along the trail subject to funding. This inventory may identify some sensitive areas within this viewshed. At this time current visual management may be adjusted to accommodate the new information. There will be no impact to modeled equivalent excluded areas (EEAs). 2. In the interim, visual management will be based on the recommendations for the "Big View" polygons as agreed at the Planning Table. 3. Manage to the objectives defined for the Big Creek viewshed polygons: a) Newly constructed access must consider the visual sensitivity of the area. b) Minimize road density to the greatest extent possible. c) Grass-seeded road right-of-ways as soon as possible. d) Road beds should be ripped and seeded. 4. Construct roads to minimum required standard i.e. narrow.

Recreation Corridor Viewshed Objectives	Recreation Corridor Viewshed Management Strategies
G. To maintain the special scenic values of visually sensitive areas identified in the zone.	1. Consider the use of alternative silviculture systems to achieve visual quality objectives where size, stand and ecological conditions are appropriate.

9.3.3 Individual Descriptions and Strategies for Recreation Viewshed Polygons

Map Reference: Appendix III Map 9 Visual Management
Map 10 Viewpoints and Lake Viewsheds

The distribution of visual quality objectives (VQOs) within each Recreation Corridor Viewshed Polygon is currently non-spatial. The percentage VQO class approximates the expected visual management required to maintain visual quality in relation to the identified recreation and tourism values within the polygon. As part of the strategy for each polygon, a description of the relative location and application of each VQO is given to guide design. This will be an interim process until such time as formal landscape inventories can be conducted in the area. The VQO designation will not result in increases in rotation or Equivalent Excluded Area.

The following information is consistent with Scenario 5 Final analysis: (Appendix V) Polygon information is laid out in the following format:

Polygon #*(*)

The numbers of the Recreation Corridor Viewshed Polygons correspond to Map 9 in Appendix III. The first upper case letter (A, B, etc.) of the polygon indicates its relative priority against other polygons within the SRP; i.e. Polygon 1A is a priority one polygon. The lower case letter in brackets ((a), (b) etc.) is a subdivision of the polygon, which permits individual descriptions and site specific applications of design principles.

Location generally describes the location of the polygon within the SCSRP.

Current Use

Current use describes the degree of use of the travel corridor within the polygon, or the polygon it influences if there is not travel corridor within it (in instances where the polygon comprises a portion of a viewshed). Current use estimates are based on local knowledge, field reconnaissance by recreation contractors, and public input. Use ratings are relative to the high use areas of Hungry Valley and the surrounding areas of Mud/Swartz Lakes.

Recreation Potential

Recreation Potential considers the recreational values within the polygon and the anticipated use by the public in the future.

Objective

The objective describes the relative distribution of the VQO classes and any polygon specific comments regarding corridor management.

Rationale

Rationale describes the values within the polygon and the justification for the objectives (visual prescription).

Visual Quality Objectives (VQO)

V Q O describes the resource management objective established by the Ministry of Forests District Manager or contained in a higher level plan. The VQO reflects the desired level of visual quality based on the physical characteristics and social concern for the area.

The specific VQO classes are defined as follows:

Preservation: No visible alterations

Retention: Human caused alterations are visible but not evident.

Partial Retention: Human caused alterations are evident but subordinate and not dominant.

Modification: Human-caused alterations are dominant but have natural appearing characteristics.

Maximum Modification: Human-caused alterations are dominant and out of scale.

The percent of alteration in perspective view values was derived from the Ministry of Forests *Clearcutting to Meet VQOs* study completed March 1996. The following table was extracted from Ministry of Forests *Procedures for Managing Visual Resources to Mitigate Impacts on Timber Supply* (May 1998).

VQO	% Denudation range in perspective views
Preservation	0
Retention	0-1.5
Partial Retention	1.6-7.0
Modification	7.1-18.0
Maximum Modification	18.1-30.0

Individual Polygon Descriptions

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Big Creek View "A"	Steep foreground views adjacent to Big Creek	Moderate to high		Retention/Partial Retention: 200 year rotation. Due to visual sensitivity, the % alteration will be to the restrictive end of partial retention, measured in the perspective view.	
Big Creek View "B"	Dash headwaters	Moderate	High	Partial retention 100%: 180 year rotation. Due to visual sensitivity, the % alteration will be to the restrictive end of partial retention, measured in the perspective view.	
Big Creek View "C"	Adjacent to Big Creek, below the western slopes of Piltz / Wales.	Moderate	High	100% partial retention VQO and 100% available in one rotation.	It is assumed that partial cutting will achieve a partial retention objective without an extended rotation. This is flat terrain with forested islands.
Polygon 1A	North facing slopes of the Hungry Mountains, visible from Hungry Valley.	High	High	50% retention VQO: primarily the upper slopes of the Hungry Mountains and recreation destinations. 50% partial retention VQO: primarily lower slopes of the Hungry Mountains. Visual screening will be utilized adjacent to the open range and wetlands of Hungry Valley.	Hungry Valley has been identified as an important recreational area and a travel corridor to the Big Creek Park. The surrounding mountains and hills provide a natural appearing environment for Hungry Valley. The area is commonly accessed in the fall by a 4x4 road from Gaspard Lake. This is part of the core backcountry area adjacent to Big Creek Park.

Polygon 1A: Details to Objective

The objective is to manage polygon area 1A on a 200 year rotation, 10% removal/20 year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of/retention partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply.

It is assumed that future determination of VQOs within polygon 1A will guarantee timber access to 100% of the productive forest land base within polygon 1A (subject to other constraints as modeled by the SCSRP Planning Table) over a 200-year rotation. Where VQOs are recommended that are more constraining to operational access than that modeled, VQO recommendations for the remainder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1B	Upper Lone Cabin Basin	Low	Moderate	15% Retention VQO: adjacent to, or close to, the trail and recreation destinations. Maintain visually effective screening adjacent to trails. 20% Partial Retention VQO: in the foreground of the trail viewshed, viewshed of major viewpoints. 65% Modification (with Design) VQO: in the mid to background viewshed, and non-visually sensitive areas.	Contains several small lakes with rugged and varied terrain, high recreational and backcountry opportunities and is used by a commercial guide. This polygon is an integral portion of the "connection backcountry" between Big Creek and Churn Parks.
Polygon 1C(a)	Upper Dash Creek	Moderate	High	20% Retention VQO: foreground views, especially steep slopes, and adjacent to Dash Valley trail, and recreation destinations. 60% Partial Retention VQO: midground viewshed	Polygon has high backcountry values and a more pristine setting than Hungry Valley. Maintain trail as non- motorized with emphasis on a natural recreational experience setting. Guide/outfitter camp and range camp are situated within the polygon. Important viewpoints include

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1C(a)	Upper Dash Creek	Moderate	High	20 % Modification (with design) VQO: in the background, on upper slopes, in areas with a higher visual absorption capacity, and non-visually sensitive areas. Retention VQO: 200-metre "Recreation Corridor Segment" was identified to protect the trail from Hungry Mountain to the Dash Valley Cabins. The "Recreation Corridor Segment" is to be managed on a Retention VQO. (Recreation Corridor Segments: Appendix III Map 9)	cabin sites and open meadows in the westerly portion.

Polygon 1C(a) Details to Objective

To manage polygon area 1C(a) on a 135-year rotation, 15% removal / 20-year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of/retention partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply.

It is assumed that future determination of VQOs within polygon 1C(a) will guarantee timber access to 100% of the productive forest land base within polygon 1C(a) (subject to other constraints as modeled by the SCSRP Planning Table) over a 135-year rotation. Where VQOs are recommended that are more constraining to operational access than that modeled VQO recommendations for the reminder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1C(b)	Lone (Beaver) Valley: West / Prentice Lake	High	High	20% Retention VQO: primarily in the foreground south of the Lone Valley trail (on the north facing slopes), foreground views along the Prentice Lake Trail and in the vicinity of Prentice Lake, and other recreation destinations as listed below. Maintain natural screening where possible. 60% Partial Retention VQO: upper slopes south of the Lone Valley trail and slopes north of the Lone Valley Trail. 20% Modification (with design) VQO: background and non-visually sensitive areas. Retention VQO: 200-metre "Recreation Corridor Segment": on Dash/Lone Valley trail portion. " Corridor Segment" to be managed as a Retention VQO (Recreation Segments: Appendix III Map 9)	Area is a popular destination for recreationalists who access the area from Lillooet Forest District. Lone Valley has an extensive network of beaver ponds and wet meadows in the valley bottom that permits unobstructed views to the south side of the valley. Important viewpoints include the Beaver Valley cabin at Panlos Creek, the intersection of Dash/Lone (Beaver) Valley and Prentice Lake trails, and Prentice Lake. Hikers access the alpine area north of Lone (Beaver) Valley.

Polygon 1C(b) Details to Objective

To manage polygon area 1C(b) on a 135 year rotation, 15% removal / 20 year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of/retention partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply.

It is assumed that future determination of VQOs within polygon 1Cb will guarantee timber access to 100% of the productive forest land base within polygon 1C(b) (subject to other constraints as modeled by the SCSRP Planning Table) over a 135 year rotation. Where VQOs are recommended that are more constraining to operational access than that modeled, VQO recommendations for the reminder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1D(a)	Lower Hungry Valley/Fish Lake	Moderate	High	10% retention VQO: adjacent to wetlands, meadows, travel routes, and recreation destinations as listed below. Maintain visually effective screening adjacent to the trail and adjacent to open range/timber interface unless block design allows interlock with existing openings. 90% modification VQO (with design): non-visually sensitive areas.	This polygon is part of the 'backcountry" area adjacent to Big Creek Park and is integral to the recreational values of Hungry Valley. It is adjacent to the travel corridor to Big Creek Park. Visual design principles must be applied in this area, as it is adjacent to the park, along the corridor to the park, and within the high recreational value area of Hungry Valley. With this flat topography, it is felt that foreground management techniques can be used to mitigate visual impact in this polygon.
Polygon 1D(b)	Lower Hungry Valley, vicinity of the "Fire Road".	Moderate	High	Maintain visually effective screening along recreation corridors and destinations as listed below.	As per 1D(a), this area is essentially the corridor of the "Fire Road". It is adjacent to the Big Creek Park, and one of the potential main travel routes to the Park.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1D(b) (Continued)	Lower Hungry Valley, vicinity of the "Fire Road".	Moderate	High	10% retention VQO, adjacent to the trail, wetlands, meadows, Fish Lake, and recreation destinations. 90% modification VQO (with design)	This polygon also contains Fish Lake. Fish Lake is classified as a Harvesting Guideline Class "A" lake under the Lakes Classification process. The viewshed will be managed as a scenic area (Lake Classification Guidelines: Appendix XI). Due to the flat topography, it is felt that foreground management techniques can be used to mitigate visual impact in this polygon.
Polygon 1E(a) (north)	South slopes of Piltz/Wales Mountains, adjacent to Hungry Valley	Moderate	High	100% partial retention VQO	South slopes of Piltz/Wales mountains and terrain adjacent to Hungry Valley. As per Polygon 1A, this viewshed is critical to the setting of Hungry Valley and the recreational values there. Portions of this polygon may be visible from within Big Creek Park.
Polygon 1E (a) (south)	Hillside south of Fish Lake, Fish Lake Viewshed	Moderate	High	100% partial retention VQO.	Part of the setting of Hungry Valley and the viewshed from Fish Lake. Fish Lake has been rated as a Harvesting Guideline Class "A" lake under the Lakes Classification Process. The viewshed of Fish Lake will be managed as a scenic area. Portions of this polygon are also visible from Big Creek Park.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 1E(b)	Mud/Swartz 4x4 road	High	High	Maintain trail integrity with the application of the Recreation Corridor Strategy: 60 metre trail management corridor. 100% modification with design.	Important route from Mud / Swartz recreation area to the Fraser River via Buck Mountain, Poison Mountain, China Head Mountain, etc. Polygon forms part of the "connection backcountry" between Big Creek Park and Churn Protected Area. Trail may be managed to a "roaded natural" recreational experience.
Polygon 1E(c) Big Creek Park Viewshed	Western slopes of Piltz/Wales, adjacent to Big Creek	Moderate	High	55% partial retention VQO, primarily on the upper slopes. 45% modification (with design) VQO: primarily on the lower screened slopes.	CCLUP contains direction for the maintenance of visual values for viewpoints within Big Creek Park. Upper portions of polygon are visible from Scallon Meadows, Mt. Tom, and Dil-Dil Plateau. Well designed cutblocks with a higher visible alteration can be accepted if views are from distances beyond 8 kms.
Polygon 2F:	Dash Creek/Lone (Beaver) Valley connector trail	Moderate	Moderate	Retention VQO: 200 metre "Recreation Corridor Segment" from the intersection of Dash Creek south to the junction with the Prentice Lake Trail is to be managed to a Retention VQO for the purposes of maintaining visually effective screening along the trail. (Recreation Corridor Segment: Appendix III Map 9) 75% Modification (with design) VQO and EEA = 0.09 25% Partial Retention	This trail is the connection between Dash Creek and Lone (Beaver) Valley Creek: "core backcountry" with high recreational potential. Vegetative and topographic screening along the trail in the midsection of this polygon permits greater harvesting opportunity.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 2G(a)	Eastern Hungry Valley/West Churn Creek	High	High	20% Partial Retention VQO: Adjacent to the trail, wetlands, And meadows, eastern shoulder of the Hungry Mountains adjacent to Polygon 1A, and in the viewshed of the Hungry Valley Range cabin. 80% Modification (with design) VQO: Midground viewshed and non-visually sensitive areas.	Contains the Eastern portion of Hungry Valley and the headwaters of West Churn Creek. This is the entrance to Hungry Valley via the Gaspard Lake 4x4 road and the 3200 Rd. High recreation and visual values exist in this area. Some modifications and trail relocation in the central portion of this polygon. Important viewpoints are the trailhead in the vicinity of the Hungry Valley Cow Camp, and Moose Lake. These are broad expansive views.
Polygon 2G(b)	Lone (Beaver) Valley east; section south of trail, including trail	High	Moderate	100% Partial Retention VQO: 200 metre trail management corridor used to maintain visually effective screening.	Contains the Lone Valley Trail from trailhead at Swartz Lake to the eastern portion of Lone Valley. Important views are to the south of the trail. Good opportunities for management of vegetative screening. An important viewpoint and camping opportunity is in the open meadow where the trail from the south intersects Lone Valley.
Polygon 2G(c)	Small detached polygon east of 2G(e)	High	High	100% Modification (with design) VQO	The polygon is visible from southern portion of the Dash-West Churn Trail as it passes over its highest point along the Hungry Mountains. The important viewpoint in this polygon is Viewpoint #9 (Appendix III Map 10). This polygon is a portion of the viewshed of the connector route to the higher recreational and backcountry values of Upper Dash Creek.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 2G(d)	Lone Valley East; section north of trail	High	Moderate	100% Modification (with design)	Views from the trail in the vicinity of this polygon are predominantly to the south. This is expected to permit a greater degree of alteration to the north of the trail.
Polygon 2G(e)	Eastern shoulder of Hungry Mountains	High	High	100% Modification (with design) VQO: Retention VQO: 200-metre "Recreation Corridor Segment" identified in this polygon. Recreation Segment is to be managed to a Retention VQO to permit visually effective screening along the trail. (Recreation Corridor Segments: Appendix III Map 9)	This is the southern portion of the Dash -West Churn Trail as it passes over its highest point along the Hungry Mountains. Connector route to the higher recreational and backcountry values of Upper Dash Creek. Good opportunities for management of vegetative screening along trail corridor. The important viewpoint is Viewpoint #9, the opening at the summit of the trail. (Viewpoints: Appendix III Map 10)
Polygon 2H(a)	Viewshed of 4x4 road to Hungry Valley from Gaspard Lake	High	High	100% modification (with design) VQO: Retention VQO: 100 metre "Recreation Corridor Segment" adjacent to 4x4 road. Recreation Corridor Segment to be managed to a Retention VQO for the purposes of visually effective screening. (Recreation Corridor Segments: Appendix III Map 9)	Main route into Hungry Valley in the fall. A "roaded modified" recreational experience is acceptable along this route.

Polygon Name	Location	Current Use	Recreation Potential	Objective	Rationale
Polygon 2H(b)	Lower Lone Cabin Creek	Low	Moderate	100% Modification (with design) VQO: 200 metre trail management corridor	Open forest along the Lower Lone Cabin Trail presents some opportunities for visual screening. A commercial guide uses the trail. Important viewpoints are at the trailhead (km 0) and km 1.8 and km 7.2. These viewpoints are primarily at the crests of ridges. This polygon forms part of the "connection backcountry" between Big Creek Park and Churn Protected Area. Mule deer winter range management strategies will contribute to visual quality in this polygon.
Polygon 2I	Windy Ridge 4x4 road	High	High	60 metre trail management corridor based on Recreation Corridor Strategy (Recreation Corridor Segments: Appendix III Map 9) Modification (with design) is acceptable for the viewshed of the road.	Popular route used by four-wheel drive clubs since it permits extended tours through a "roaded natural" environment. Maintain the integrity of the route and the road.
View from Sky Ranch looking South	View from Sky Ranch looking South (potential access into Big Creek Park)			This viewshed will be managed using visual design principles. Techniques used in the "Visual Landscape Design Training Manual" will be applied here.	

9.3.4 Visual Landscape Management From High Elevation Viewpoints

Map Reference: Appendix III Map 10

The Ministry of Forests manages visual quality on public forestlands through a system called visual landscape management. Visual landscape inventory has been geared to address views from main travel corridors such as roads, recreation trails and main water corridors - all are 'valley-bottom' views. The management process culminates in a resource management objective for visuals called a visual quality objective (VQO). The District Manager, under the Forest Practices Code Act may establish VQOs. Visual impact assessments are required to satisfy Visual Quality Objectives (VQO). This assessment procedure works well for views with well defined visual landscape units as seen from particular viewpoints looking horizontally, or upwards. The boundaries of these units are defined by the uniformity of physical or viewing characteristics of the terrain; one unit is separated from another because of well-defined breaks in the landform, or viewing conditions.

However, the procedure for delineating landscape units, assigning a VQO and designing cutblocks to meet the allowable alteration percentage does not transfer effectively to high elevation viewpoints. For high elevation viewpoints, a different approach is required.

For the purposes of the SCSRP, high elevation viewpoints are viewpoints from which a vast panorama can be seen. These viewpoints are located above the tree line encompassing a panoramic viewing area.

The following viewpoints are recognized as high elevation viewpoints for the plan area (Appendix III Map 10 Viewpoints and Lake Viewsheds) The viewpoints marked with an asterisk * are currently used by commercial tourism operators.

- Alpine ridge north of the Black Dome road
- Red Mountain*
- French Mountain*
- Poison Mountain*
- Buck Mountain*
- Quartz Mountain*
- Height of land, south of Lone Valley Creek
- Hungry Mountain
- Piltz Peak
- Dash Hill*, Mount Tom* and Dil-Dil Plateau* within Big Creek Park
- Alpine ridge north of Lone Valley

9.3.4.1 Visual Management: High Elevation Viewpoints Objectives and Strategies

High Elevation Viewpoints Management Objectives	High Elevation Viewpoints Management Strategies
A. Maintain a natural looking landscape with minimal geometric shapes and	1. The management strategies following will be applied to cutblocks within 16 kilometres of the identified high elevation viewpoints.

High Elevation Viewpoints Management Objectives	High Elevation Viewpoints Management Strategies
Objective A (Continued) Maintain natural flow patterns.	1. Strategy 1 (Continued) Techniques from the Visual Landscape Design Training Manual will be applied here. The Table recommends that Visual Quality Objectives not be established. 2. Design of cutblocks is critical and essential: Cutblocks need to have organic shapes and mimic the pattern of natural openings in the area (e.g. lakes, rock outcrops, meadows, and fire history). The shapes should be asymmetrical, interlocking, organic and have varying size consistent with the naturally occurring patch size distribution for the area. Avoid repetition and similarity. 3. Visual landscape design may also be applied to main haul road rights-of-way, recreation corridors, and riparian management zones that are visible from high elevation viewpoints. If possible, avoid creating a straight-edged, narrow, ribbon effect. 4. Where a viewshed from a high elevation viewpoint overlaps with a viewshed from a low elevation viewpoint, design considerations from the low elevation viewpoint will take precedence. 5. Cutblocks beyond 16 kilometres that may be visually dominant should follow visual landscape design management principles.

9.4 LAKE CLASSIFICATION

Map Reference: Appendix III Map 11 Lakes Classification

9.4.1 Lake Classification Objectives and Strategies

Lake Classification Objectives	Lake Classification Strategies
A. Classify lakes, set standards for management of surrounding Lakeshore Management Zone, and define scenic area (if applicable).	1. Lakes and their surrounding lakeshore will be managed as per the assumptions used for Scenario 5 final analysis. 2. Ministry of Forests and Ministry of Environment established Lakes Classification Committee to solicit public and stakeholder input to process. 3. Consensus recommendations were reached by the Lakes Classification Team regarding classification of lakes in the SCSRP. 4. Recommend that approval of lake management goals and direction be given by District Manager as per Operational Planning Regulations. 5. Recommend that lake management criteria in the "Lake Classification Process: Williams Lake Forest District (WLFD) Procedures" be applied to operational plans in the SCSRP (see Appendix XI). 6. All classified lakes within the SCSRP have been assigned a 200-metre Lakeshore Management Zone (LMZ). For Class A lakes, this LMZ is considered a reserve and contributes in its entirety to the "no harvest" area. 7. The LMZ for Class B lakes is to be managed via a partial cutting silvicultural system (e.g. patch, group, or single tree selection) over a 160 year rotation. A minimum of fifty percent (50%) of the basal area is to be retained on-site post harvest and a maximum of twenty five percent (25%) of the LMZ is to be impacted per pass. 8. Class C, D, and E lakes are to be managed as per the WLFD procedures. Both clear cutting and partial cutting are acceptable silvicultural practices within these LMZs. These lakes are to be managed over a normal rotation.

9.4.2 Lake Viewsheds

Map Reference: Appendix III Map 10 Viewpoints and Lake Viewsheds

It is recommended that the following be established as scenic areas under the Forest Practices Code Act:

- Koster Lake Viewshed
- Roaster Lake Viewshed
- Swartz Lake Viewshed
- Clear Lake viewshed (adjacent to Churn Protected Area)

The Visual Quality Objectives that were recommended in the visual landscape inventories and at the Table should become the established Visual Quality Objectives for the above viewsheds, to be consistent with the Lakes Classification as modeled for the Scenario 5 Final analysis.

- Gaspard Lake Viewshed

View from Gaspard Lake into the South Chilcotin SRDZ. Only a narrow fringe of the Gaspard viewshed is within the SCSRP area, and it is approximately 6 kilometres from Gaspard Lake. For this reason Visual Quality Objectives will not be established. The portion of the viewshed in the SRDZ will be managed through visual design principles.

9.4.3 Classified Lakes

Map Reference: Appendix III Map 11 Lakes Classification

CCLUP Subunit	Landscape Unit	Lake Name or Mapsheet & Polygon	Lake Size (hectares)	Lake Mgmt. Goal	Harvesting Guideline Class	Boating Regulation	Fishing Regulation	Commercial Land Development	Access Management Within Lakeshore Management Zone	Lake Viewshed
South Chilcotin SRDZ	Koster - Lone Cabin	Koster	13	Quality	B	General	General	No new tenures	Temporary/ Reclaimed	Partial Retention
	Koster-Lone Cabin	Roaster	9	Wilderness	A	General	General	No new tenures	No new roads	Retention and partial retention
	Upper Churn	Swartz	9	Quality	B	General	General	No new tenures	Temporary/ Reclaimed	Retention and partial retention
	Upper Churn	920.027-290	12	Quality	B	Restricted	Restricted No power boats	No new tenures	Motorized restricted	No concern
	Churn	920.037-504	3+	Quality	B	General	General	No new tenures	No new roads	Overlaps Big Basin No Harvest
	Churn	920.037-572	6	Quality	B	General	General	No new tenures	Walk-in/ Fly-in	OverlapsEast Basin Retention Within MDWR
	Upper Big Creek	Fish Lake 092O036-555	96	Wilderness	A	General	General	No new tenures	ATV/walk-in	Overlaps Within recreation corridor viewshed
	Upper Big Creek	Mud	44	General	B	General	General	No new tenures	Temporary/ Reclaimed	Overlaps Within recreation corridor viewshed

Classified Lakes

Map Reference: Appendix III Map 11 Lakes Classification

CCLUP Subunit	Landscape Unit	Lake Name or Mapsheet & Polygon	Lake Size (hectares)	Lake Mgmt. Goal	Harvesting Guideline Class	Boating Regulation	Fishing Regulation	Commercial Land Development	Access Management Within Lakeshore Management Zone	Lake Viewshed
South Chilcotin SRDZ	Upper Big Creek	920.036-716	8	General	B	General	General	No new tenures	Walk-in/ Fly-in	No concern
	Upper Big Creek	920.035-216	11	Quality	C	General	General	No new tenures	Walk-in/Fly-in	Overlaps Within recreation corridor viewshed. Partial Retention
	Big Creek	920.045-942	10	General	C	General	General	Enhanced referral	Temporary/ Reclaimed	No concern
	Big Creek	920.055-131								Unclassified
Gaspard ERDZ	Dash	920.027-253	14	General	D	General	General	Development permitted	Temporary	No concern
	Dash	920.036-97 (Moose Lake)	6	General	D	General	General	Development permitted	Temporary/ Reclaimed	No concern overlaps within recreation corridor viewshed
	Gaspard	92O.27-34	5	General	D	General	General	Development permitted	Temporary	No concerns

Refer to Appendix XI for definitions of the lake management goals and harvesting classes.

Note - stock watering will be as determined in Range Use Plans (under authority of the FPC) regardless of the lake classification.

9.5 COMMERCIAL RECREATION

9.5.1 Background Information

The British Columbia Assets and Land Corporation (BCAL) with Ministry of Environment, Lands and Parks (MELP) administer the Commercial Recreation (CR) policy for the purposes of authorizing Crown land use by commercial tourism operators.

Commercial recreation applies to all forms of outdoor recreation activities carried out on provincial Crown land (including Crown land in a provincial forest and Crown land covered by saltwater and freshwater) on a fee-for-service basis. This includes commercial mechanized ski guiding, commercial hunting and fishing, commercial snowmobile touring, commercial recreation activities that require the operator to construct or place improvements on the foreshore (e.g. wharves and floats, commercial horseback tours, etc.).

The SCSRP may be used to identify commercial recreation opportunities, and to direct the present and future use of Crown land in a specified area. A commercial recreation plan should identify available Crown land, indicate the associated uses that would be considered within each area, and provide a balanced context for delineating those parcels which would not be offered for development.

As an example, many commercial operators in the plan utilize horses in backcountry areas. Concern has been expressed regarding the potential for overuse of natural forage in the vicinity of frequently used camps or stopping points. Through a CR application process, intensive use of sites that have previously exhibited serious forage deterioration, or that are proposed to receive high levels of use, will be identified for special management through the Operating Area Management Plan. This Operating Plan forms part of the commercial operator's tenure. Management options should include that alternate feeding requirements should be arranged with consultation between Ministry of Forests (Range), Ministry of Environment, Lands and Parks, and local range tenure holder(s) because of concern over the importation of noxious weeds or foreign species.

9.5.2 Commercial Recreation Management Objectives and Strategies

Commercial Recreation Management Objectives	Commercial Recreation Management Strategies
A. Identify commercial opportunities.	1. Ministry of Environment, Lands and Parks, BC Assets and Land Corporation, and Ministry of Small Business, Tourism, and Culture should work together to develop a commercial recreation plan to identify available Crown land, indicate the associated uses that would be considered within each area, and provide a balanced context for delineating those parcels which would not be offered for development.

Commercial Recreation Management Objectives	Commercial Recreation Management Strategies
B. New tourism / commercial recreation development should be focused on areas managed for visuals and backcountry conditions; and should complement the existing character of the area's recreation activities.	1. New development should meet resource management guidelines of the SCSRP. New commercial recreation applications should demonstrate consideration of environmental carrying capacities and maintenance of quality outdoor experience for existing and future users.

10 TIMBER ACCESS

Background Information

Although there are a number of harvesting systems available for implementation within the South Chilcotin Sub-Regional Plan planning area, it is neither the intent nor the function of this section to describe them to the reader. This section, 'Timber Access', addresses nothing more than operational access to the land base. That is, it describes:

- What percentage of the land base is available for development
- Where the authority is from which timber access is derived; and
- What form (i.e. modified versus conventional) its distribution shall be across the landscape.

Cariboo-Chilcotin Land Use Plan Direction

Forest development objectives within the South Chilcotin Special Resource Development Zone (SC SRDZ) portion of the SCSRP planning area shall recognize direction supplied in Appendix 5, Section 3 of the CCLUP document.

Appendix XII of the CCLUP Final Integration Report (the 'Integration Report') dated April 6, 1998, provides a comparison of the subunit targets contained in Appendix 3 of the CCLUP 90 Day Implementation Process Final Report (CCLUP) to those developed during the integration process. For the South Chilcotin Special Resource Development Zone (SRDZ) and the Gaspard Enhanced Resource Development Zone (ERDZ) – the subunits that encompass the area of the SCSRP (SCSRP) – the Integration Report quotes the following numbers.

Subunit	**Integration Report**			
	Modified Extended	Modified EEA	No-Harvest	EEA
South Chilcotin	31%	9%	7%	16%
Gaspard	7%	3%	11%	14%

Definitions

- Equivalent Excluded Area or EEA is the common unit used to measure the impact of non-timber strategies on timber access. EEA is based on the difference between a strategy rotation age and the base (normal) rotation age. As an example, if a prescription implies an extended rotation of 160 years for a stand in which the normal rotation age is 80 years, then the EEA would be 0.5 (i.e. 1 – (80/160)) multiplied by the strategy area. In this example, 50% of the strategy area would be unavailable for harvest during a normal rotation. EEA represents the equivalent excluded area by subunit and is derived by combining the Modified Extended impact to the No-Harvest impact.
- Rotation Age or Rotation is the planned number of years between the formation or regeneration of a tree crop or stand and its final cutting at a specified stage of maturity. It can be based on physical, biological, pathological or economic criteria. For the purposes of implementing the SCSRP, CCLUP defined rotation as the minimum harvest age by tree species

for the Cariboo Forest Region. That is, 80 years for stands in which lodgepole pine (Pli) are the leading species and 120 years for those stands that are comprised of other leading species.

- Modified Extended is the percentage area by subunit that, based on the results of the long-term analysis, will require a management prescription that extends the rotation beyond normal.
- Modified EEA is the equivalent excluded area impact by subunit attributable to the Modified Extended area. For example, in the South Chilcotin SRDZ, the 31% of the subunit that is under some form of modified harvest represents an equivalent No-Harvest area of 9%.
- No-Harvest refers to the percentage area by subunit that, based on the results of the long-term analysis, will not be harvested over a rotation. This area includes the estimated impact of RMZs, OGMA and other land exclusions within the planning area.

10.1 SCSRP TIMBER ACCESS

10.1.1 Timber Access Targets

In recognition of the above, the following access targets were derived for the area encompassed by the SCSRP (see Appendix V).

Subunit	**SCSRP Planning Area**
	EEA
South Chilcotin	16.30
Gaspard	12.31 (Please see Section 5: Biodiversity)

Equivalent Excluded Area (EEA) calculations for the SCSRP planning area are the result of access netdowns due to non-timber management strategies developed by the Table and are presented as management assumptions modeled in SCSRP Appendix V Scenario 5 Final dated February 9th, 1999.

As indicated in the CCLUP, there is joint sign-off of Forest Development Plans – to the extent they apply to SRDZ areas within the SCSRP planning area – by the Statutory Decision Maker (SDM) of the MOF and MELP. Consistent with their authority, the SDMs have indicated that they accept Section 4 of the Integration Report, as approved by the RRB and IAMC, as appropriate advice and direction for achieving the overall objectives of the CCLUP. SDM direction as it pertains to the Integration Report and timber access targets may be found in the Statutory Decision Maker Direction to Operational Plan Proponents document dated April 30,1998.

Although Section 4 of the Integration Report provides appropriate advice and direction for achieving the overall objectives of the CCLUP, the Integration document also provides valuable

guidance as it relates to the development of a timber access impact model for the SCSRP planning unit. That is:

1. Non-timber impacts on timber access shall be based on management prescriptions developed by the SCSRP planning group.
2. Each non-timber strategy shall be analyzed and the prescription shall be translated into an implied rotation age. If a strategy requires that stands be retained beyond the base rotation age, a resultant impact to timber access shall be calculated via an EEA. In simple terms, the longer the strategy rotation ages the greater the impact on timber access.
3. EEA impacts shall be considered incremental to current silvicultural systems in practice. For the purposes of this analysis, the following prescriptions are assumed to be normal forest management practices: even-aged management for all conifer species excluding Douglas fir; and, uneven-aged management for Douglas fir leading stands.
4. Silvicultural Systems (SS) that have the potential of being implemented within the SCSRP planning area include:
    - Single Tree Selection: a silvicultural system (SS) in which age classes are created or maintained through the removal of individual stems of all diametre classes uniformly throughout the stand.
    - Group Selection: an uneven-aged SS that removes trees to create openings within the stand that are less than or equal to twice the height of representative mature stems.
    - Shelterwood: a SS where trees are removed in a series of cuts designed to achieve a new even-aged stand under the shelter of remaining trees.
    - Patch Cutting: a SS that creates openings less than one hectare in size. Each opening is intended to be managed as a distinct even-aged unit.
    - Clearcut: an even-aged SS that removes the entire stand of trees during a single harvesting operation. Openings are one hectare or greater and at least two tree heights in width.
    - Partial Cutting: a SS in which only selected trees are harvested. Seed Tree, Shelterwood, Single Tree and Group Selection, and Clearcutting with reserves are examples of a Partial Cutting system.
5. The current species distribution is assumed to remain constant over time (i.e. stand conversion is not assumed to occur within the planning area).
6. Where draft Landscape Units are partially located within Protected Areas, the productive forest land base within the protected area is assumed to contribute to Old Seral requirements within that unit.

Further to the above and within the area of the plan, the following assumptions are made as they pertain to EEA calculations:

1. They apply to the productive forest land base of the applicable CCLUP subunit. The productive forest land base equates to the total area of Crown forest within the SCSRP determined by subtracting the following:

- All non-Crown land;
- All Crown land committed to non-timber use through a Land Act designation;
- All non-forest Crown land; and,
- All forest area classified as brush or non-commercial cover in the forest inventory.

2. They include all impacts associated with the application of management prescriptions developed by the Table.
3. They include all impacts associated with management constraints detailed in the *Forest Practices Code of British Columbia Act* (FPC); and
4. They are consistent with those detailed in the CCLUP as modified by the Integration Report, and ultimately by the SCSRP analysis process.

It is assumed by the Table that the 'Implementation and Monitoring Committee', when established by the IAMC and RRB, will examine Forest Practices Code impacts to ensure that legislative constraints are not incremental to EEA targets developed for the SCSRP planning area. Further to this and in the context of operational planning, the Table also assumes that the 'Implementation and Monitoring Committee' will document instances where developmental activity is constrained beyond those levels prescribed and predicted by the Table: those instances where operational realities are not accurately reflected by SCSRP modeling assumptions. Where either of these situations exist, it is expected that the 'Implementation and Monitoring Committee' will produce and supply appropriate resolution recommendations to the IAMC/RRB.

10.1.2 Timber Access Management Objectives and Strategies

Timber Access Management Objectives	Timber Access Management Strategies
A. Maintain timber access within the South Chilcotin SRDZ subunit and the Gaspard ERDZ subunit that accurately reflects the results of Scenario 5 Final.	1. Within the South Chilcotin SRDZ subunit and the Gaspard ERDZ subunit, implement harvesting and access management plans in a manner consistent with consensus strategies developed for the area.
B. Prescribe silvicultural prescriptions and implement harvesting regimes in a manner consistent with management strategies developed for the SCSRP.	1. Harvesting activities are not to be proposed within areas that have been excluded from the operable land base (e.g. riparian reserves, OGMA, Big Basin). Where harvesting activities are proposed in areas that are subject to the constraints of sector strategies, management prescriptions must recognize consensus recommendations developed by the Table. Access and operations proposed on the residual land base shall be governed and guided by the FPC.
C. Pursue enhancement activities in the Gaspard ERDZ portion of the SCSRP planning area that, among other things, increases the productivity of the forests within the subunit. (CCLUP: Pg 7).	1. Management opportunities that increase wood quality and/or fiber yield should be pursued where it is feasible to do so.

Timber Access Management Objectives	Timber Access Management Strategies
D. Timber development within the South Chilcotin SRDZ portion of the SCSRP planning area should focus on the central region of the polygon. (CCLUP: Page 87).	1. Although the operational area extends beyond the central region of the South Chilcotin SRDZ subunit, initial planning work should focus on the central portion of this polygon.
E. Within the Gaspard ERDZ portion of the SCSRP planning area, the primary restriction to timber development shall be in the southwestern portion of the polygon. (CCLUP: Page 131).	1. Within the Gaspard ERDZ portion of the SCSRP planning area, timber development shall proceed in a fashion that adheres to spatial constraints developed by the Table.
F. To ensure that the natural disturbance patterns for the SCSRP planning area are maintained over the rotation; manage the temporal and spatial distribution of cut and leave areas in accordance with the patch size distribution described in the FPC.Biodiversity Guidebook for each Natural Disturbance Type.	1. Consistent with the FPC and the FPC Biodiversity Guidebook, prepare operational plans in such a way that they include a range of block sizes. Although Section 11(1)(b) of the FPC Operational Planning Regulation indicates that the maximum cutblock size for the Cariboo Forest Region must not exceed 60 hectares, Section 11(3)(b)(ii) of the FPC Operational Planning Regulation and Sections 9(2)(e) and (f) of the FPC Timber Harvesting Regulation permit larger openings where they are proposed to salvage timber, where they are proposed in a manner consistent with the intent of Biodiversity management and where they have been authorized by the District Manager and, if applicable, the Designated Environment Official. A patch is defined as a stand that differs in age from adjacent patches by more than 20 years and refers to either a natural disturbance opening that led to an even-aged forest or an opening that was created by a cut block.

Timber Access Management Objectives	Timber Access Management Strategies
G. Operational activity should control vehicle access and minimize the disturbance to wildlife.	1. Operational development should be designed and implemented in a fashion consistent with the SCSRP access management strategy. The length of time between disturbances should be lengthened – wherever possible – to allow time for recolonization and recovery of wildlife populations. In general, the 'Get In and Get Out' approach is recommended for identifiable units in the area (e.g. well defined drainage's and/or operating areas).

11 FISH AND WILDLIFE

11.1 GRIZZLY BEAR HABITAT

Background Information

Grizzly bears are recognized as a species of special importance within the province of British Columbia. Their role as a large predator in the ecosystem is considered an important barometer of ecosystem health. Historically they have played an important role for resident / non-resident hunting and other tourism values. The CCLUP notes that the South Chilcotin SRDZ is an important area for Grizzly bear. Strategies are designed to ensure that habitat suitability for Grizzly bear is maintained through time.

11.1.1 Grizzly Bear Habitat Management Objectives and Strategies

Grizzly Bear Habitat Management Objectives	Grizzly Bear Habitat Management Strategies
A. To maintain grizzly bear habitat quality and quantity through time within the area of the plan.	1. Finish activities, to the fullest extent possible, within each watershed prior to starting up in an adjacent one to minimize industrial disturbance and human interaction. 2. Complete each harvest entry as quickly as possible. 3. To manage polygon area 1C(b), (Appendix III Map 9), on a 135 year rotation, 15% removal / 20 year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of retention / partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply. 4. It is assumed that future determination of VQOs within polygon 1C (b) will guarantee timber access to 100% of the productive forest land base within polygon 1C (b) (subject to other constraints as modeled by the SCSRP Planning Table) over a 135 year rotation. Where VQOs are recommended that are more constraining to operational access than that modeled, VQO recommendations for the remainder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area. 5. Design Blocks with "creating edge" in mind.

Grizzly Bear Habitat Management Objectives	Grizzly Bear Habitat Management Strategies
B. Apply biodiversity objectives.	1. It is anticipated that these strategies, along with the application of biodiversity objectives will satisfy grizzly bear habitat requirements. 2. Protection and enhancement of shrub layer should be considered in development of harvesting prescriptions and site prep. 3. Blocks in areas known to contain resident grizzly bears should be designed with interior Wildlife Tree Patches of at least 2 hectares. 4. WTP should be concentrated along riparian corridors, in areas of high shrub production, in wet forest types, along game trails, etc. 5. Where there is a choice to either make a number of smaller WTP or fewer larger ones it is generally better to create fewer large patches than a number of small scattered patches.
C. Control access.	1. Restrict use of vehicles and ATVs for hunting. (See current hunting regulations and SCSRP Access Management Plan, Section 12). 2. Minimize non-industrial use of newly constructed roads consistent with the SCSRP Access Management objectives and strategies. 3. Minimize road density to only those roads required for ongoing industrial activity. 4. Align main roads several hundred metres away from areas known/or suspected to be important foraging, denning, or travel routes (riparian areas, wet forest types, areas of high herbaceous plant or berry production, etc.) 5. Deactivate spur roads immediately following harvest as per temporary access provisions under SCSRP Access Management objectives.

11.2 MULE DEER WINTER RANGES

Map Reference: Appendix III Map 12: Wildlife Habitats

Background Information

During winter, mule deer experience severe hardships that determine their survival. Many factors combine to limit suitability of Mule Deer habitat during winter and deer must concentrate in favourable areas to survive. In fall and summer, Mule Deer are able to access a wide range of habitats with sufficient resources, including high elevation forage, but they must migrate to smaller, lower elevation areas with specific habitat characteristics to endure the winter (Regional Mule Deer Winter Range Strategy, June 1996). Mule Deer in the Cariboo are particularly stressed during winter, as they are at their northern limit of continuous high-density distribution (BC Wildlife Branch 1990).

Mule Deer survival during winter is dependent on old growth and mature Douglas fir stands with well-developed canopies that provide snow interception, security, thermal cover; and food through litterfall (Regional Mule Deer Winter Range Strategy, June 1996).

11.2.1 Mule Deer Winter Range Management Objectives and Strategies

The Mule Deer winter range management strategies will be revised to reflect stand specific management direction provided by Mule Deer Winter Range Management Plans to be completed by the Mule Deer Working Group (Ministry of Environment, Lands and Parks, Ministry of Forests, and the timber industry).

Mule Deer Winter Range Management Objective	Mule Deer Winter Range Management Strategies
A. Maintain Mule Deer Winter Range within the Plan area (Churn Creek, Koster-Grinder and Lone Cabin MDWR's) with adequate mixes of habitat types as described in the Regional Mule Deer Strategy, the Handbook for Timber and Mule Deer Management Co-ordination on Winter Ranges in the Cariboo Forest Region, and the CCLUP Integration report.	1. Use the Handbook for Timber and Mule Deer Management Co-ordination on Winter Ranges in the Cariboo Forest Region (Land Management Handbook No. 13) as modified by the Integration report for operational guidance when proposing harvesting on Mule Deer Winter Ranges. 2. Winter range management plans completed for these winter ranges will not change the management objective but will aid in applying the strategies in a more spatial manner to these particular winter ranges.

11.2.2 Timber Access Within Mule Deer Winter Ranges

1. The pine component in mixed stands at or in excess of 40% Douglas-fir content will be selectively harvested based on a 80 year rotation on an even flow basis.
2. The spruce component in mixed stands at or in excess of 40% Douglas-fir content will be selectively harvested based on a 120 year rotation on an even flow basis.
3. There are no MDWR constraints on pine or spruce harvest in pure pine/spruce or in mixed stands of less than 40% Douglas-fir content.
4. Harvesting incremental volume subsequent to initial stand entry in Douglas-fir stands managed for high and moderate crown closure: that is; when growth has replaced the harvested volume and the stand has recovered any winter range values, which may have been lost, the second pass may be taken (Regional Mule Deer Winter Range Strategy, June 1996).
5. Stands identified for low crown closure management within the MDWRs are to be managed according to normal silviculture Douglas-fir management with allowance for Mule Deer requirements as indicated in the Mule Deer Handbook. It is expected that given the current condition of these winter ranges no stands will be proposed for this type of harvest until these areas can be identified through the winter range management plans.

11.2.3 Timber Harvesting Priority Within Mule Deer Winter Ranges

Harvesting timber within the mule deer winter ranges in the following order of priority:

1. Harvest of current beetle attack where it is identified as a priority for resource management.
2. Within non-fir stands.
3. Within age Class 5 Douglas-fir stands where commercial thinning would benefit mule deer winter range values.
4. Within Mule Deer winter ranges that have met the crown closure objectives for the fir component of the stand as described in the Regional Mule Deer Winter Range Strategy and the CCLUP Integration Report; and
5. Areas that are to be managed for low crown closure objectives: areas to be identified through Mule Deer Winter Range management plans.

11.3 MOOSE HABITAT

Map Reference: Appendix III Map 12: Wildlife Habitats

Background Information

Moose occur throughout the SCSRP region. Historically this area has been an important moose hunting area for both resident and non- resident hunters. Access has been slow and difficult, using old wagon roads and cattle trails. Throughout the SRP process, numerous groups and individuals spoke of the importance of the SCSRP area to local moose populations, particularly Upper Dash Valley and Hungry Valley. One of the primary goals of the SCSRP is to mitigate the direct and indirect impacts of industrial development on moose populations and moose habitat. The following strategies are meant to mitigate impact and, in some cases, enhance habitat suitability for moose.

11.3.1 Moose Habitat Management Objectives and Strategies

Moose Habitat Management Objectives	Moose Habitat Management Strategies
A. To maintain moose habitat quality and quantity through time within the area of the plan.	1. It is anticipated that the strategies outlined here, along with the application of the biodiversity targets outlined in the Biodiversity Guidebook and the Biodiversity Conservation Strategy for the CCLUP and the visual management component of the SCSRP plan will satisfy moose habitat requirements.

Details to Strategy A-1

1. Polygon Area 1-A

To manage polygon area 1A on a 200 year rotation, 10% removal 20 year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of/retention partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply.

It is assumed that future determination of VQOs within polygon 1A will guarantee timber access to 100% of the productive forest land base within polygon 1A (subject to other constraints as modeled by the SCSRP Planning Table) over a 200 year rotation.

Where VQOs are recommended that are more constraining to operational access than that modeled, VQO recommendations for the remainder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area.

2. Polygon 1C(a)

To manage polygon area 1C(a) on a 135 year rotation, 15% removal/20 year re-entry on the planimetric basis. Planimetric view is the guide for performance assessment. Critical viewpoints must be fixed and (not added to) or adjusted. It is expected that you could achieve recommended VQOs of retention / partial retention from viewpoints predetermined in this plan. If not achievable, the planimetric takes precedence. No other constraining influences, other than those that have been modeled, will apply.

It is assumed that future determination of VQOs within polygon 1C(a) will guarantee timber access to 100% of the productive forest land base within polygon 1C(a) (subject to other constraints as modeled by the SCSRP Planning Table) over a 135-year rotation.

Where VQOs are recommended that are more constraining to operational access than that modeled, VQO recommendations for the remainder of the polygon must be relaxed to accommodate timber access targets developed by the SCSRP Planning Table. It is recommended that the above 'VQO Relaxation Process' be completed prior to formal VQO designations in the area.

Details to Strategy A-1 (Continued)

3. Non-overlapped Portion of Moose Habitat in Hungry Valley

To manage the non-overlapped portion of the moose habitat in Hungry Valley on a 160 year rotation - 12 1/2% removal/20 year re-entry. The planimetric view is the basis for performance assessment.

Moose Habitat Management Objectives	Moose Habitat Management Strategies
B. To maintain moose habitat quality and quantity through time within the area of the plan.	1. Complete each pass as quickly as possible. 2. Blocks should be designed with "creating edge" in mind. 3. No more than 50% of a W1 or W5 wetland edge should be disturbed in any pass. 4. Similar restrictions should be applied to the edge of large (> 5 hectare) shrub carrs. 5. Protection and encouragement of shrub layer should be considered in development of harvesting prescriptions and site preparation. 6. WTP should be concentrated along riparian corridors, in areas of high shrub production, adjacent to shrub carr habitat, in wet forest types, along game trails, etc.. 7. Where there is a choice to either make a number of smaller WTP or fewer larger ones it is generally better to create fewer large patches than a number of small scattered patches. 8. Where deciduous forest types occur, they should not be targeted for harvest.
C. Control access	1. Minimize road density to only those roads required for ongoing industrial activity. 2. Minimize non-industrial use of roads consistent with the SCSRP access management objectives. 3. Where possible align main roads several hundred metres (200 metres +) away from high quality moose habitat (riparian areas, wet forest types, areas of high shrub production, etc.). 4. Restrict use of vehicles and ATV's for hunting. See current hunting regulations Access Management Plan, Section 12. 5. Deactivate spur roads immediately following harvest: temporary access provisions Section 12 SCSRP access management objectives.

11.4 CHURN CREEK BIGHORN SHEEP

Map Reference: Appendix III Map12: Wildlife Habitats
Appendix III Map 15: Sheep Habitat

Background Information

The Churn Creek-Fraser River sub-population represents 15-20% of the total provincial population of California bighorn sheep and as such, is both regionally and provincially significant. Three major herds of sheep exist, within the sub-population, based on migratory patterns: non-migratory sheep (summer in the Fraser-Churn Creek area), early migrating sheep (summer in the Nine Mile Ridge and Yalakom Mountain area) and late migrating sheep (summer in the Red and French Mountain area). Most migrant sheep (approximately 50% of sub-population) use Churn Creek and East Churn Creek as the principal migratory route to and from Red and French Mountain or Nine Mile Ridge and Yalakom Mountain. All the sheep in the sub-population winter at lower elevations along Churn Creek or the Fraser River.

Bighorn sheep are predominately grazers, relying on grassland habitats. Bighorn sheep generally inhabit steep, rugged terrain such as mountains, canyons or grasslands with adjacent cliffs within areas that have a low and open plant community structure. The major needs of bighorn sheep are forage, water, thermal protection, and areas for escape, rutting and lambing. While grasses, sedges and forbs comprise the majority of bighorn food; up to 25% of the diet may be shrubs such as sage, saskatoon, bearberry, juniper and willow. Both summer and winter ranges must provide freedom from disturbance and a proper combination of forage, escape terrain and water if viable populations are to be maintained. Where bighorn sheep move or migrate to particular areas to rut or lamb, it is of utmost importance that travel corridors to such areas be protected and maintained to ensure there is no interference with this movement.

In British Columbia, California bighorn sheep are blue-listed (considered vulnerable to declines) because of their restricted distribution and low numbers. Also, in some cases, their winter ranges are threatened by past overgrazing, competition with domestic stock, land alienation and human encroachment. They are also threatened by disease; particularly those transmitted by domestic sheep.

The CCLUP directs that inventories to identify sensitive habitats and management needs for bighorn sheep, as a species at risk, be undertaken and that, consistent with targets, important habitats be protected.

Ministry of Environment, Lands and Parks, with funding from Forest Renewal BC, Habitat Conservation Trust Fund, Lignum Limited, the Williams Lake Sportsmen's Association and the Wild Sheep Society of BC, has undertaken and recently completed a 3 year study of movements and habitat use of the Churn Creek-Fraser River Bighorn Sheep sub-population. This study has provided information on important habitats, such as the location of the migratory corridor, and the timing of migration within the sub-population. This work has identified the following important habitats for the Churn Creek-Fraser River sub-population: (Appendix III Map15)

1. Winter range situated in grassland habitats of the Lower Churn (including Little Churn) and adjacent Fraser River and associated drainage (Lone Cabin Creek, Grinder Creek, French Bar Creek)
2. Summer range for the migratory component of the sub-population situated in the alpine/sub-alpine habitats on Red Mountain, French Mountain, Nine Mile Ridge and Yalakom Mountain

3. Lambing areas situated in Lower Churn, Fraser River and in higher elevation habitats (Red Mountain and Yalakom Mountain)
4. Rutting areas situated in grassland habitats of the Lower Churn Creek and adjacent Fraser River, and
5. The migration corridor between the low elevation winter range and high elevation summer range, including Big Basin, the east side of Churn Creek south to East Churn Creek, the north side of East Churn Creek, the corridor between East Churn Creek and Red Mountain and the corridor between Red Mountain and Yalakom Mountain.

To mitigate potential problems a number of guidelines have been developed for operations utilizing the Red Mountain road system and for planning harvesting adjacent to the sheep migration corridor. See Section 12, Access Management, for additional guidance.

11.4.1 Churn Creek Bighorn Sheep Management Objectives and Strategies

Churn Creek Bighorn Sheep Objectives	Churn Creek Bighorn Sheep Management Strategies
A. Minimize the impact of human activities on the sheep migration pattern and sheep use of the corridor.	1. Minimize new access development within the migration corridor. 2. Deactivate primary, secondary and tertiary access roads within and adjacent to the migration corridor, wherever possible. 3. Establish a restricted timing window for use of access within and adjacent to the migration corridor such that migration periods are avoided. 4. For logging that utilizes road access through the migration corridor, winter logging and hauling is preferred.
B. Maintain migration corridor habitats in a condition that addresses sheep forage requirements, thermal factors and predation.	1. Protect and/or restore grassland habitats. 2. Where necessary use prescribed fire to maintain attributes to sheep migration corridor. 3. Manage for some older age trees within the corridor and adjacent to high use habitats for thermal cover purposes. 4. For portions of the corridor that also function as mule deer winter range, utilize the selective timber harvest approaches outlined in the regional Mule Deer Strategy. 5. Restrict the season of timber harvesting to those times outside the spring and fall migration periods – winter logging is preferred. 6. Where feasible use helicopter logging on steep slopes. 7. For timber harvesting outside of deer winter range areas, apply selective logging in Douglas-fir stands.

Churn Creek Bighorn Sheep Objectives	Churn Creek Bighorn Sheep Management Strategies
B. Maintain migration corridor habitats in a condition that addresses sheep forage requirements, thermal factors and predation.	8. In pine stands apply clearcut logging with reserves or interior WTP. 9. Locate WTP and / or single tree for retention along topographic breaks or other suitable locations. 10. Consult Ministry of Environment when planning forest harvesting operations within the sheep migration corridor.
C. Manage for the ecological integrity of critical lambing areas.	1. Where lambing habitat values are identified, measures will be taken to maintain the integrity of the area, including maintenance of sheep access to and from the area. 2. Establish a timing window for forestry operations in the vicinity of lambing areas. There should be no logging activities in the surrounding area (approx. within 1-2 km.) from April through July. 3. Establish a buffer or management zone around the perimeter of the lambing area, where habitat features important to sheep will be managed. 4. Reserve Ponderosa pine.

11.5 BULL TROUT

Map Reference: Appendix III Map 13: Bull Trout

Background Information

Bull Trout are recognized as being “blue-listed” a designation that includes any indigenous species or subspecies (taxa) considered to be vulnerable in British Columbia. Vulnerable taxa are of special concern because of characteristics that make them particularly sensitive to human activities or natural events. Blue-listed taxa are at risk, but are not extirpated, endangered or threatened. This is because of their restricted distribution, susceptibility to over fishing and habitat degradation. To ensure that current populations are maintained, special attention must be given to maintaining water quality, water temperature regimes, riparian habitat, channel integrity, and to limiting motorized access to large portions of Bull Trout habitat areas.

Bull Trout are present in the watersheds being planned and the following management strategies are meant to ensure their future distribution. Current known distribution of Bull Trout has been determined through stream inventories (Appendix III Map 13).

11.5.1 Bull Trout Management Objectives and Strategies

Bull Trout Management Objective	Bull Trout Management Strategies
A. Maintain the integrity of habitat that produces bull trout.	1. Develop management prescriptions in consultation with BC Environment habitat protection staff to ensure that Bull Trout habitat attributes are maintained. 2. Maintain channel integrity and hydrologic stability. 3. Maintain water quality. 4. Maintain riparian habitat adjacent to bull trout streams and those identified as being important for maintenance of bull trout habitat. 5. Conduct road maintenance activities in concert with the management objective. 6. Construct road crossings consistent with MoF District guidance. 7. Consider best management practices when conducting timber-harvesting activities adjacent to bull trout habitat and areas identified as important to bull trout populations. 8. Maintain water temperature regimes within systems known to contain bull trout through the innovative application of streamside protection. 9. Minimize motorized access into currently low access areas of the South Chilcotin

12 ACCESS MANAGEMENT

Map Reference: Appendix III Map 14 Access Management

Cariboo-Chilcotin Land Use Plan Direction

Ninety-Day Implementation Process Final Report: Feb. 15, 1995

A. Section 3.8: Undeveloped Areas: Access Management, pages 25 and 26 (in part)

Background

Across the region are a number of areas, which are outside of established, and new Protected Areas and which are, as yet, undeveloped. These areas tend to be located within sub-units of the Special Resource Development Zone. They may contain important wildlife, recreation, and/or tourism values associated with undeveloped or backcountry areas. They may also contain significant mineral and timber resources.

The resource targets and sectoral strategies have been developed in recognition of these values and of the sensitivity of some of these areas to road access.

Action

Such unroaded areas are available for development. Proposals for access development within these areas will be planned and managed in the context of the resource targets, sectoral strategies, and any sub-regional plans that accommodate or are consistent with those targets and strategies.

For currently unroaded drainages, the Ministry of Energy, Mines and Petroleum Resources (Ministry of Energy and Mines) will encourage the mineral exploration industry to utilize low impact forms of access until there is sufficient evidence to warrant road construction. Where exploration roads are considered necessary, the Ministry will encourage the industry to participate in the restriction of public use of such roads and, where they are no longer necessary, the de-activation of such roads. The Ministry will make every reasonable effort to encourage the industry to avoid road development until ore bodies are sufficiently proven that the Ministry considers that road access for exploration or mine development is warranted.

The Ministry of Forests, in overseeing Forest Development Planning, will ensure that the development of currently unroaded areas is planned in conjunction with the Ministry of Environment, Lands and Parks and in consultation with the Ministry of Energy, Mines and Petroleum Resources (Ministry of Energy and Mines) and the Ministry of Small Business, Tourism and Culture. The forest development or landscape unit plans for such areas will identify access management procedures that satisfy the interests of resource uses and values, consistent with the resource targets established by the Land Use Plan and the Ninety-day Implementation Process.

B. Appendix 3, Zonal and Sub-Unit Targets

South Chilcotin Special Resource Development Zone, pages 86 and 87

Overlaps: Access Management Planning will restrict permanent road access in 80% of this polygon.

Wildcraft: To maintain road access to 30% of the polygon. Access to the majority of the polygon will be walk-in off some permanent main roads. Coordinate the use of any temporary access from forest industry development or mineral exploration.

Recreation: Maintain 30% of the polygon in a backcountry condition. In order to be compatible with the timber targets this includes areas above 5000 feet, and is mainly located in the western portion of the polygon, adjacent to the Big Creek Protected Area.

Fish and Wildlife: Apply an access management strategy aimed at restricting the development of permanent access over approximately 50% of the polygon, in addition to the area to be managed for backcountry experience. (30%)

C. Appendix 3 Zonal and Sub-Unit Targets

Gaspard Enhanced Resource Development Zone, pages 130 and 131

Wildcraft: Maintain roaded access to 80% of the polygon. Access to rest of the polygon will be walk-in off permanent main roads, or temporary in conjunction with any forest industry development or mineral exploration.

Recreation: Maintain 2% of the polygon in backcountry condition.

Fish and Wildlife: Manage for access management restrictions in the areas adjacent to Special Resource Development Zones.

D. CCLUP : Other Management Strategies

Access Management, pages 159 and 160

Develop an access strategy and appropriate planning processes. This will include specific backcountry access management strategy which will be designed maintain backcountry values within (primarily) the Special Resource Development Zone. This strategy will address road locations, physical and regulatory closure of roads (non-permanent roads should be considered in previously undeveloped areas), backcountry lake access, and ATV and snowmobile use. Planning will address the need to limit the potential for disturbance or poaching of vulnerable wildlife populations. The targets include provisions for “Modified Harvest” and “No Harvest” as a result of access management requirements and the requirements for management of Quality Lakes.

Outside these backcountry areas an effective planning process is required to manage access in order to protect environmental and other values. In all zones a priority is to limit disturbance and damage to sensitive habitats such as alpine, grasslands, wetlands as a result of motor vehicles. Moose calving areas and other important wildlife habitats also require access management. The targets include provisions for “Modified Harvest” and “No Harvest” as a result of access management requirements and requirements for management of Quality Lakes.

E. Zonal Management Strategies, page 162 and 163

Special Resource Development Zone

Manage access through a Backcountry Access Management strategy (see Regional description). This will apply throughout much of the zone, however, additional stratification is required: in the more developed portions of this zone the standard Regional Access Management strategy should apply.

Enhanced Development Zone

Apply the Regional Access Management strategy to manage access. The Backcountry Access Management Strategy will not apply in this zone; however, certain portions of it will receive a higher degree of access control under the regional strategy.

CCLUP Integration Report Direction

A. Section 5.3.8, Access Management, page 49

Appendix 3 of the CCLUP references access management under four resource targets:

- Wildlife targets for maintenance of roaded access
- Recreation targets of site-specific areas for access restrictions
- Targets of site specific restriction on road development; and
- Fish and wildlife targets for the application of an access management strategy

Sub-regional plans should address access management issues that include the specific targets above. This will require consideration of all forms of vehicle access.

12.1 SCSRP ACCESS MANAGEMENT PLAN

The overall objectives of the Access Management Plan are:

1. Maintain functioning ecosystems over time by minimizing road density and ensuring permanent road development is reduced to only those roads required for ongoing industrial activities;
2. Maintain some of the natural attributes of the primary recreation area by limiting vehicular access, which tends to limit the number of users;
3. With the extensive trail network in SCSRP area, allow for a non-motorized recreational experience with opportunities for isolation and solitude, and the opportunity for experiencing independence and self-reliance associated with primitive recreation skills, and for experiencing some challenge and risk; and
4. Promote orderly development of extractive resources (e.g. timber and minerals) in a manner that maximizes economic benefits and minimizes negative impacts on environmental and recreational values (Appendix III Map 14 Access Management).

12.1.1 Access Management Objectives and Strategies

Access Management Objectives	Access Management Strategies
A. Aid in maintaining functioning ecosystems over time by minimizing road density and ensuring permanent road	1. Prevent loop routes or connections on new industrial roads between the Williams Lake Forest District and the Lillooet Forest District through the use of access control measures. 2. Use provisions to manage access control such as road closures, temporary deactivation permanent deactivation, and in some instances, restriction to industrial users only.

Access Management Objectives	Access Management Strategies
B. Maintain traditional access.	1. Allow recreational users to travel on the industrial roads for short distances where they cross or overlap the existing non-status roads and trails. 2. Leave existing non-status roads and trails open. No maintenance of non-status roads and trails will be provided by government agencies. 3. Unless no other route is feasible, industrial roads will not overlay traditional access.
C. Maintain some of the natural attributes of the primary recreation area by limiting vehicular access, which tends to limit the number of users. D. Manage access to limit impact on wildlife populations.	1. Enforce regulatory restrictions, British Columbia Hunting and Trapping Regulations, outlined below.

Details To Strategy C and D-1 Enforce Regulatory Restrictions:
British Columbia Hunting and Trapping Regulations

The following summary from the "Synopsis" of the BC Hunting and Trapping Regulations is not the law in its entirety and does not apply only to hunters and trappers. Regulations frequently change. Contact the BC Environment Regional Office in Williams Lake for detailed road access information.

- The operation of ATVs (including motorcycles and snowmobiles) for the purpose of hunting, to transport wildlife, to transport equipment and supplies which are intended for or in support of hunting or to transport hunters to and from the location of wildlife is prohibited between the hours of 4 a.m. and 10 a.m. Snowmobiles are permitted during the period December 1 to May 1. This restriction applies to the entire SCSRP
- The operation of all motor vehicles for the purpose of hunting, to transport wildlife, to transport equipment, firearms, or supplies which are intended for or in support of hunting or to transport hunters to and from the location of wildlife is prohibited on the following roads:

Details To Strategies C and D-1 Enforce Regulatory Restrictions: British Columbia Hunting and Trapping Regulations1 (Continued)

a) Gaspard-West Churn Forest Service Road (3200) - south of the junction of this road and the Stobart Creek. (Bridge).

b) Churn Creek Forest Service (2800) Road (including side roads) is restricted south of km. 35.

- Gaspard-Churn Creek ATV restricted area. Situated in Management Unit 5-3, this area is mapped as Map E10 in the 1998/99 BC Environment Hunting Regulations Synopsis. The operation of ATV (including motorcycles) at any time is prohibited, except for commercial activities other than hunting. Use of snowmobiles is allowed December 1 to May 1.
- Red Mountain and French Mountain – The operation of all motor vehicles is prohibited year round above the 1920 metre elevation. A sign stands where the 1920 metre elevation intersects the road to Red Mountain, stating that there is no vehicle access beyond this point, the reason for this restriction and a reference to the Hunting Regulations. Motor vehicle use in alpine areas for industrial/commercial purpose is allowable with a valid permit.

Access Management Objectives	Access Management Strategies
E. Manage access to provide for protection of the sheep migration corridor.	1. Regulatory Restriction: Forest Practices Code Act (Forest Service Road Use Regulation) 2. Restrictions for forestry activity requiring Gaspard-Red Mountain Forest Services Road access through the Sheep Corridor.

Details To Strategy E-1

1. Regulatory Restriction: Forest Practices Code Act

- Gaspard-Red Mountain Forest Service Road is closed from May 1 to July 1 and from September 1 to November 15. Locked gates are situated at start of Gaspard-Red Mountain Forest Service Road (near Junction with 2800 Road) and at 9.5 km. The open period may be changed pending the results of the radio collar sheep study.
- Use of the Gaspard-Red Mountain Forest Service Road is restricted to industrial users from May 1 to December 1. Industrial users include forestry operations, local ranch employees, prospectors and miners, agency staff and contract consultants. Traffic control devices consist of signs posted at two locations stating the road use restriction and the penalty for contravention.

Details To Strategy E-1 (Continued)

2. <u>Restrictions for forestry activity requiring Gaspard-Red Mountain Forest Services Road access through the Sheep Corridor.</u>

Light industrial provisions also apply to the East Churn connector. Light industrial traffic will not be permitted through the sheep corridor during closed periods after the East Churn roads connect to Blackdome Road system.

- Light industrial activities discussed in this section are conducted outside of the sheep migration corridor periods whenever possible. Activities seasonally dependent on timeframes within the corridor closure times such as silviculture activities, surveys, inventories etc. are considered to be light industrial.
- Each spring and fall, prior to the migration period, the licensees will discuss the proposed light industrial activities with the Ministry of Forests and BC Environment to determine the best means of accommodating various interests
- Light industrial activities associated with Small Business sales are coordinated to occur at the same time as the activities associated with major licensee cutting permits.
- Forest licensees will cease light industrial activity during any peaks in migration, as determined by BC Environment.
- When light industrial traffic is deemed necessary, licensees will minimize daily traffic during the migration periods, and will try to concentrate the traffic to the same time of day.
- Silviculture activities in the vicinity of Red Mountain Meadows are completed in the shortest time period possible following harvesting, and then deactivation of the Gaspard-Red Mountain Forest Service Road south of the east Churn Junction will be addressed.
- Access through the sheep migration corridor associated with wildlife management, road building, archaeological surveys, timber cruising, silviculture prescriptions, site preparation, and mistletoe control are conducted outside of the sheep migration periods (i.e. July, August or winter). Exceptions are allowed on a site-specific basis, as determined by the District Manager in consultation with BC Environment and the licensees.
- Periodic maintenance checks on culverts and bridges are conducted during the migration period with the approval of Ministry of Forests and BC Environment.

Access Management Objectives	Access Management Strategies
F. Manage access to provide protection for identified moose habitat in Hungry Valley.	1. The <u>Gaspard-West Churn Forest Service (3200) Road</u> is closed south of the Stobart Creek Bridge at 5.7 km from September 15th to December 1st (barrier in place). 2. Snowmobiles will be excluded from <u>Hungry Valley wetlands</u> from December 1 to March 31 to protect critical moose winter range.

Access Management Objectives	Access Management Strategies
F. (Continued) Manage access to provide protection for identified moose habitat in Hungry Valley.	Snowmobile access to Hungry Mountains would be permitted on the trail at the east end of the Hungry Mountains. This restriction applies to everyone, not just recreational snowmobilers. Alternate access to areas in the vicinity of Hungry Valley will be available on operational roads, which will be constructed outside of the wetlands. This restriction does not apply to officers or employees of BC Environment.
G. Maintain recreational trail use at levels that avoid impacts on other resource values including wildlife and sensitive alpine habitat. H. Provide for a range of recreational activities from 4WD to non-motorized access, and to minimize conflicts between users.	Backcountry Area Recreation Use 2. Motorized Vehicles: Allowable Use 3. Motorized Vehicles: Restricted Use .

Details to Strategies G and H:

1. <u>Backcountry Area Recreation Use: Motorized Vehicles - Allowable Use</u>

The guidelines do not apply to snowmobiles unless they are specifically mentioned.

- Subject to review at a future date if the levels of use result in unacceptable environmental impacts on other resources, ATV and motorcycles are permitted to use:

a) The trail through Hungry valley to Big Creek Park.
b) The trail to the east of Hungry valley to the Dash Valley (Lost Valley) cabins.
c) The trail from Swartz Lake through Lone Valley to Prentice Lake.
d) The trail from Lone Valley to dash Valley cabins.

- Recognize existing trails in the backcountry. Do not construct new trails, unless relocation is necessary to prevent conflict with other values. New trails will result in unnecessary impact on a range of other resource values including wildlife and sensitive alpine habitat.
- Signs are erected where the Prentice Lake trail enters the Williams Lake Forest District, and where the Lone Valley trail forks off of the Swartz Lake road. The signs advise that ATV and motorcycles must stay on the trails, and that the cutting of new trails is prohibited (Forest Practices Code Act Regulation).
- The current motorized recreational use in Hungry Valley is resulting in localized degradation of the important wetland riparian habitats.

Details to Strategies G and H: Motorized Vehicles - Allowable Use (Continued)

- Regulation of motor vehicle use will contribute to the maintenance of a backcountry condition for recreation and tourism. A sign indicating the sensitivity of the Hungry Valley wetlands is in place at the fork in the road, which leads west to Mud Lake and Fish Lake. Section 102 of the Forest Practices Code Act, which deals with the protection of recreational resources, may be invoked if damage becomes excessive.

2. Backcountry Area Recreation Use: Motorized Vehicles: Restricted Use

- To protect sensitive alpine habitat, ATV and motorcycles for recreational use are excluded from the alpine and alpine forest (above 6000 feet and 1830 metres) other than on specified trail connections. These guidelines also apply to alpine areas outside the Backcountry Area.
- The traditional use on the trails listed below is horse pack trips. ATV access is difficult on these trails and ATV use is reported to be minimal.

a) ATVs and Motorcycles are not allowed into the upper Dash Valley or on the trail connecting upper Dash to Fish Lake.

b) The upper Lone Cabin Creek horse trail and the Swan Lake trail are in the Gaspard -Churn Creek ATV restricted area. (See current road and vehicle restrictions).

- All motorized vehicles are excluded from Big Basin because of its regional significance for non-motorized recreation use and winter habitat for ungulates. Access for mining is exempt from this restriction. Sign locations to be determined.

Access Management Objectives	Access Management Strategies
I. Promote orderly development of extractive resources (timber and minerals) in a manner that maximizes economic benefits and minimizes negative impacts on environmental and recreational values.	1. Access Management for Mining 2. Access Management for Forest Harvesting

Details to Strategy I Access Management for Mining and Forest Harvesting

1. Access Management for Mining

Access relates to physical access (roads, trails, helicopters etc.). It recognizes that deactivation measures may be appropriate.

- Ensure that an appropriate level of access for exploration, development, production, and processing of geological resources are applied throughout the planning area.

Access Management for Mining (Continued)

a) Include mineral industry (e.g. freehold miners and tenure holders) in access management planning including Watershed Restoration Projects, road deactivation etc.

b) Motor vehicles, included ATVs, are allowed on mineral tenures, wherever situated, for the purpose of mineral exploration and development. Permits for use of motor vehicles (including ATVs) in areas with motor vehicle restrictions may be required. Permitting authorities will promptly issue the required permits.

- Ensure that access management plans and regulatory controls on access reasonably accommodate present and future mineral exploration and development activities.

a) This applies to all aspects of access. For greater certainty, the current system of notification for forest development planning (ads etc.) is adequate for new roads. The current, standard procedure for watershed restoration planning (WRP) includes notification of mineral tenure holders via the Ministry of Energy and Mines and an FRBC-funded contractor. For WRP, the intent is to ensure that all proponents of restoration projects follow these standard procedures.

2. Access Management for Forest Harvesting

Industrial roads are kept as narrow as possible, recognizing that there are safety issues and specific standards under the Forest Practices Code Act. Logging and silviculture activities are completed as quickly as possible and temporary roads are deactivated at the earliest opportunity.

- **Permanent Road Access Provisions**

West side of the SCSRP

a) The extension of the 2800 road, south of Dash Creek is for industrial access only.

East side of the SCSRP

a) The Red Mountain and the East Churn Connector are used as the permanent haul route for the entire area east of Churn Creek.

b) An exception to hauling all the wood out through the Gaspard-Red Mountain Forest Service Road may be made to allow some hauling out through Empire Valley and Gang Ranch, if it becomes necessary to salvage beetle wood on the East side before linking roads are fully constructed.

c) This new industrial road will be restricted year round to industrial use only from the junction with the Gaspard-Red Mountain Forest Service Road to Koster Lake. Industrial users include forestry operations, local ranch employees, prospectors and miners, agency staff and contract consultants.

A gate is installed at an unnamed creek crossing approximately 2.25 km east of the sheep migration corridor.

Signs advising of the road use restriction are posted at all intersections of existing roads with the new industrial road. These signs indicate that travel across the industrial road is permitted to get to the traditional road on the other side.

- **Permanent Road Access Provisions**

East side of the SCSRP

For the purposes of Hunting Regulations, this new industrial road is classified as a side road of the 2800 road, and the motor vehicle restriction for hunting purposes will apply.

- **Temporary Access Provisions**

a) Access off the 2800 road and up the valleys (Lone, Dash, and Hungry) is on a temporary basis.

Current plans propose that first pass logging will be completed in each of these valleys over a two to three year period. During active logging and hauling (winter) these road will remain open. If logging takes place over two years, the access will be closed when operations are not active. Access control points will be located close to the main 2800 road in the most suitable terrain.

b) Once logging and silviculture activities are completed, these roads will be deactivated in accordance with the deactivation operations prescribed in the Forest Development Plan and carried out in accordance with the Forest Road Regulation of the *Forest Practices of British Columbia Code*.

c) Debris piles are normally pushed back onto the road following harvesting and are not burned until the following year. This restricts access for a period of one year after harvesting.

d) Access closure is achieved through a variety of methods including physical barriers such as trenches, lock blocks, gates, rocks, and earth berms.

e) All industrial side roads east of Churn Creek are deactivated in accordance with the deactivation operations described in the Forest Development Plan and carried out in accordance with the Forest Road Regulation of the Forest Practices of British Columbia Code. This is completed after logging is finished and silviculture responsibilities are fulfilled.

f) The IAMC and the Cariboo Chilcotin RRB have directed the SCSRP Planning Process to avoid the creation of an unintentional linkage (through intersection of forest development roads with non-status roads) with the Lillooet Forest District.

g) The extension of the 2800 road across Mud Lakes road and into the southern tip of the Williams Lake Forest District requires special access control provisions in order to prevent a permanent road linkage with the Lillooet Forest District.

h) There is only one crossing of the Mud Lakes road by an industrial resource extraction road. This crossing is located near where Swartz Creek enters Churn Creek in terrain that facilitates access control. A gate will be installed above Swartz Creek and is closed when there are no active industrial operations.

i) The extension of the 2800 Road beyond Dash Creek is restricted year round to industrial users only for safety purposes, and the prevention of the establishment of a traditional pattern of use on this road while the Mud Lakes crossing is in use for industrial access. A sign is erected at the intersection of the Mud Lakes road and the 2800 Road advising of the industrial use restriction.

- **Temporary Access Provisions** (Continued)

j) Once the first pass logging and associated silviculture activities are completed in the southern tip of the district, the 2800 road will be deactivated back to the gate above Swartz Creek. This will be done in accordance with the deactivation operations described in the Forest Development Plan and carried out in accordance with the Forest Road Regulation of the Forest Practices of British Columbia Code.

k) All new industrial roads west of the 2800 road are restricted year round to industrial use. The restriction applies to licensed motor vehicles as well as ATV and motorcycles. Sign locations will be determined.

Access Management Objectives	Access Management Strategies
J. Make users aware of access management controls and restrictions.	1. Erect signs publicizing access management controls and restrictions

Details to Strategy J –1: Signs required for access management control.

- Alpine Areas. ATVs and motorcycles are excluded from the alpine and alpine forest (above 6000 feet/1830 metres elevation) other than on specified trail connections. Sign location and wording to be determined. Permits may be issued to allow industrial and commercial use.
- Red Mountain and French Mountain – The operation of all motor vehicles is prohibited year round above the 1920 metre elevation. A sign stands where the 1920 metre elevation intersects the road to Red Mountain, stating that there is no vehicle access beyond this point, the reason for this restriction and a reference to the Hunting Regulations. Industrial and commercial use is allowed with a valid permit.
- Gaspard-Red Mountain Forest Service Road is closed from May 1 to July 1 and from September 1 to November 15. Locked gates are situated at start of Gaspard-Red Mountain Forest Service Road (near Junction with 2800 Road) and at 9.5 km. The open period may be changed pending the results of the radio collar sheep study.
- Gaspard-Red Mountain Forest Service Road is restricted to industrial users from May 1 to December 1. Industrial users include forestry operations, local ranch employees, prospectors and miners, agency staff and contract consultants. Traffic control devices consist of signs posted at two locations stating the road use restriction and the penalty for contravention.
- The East Churn connector industrial road will have a year round industrial use only restriction from the junction with the Gaspard-Red Mountain road to Koster Lake. A gate will be installed at an unnamed creek crossing approximately 2.5 km east of the sheep migration corridor. This gate will be closed during the sheep migration period. Signs advising of the road use will be posted at all intersections of existing roads with the new industrial road. These signs will also indicate that travel across the industrial road is permitted to get to the traditional road on the other side.

Details to Strategy J –1 Signs required for access management control. (Continued)

- For the purposes of the Hunting Regulations, the East Churn connector industrial road will be classified as a side road of the 2800 road, and the motor vehicle restrictions for hunting purposes will apply.
- Where the Prentice Lake Trail enters the Williams Lake Forest District, and where the Lone Valley Trail forks off of the Swartz Lake road, signs are erected advising that ATV and motorcycles to stay on the trails, and that cutting new trails is prohibited. (Forest Practices Code Act: Section 102).
- At the fork in the road, which leads west to Mud Lake and Fish Lake, a sign indicating the sensitivity of the Hungry Valley wetlands is in place. Section 105 of the *Forest Practices Code Act*, which deals with the protection of recreational resources, may be invoked if damage becomes excessive.
- Snowmobiles are excluded from Hungry Valley wetlands from December 1 to March 31 to protect critical moose winter range. Determine location and wording of signs. Alternate access is permitted on the trail at the east end of Hungry Mountains.
- There is only one crossing of the Mud Lakes Road by an industrial resource extraction road. This crossing is located near where Swartz Creek enters Churn Creek in terrain that facilitates access control. A gate is installed above Swartz Creek and is closed when there are no active industrial operations.
- The extension of the 2800 Road beyond Dash Creek is restricted year round to industrial users only for safety purposes and the prevention of the establishment of a traditional pattern of use on this road while the Mud Lakes crossing is in use for industrial access. A sign is erected at the intersection of the Mud Lakes Road and the 2800 Road advising of the industrial use restriction.
- All motorized vehicles are excluded from Big Basin because of its regional significance for non-motorized recreation use and winter habitat for ungulates. Access for mining is exempt from this restriction. Sign locations to be determined.
- All new industrial roads west of the 2800 Road are restricted year round to industrial use. The restriction applies to licensed motor vehicles as well as ATVs and motorcycles. Sign locations will be determined.

13 IMPLEMENTATION AND MONITORING OF THE SCSRP

Direction from South Chilcotin Sub-Regional Plan Planning Process Terms of Reference February 4, 1997 states:

> "Section 10.0 Monitoring and Plan Review"
>
> > "Upon completion of the SCSRP, the table will establish a monitoring scheme. This scheme will be based on the objectives specified in the plan, and will specify what needs to be reviewed, by whom and how often."

13.1 IMPLEMENTATION

The SCSRP will be forwarded to the Cariboo Mid-Coast IAMC (IAMC) and the Cariboo Chilcotin Regional Resources Board (RRB) for endorsement and approval. The SCSRP will provide guidance to statutory decisions makers for resource planning within the SCSRP area. Each resource agency will be responsible for the recommendations or actions within their mandated responsibilities.

13.2 MONITORING

The RRB and the IAMC have joint responsibility to monitor the CCLUP. Until monitoring direction is received from the RRB and IAMC, the SCSRP will be monitored in the manner described below:

1. Concerns related to conditions outlined in this plan should be forwarded to the Provincial agency responsible.
2. An annual review meeting will be held in the spring of each year. It will be the responsibility of the Ministry of Forests to organize the meeting. Thirty days notification will be given to table participants.

The purpose of an annual meeting is:

- To review the correspondence addressed to and the concerns of the Provincial agencies.
- Bring forward concerns from SCSRP Planning table participants.
- If necessary, to initiate an action plan in response to discussions; and
- To review the results of the monitoring program when it is established.

3. The Table recommends that the statutory decision makers prepare and distribute interim planning guidance based on this document prior to the establishment of landscape unit objectives.

APPENDIX I

TERMS OF REFERENCE

February 4, 1997

1.0 PURPOSE AND OBJECTIVES

1.1 Purpose

The South Chilcotin Sub-Regional Plan will address the resource targets and strategies outlined in the Cariboo-Chilcotin Land Use Plan (CCLUP) which are applicable to the plan area, and ensure consistency with the CCLUP as a higher level plan under the Forest Practices Code.

1.2 Objectives

1. Ensure the sub-Regional planning process is consistent with the Regional Resource Board (RRB) and Inter-Agency Management committee (IAMC) Sub-Regional Planning Strategy.
2. Integrate resource targets at the sub-regional level, using direction provided by and ensuring consistency with the CCLUP Final Report and any other documents approved under its terms.
3. Address the planning requirements identified in the CCLUP and Forest Practices Code (operational planning requirements); i.e. biodiversity, forest ecosystem networks, lakes classification, wildlife habitat, access management, etc.
4. Provide direction for integrated land use at the operational level.
5. Provide an opportunity for local stakeholders to actively participate in the implementation of the CCLUP through the development and implementation of the South Chilcotin Sub-Regional Plan.
6. Provide an opportunity for local information to be identified and applied in the resource management strategy being developed for the South Chilcotin Sub-Regional Plan area.

2.0 OVERVIEW

2.1 Background

The area within the South Chilcotin Sub-Regional Plan (SRP) is largely undeveloped, and has high backcountry recreation and tourism values, wildlife and fisheries values, and cultural/heritage and archaeological values, as well as important resource values for timber, range and mining. This are has been the focus of extensive public planning processes. The proposed South Chilcotin SRP area overlaps four Local Resource Use Plans (LRUPs): the Churn Creek Local Resource Plan which has been ongoing since December 1993, the Hungry Valley LRUP which was completed in November 1993, the

Big Creek LRUP which was active from April 1990 to October 1992, an the Yalakom LRUP (Lillooet Forest District) which has been ongoing since May 1990.

Two joint meetings have been held between the Churn Creek LRUP planning members and the Hungry Valley LRUP planning members to address the Cariboo-Chilcotin Land Use Plan (CCLUP) targets and strategies for the South Chilcotin Special Resource Development Zone (SRDZ). Maps and area summaries have been prepared for the proposed no-harvest and modified harvest zones.

An inter-agency scoping meeting took place on June 3, 1996, in Williams Lake. Presentations have been made to the Inter-Agency Management Committee and to the Regional Resource Board and endorsement has been received to initiate the South Chilcotin Sub-Regional Planning Process.

In order to accommodate the current local planning process which has been ongoing for several years, and to incorporate the very detailed level of planning which has already been completed for certain issues, the sub-regional process will be structured to progress in three phases. Appendix 2 contains a detailed list of the tasks which have already been completed, and the tasks which are still remaining under each of the three phases, in order to fully address the CCLUP targets and objectives, and the Forest Practices Code requirements.

- Phase 1 will address the Cariboo-Chilcotin Land Use Plan targets, strategies and objectives the South Chilcotin Special Resource Development zone. the planning table will report directly to the RRB and IAMC.

- Phase 2 - complete the detailed planning (i.e. access management, visual quality objectives, recreation objectives, biodiversity requirements) for the Churn Creek LRUP portion of the SRP. This portion of the plan will be written up as landscape unit objectives. This will allow greater flexibility and efficiency in making future amendments as more information becomes available. The planning table will report to the designated decision makers under the Forest Practices Code for approval of the recommended landscape unit objectives, and to the RRB and IAMC for review.

- Phase 3 - complete the detailed planning for the remainder of the South Chilcotin SRP. This would include a review and incorporation of the existing Hungry Valley LRUP and CAMP. This portion of the plan will also be written up as landscape unit objectives, with the same reporting requirements as for Phase 2.

2.2 Guiding Principles

2.2.1 Relationship to the CCLUP

The Cariboo-Chilcotin Land Use Plan was announced by the British Columbia government on October 24, 1994. The plan was declared a higher level plan under the Forest Practices Code on January 31, 1996. The Forest Practices Code requires that operational plans approved on, or after, this date are consistent with higher level plan direction. The sub-regional plan will be the link between the CCLUP and operational planning processes (i.e. forest development plans). The sub-regional plan will be consistent with the intent, targets and strategies identified in the CCLUP. The practices described in operational plans will subsequently be consistent with the intent of the South Chilcotin SRP and the CCLUP. The potential exists for a sub-regional plan to be declared as a higher level plan under the Forest Practices Code at some point in time.

The South Chilcotin SRP process will not be re-visiting the land use designations, targets or strategies identified in the CCLUP as these decisions have been made and signed off as a higher level plan. The CCLUP targets are designed to give strategic direction to the sub-regional planning exercise, but not to restrict the ability of planning teams to develop innovative, site-specific solutions to integrated resource management issues. The South Chilcotin SRP will be consistent with the RRB-IAMC Sub-Regional Planning Strategy and will fit within the framework of the strategy.

2.2.2 Confidentiality of sensitive information will be maintained.

There may be information that the public, or participants want to communicate to the planning team for use in the development of the sub-regional plan that is of a confidential nature. This may include guiding or trapping trails, First Nation's archaeological sites, and other values important or personal to the participant. If such information is shared so that these values can be considered or protected in the development of the plan, the proponent should advise the working group that mapped locations are provided on a confidential basis. In the final report, these values will be handled in a sensitive manner. The values will not be mapped, but will be described in a general form where they impact, or are impacted by, other resource values and recommendations.

2.2.3 The South Chilcotin SRP will be without prejudice to aboriginal rights and treaty negotiations.

The government is committed to working with First Nations on a government-to-government basis without prejudicing aboriginal rights or treaty negotiations. The government has a legal commitment to ensure that First Nations rights are addressed and considered in the planning process. First Nations will be encouraged to actively participate in the planning process.

2.2.4 The South Chilcotin SRP Planning Area

2.2.4.1 Boundary (see Appendix 1)

- eastern boundary follows the Fraser River
- southern boundary follows the Williams Lake District boundary
- western boundary follows the South Chilcotin SRDZ boundary (Big Creek park is excluded)
- northern boundary follows the South Chilcotin SRDZ boundary, the West Churn watershed boundary and the Churn Creek Protected Area boundary.

The area encompassed by the plan is approximately 168,330 hectares and included:

- the entire South Chilcotin special Resource Development Zone
- the entire Churn Creek Protected Area
- the West Churn Creek drainage within the Gaspard Enhanced Resource Development Zone (follows the draft Dash Biodiversity Assessment Unit boundary)

2.2.4.2 Boundary Justification

The inclusion of the entire South Chilcotin SRDZ will facilitate the integration and the application of all the CCLUP resource targets. The Churn Creek Protected Area has historically been included in the Churn Creek LRUP, and is included within the proposed SRP boundary because of issues related to resource extraction corridors, the bighorn sheep migration corridor, mule deer winter range management, and in order to include complete watershed units (draft biodiversity assessment units) for biodiversity planning.

The plan area encompasses the entire Churn Creek watershed, as well as the tributaries within the SRDZ which flow directly into the Fraser River, and the portions of the Big Creek watershed which are within the SRDZ. Aside from the northwest corner, the plan area follows draft biodiversity assessment unit boundaries. Four entire draft units are included (Koster-Lone Cabin, Churn, Upper Churn, and Dash) and two partial units (Upper Big Creek, Big Creek).

2.2.5 Linkages with Other Strategic Plans

Communication with other existing and proposed planning processes is essential for the successful implementation of the CCLUP targets.

- Churn Creek Protected Area Management Plan: The timeframe for this plan is dependent upon the priorities determined for the completion of management plans for the new parks and protected areas established through the CCLUP. Big Creek Park and Itcha Ilgachuz Park have been identified as the first priorities for Park Management Plan. Issues relating to access corridors through the protected area must be resolved concurrently with the South Chilcotin SRP process.

- Big Creek Park Management Plan: As above, Big Creek Park has been identified as a first priority for a park management plan. Issues relating to the South Chilcotin SRP will include access, adjoining recreation corridors, backcountry recreation and visual quality.

- Churn Creek LRUP: The work being completed under the ongoing Churn Creek LRUP will be incorporated into the South Chilcotin SRP. The portion of the SRP which overlaps the Churn Creek LRUP will be written up as Phase 2 of the SRP.

- Hungry Valley LRUP and CAMP: These existing plans will be updated and incorporated into the South Chilcotin SRP. This portion will be written up as Phase 3 of the SRP.

- Big Creek LRUP: A small portion of the Big Creek LRUP falls within the proposed South Chilcotin SRP. This process was ongoing from 1990 to 1992, but did not result in a consensus agreement or a final approved plan. People with interests in the Big Creek area will be encouraged to actively participate in the SRP process.

- Yalakom LRUP and CAMP: The Yalakom LRUP, in the Lillooet Forest District, was initiated in 1990. A final version of the plan has not been completed yet, but the most recent draft was produced in November 1994. The Yalakom CAMP is just being initiated over the same area. Common issues of concern are wildlife management, access control, visual quality, and recreation management. The Lillooet Forest District has been an active participant in the Churn Creek LRUP.

- Landscape Unit Plans: Landscape unit objectives will be completed subsequent to Phase 1, during Phases 2 and 3 of the South Chilcotin Sub-Regional Planning Process.

2.2.6 Development planning

The CCLUP Interim Interpretative Guide and other government correspondence relating to the CCLUP will provide direction to forest development planning in the interim. During the development of the sub-regional plan the District Manager (and Designated Environmental Official in the SRDZ) will continue to review and approve forest development plans in the planning area according to the processes outlined in the Forest Practices Code.

Other agency resource development proposals (i.e. mineral claims, land referral applications) will continue during the planning process through existing referral processes.

3.0 ROLES AND RESPONSIBILITIES

The South Chilcotin SRP process will provide for different level of public involvement: participation on a public planning team, in workshops, on technical working groups, or simply being kept informed of the process as it develops. A preliminary list of planning team interests is located in Appendix 3. Each group/individual will decide how to best represent their interest in the planning process.

Planning team meetings, public workshops and technical working groups will be utilized to develop the South Chilcotin SRP. These groups and activities, along with IAMC an RRB, are crucial to the success of the planning process. The roles and responsibilities of each of these is discussed in the subsequent paragraphs.

3.1 IAMC/RRB

Roles and responsibilities:

- IAMC and RRB have been given the responsibility by government to jointly implement the CCLUP.
- IAMC and RRB will provide direction to the planning team (i.e. the Sub-Regional Planning Strategy that was jointly developed).
- Approve the terms of reference and work plan for the planning process.
- The planning team for the South Chilcotin SRP will report directly to the RRB and IAMC.
- Upon completion, the draft sub-regional plan will be submitted to the RRB and IAMC for approval. IAMC and RRB will ensure that the final plan for the south Chilcotin SRP is consistent with the CCLUP.
- If approved, the plan becomes information to the decision makers identified in the *Forest Practices Code of British Columbia Act*.

3.2 Planning Team

Roles and responsibilities:

- Determine how to implement the CCLUP targets and strategies on the landbase, ensuring consistency with the CCLUP.
- Incorporate local knowledge and information supplied by the Technical Subcommittee.
- Report to IAMC and RRB keeping them up-to-date and informed.
- Communicate with constituents and represent their interests at the planning table by identifying issues, concerns, values, priorities and objectives.
- Conduct general public consultation through a variety of means such as workshops, forums, speakers.
- Confirm final deliverables.
- Identify unresolvable issues and forward to IAMC/RRB.
- Endorse the sub-regional plan and put forward to IAMC/RRB.

3.3 Agencies

Roles and responsibilities:

- Pursue required resources to support the planning process, planning team and technical working groups.
- Advise table on government programs and policies related to the specific planning tasks.
- Supply technical/analytical support.
- Complete information collection, mapping, analysis.
- Participate as part of the planning team.
- Help the planning team to understand the CCLUP terminology, targets and strategies.
- Assist in communication of the plan to RRB and IAMC.
- Assist in communication with the general public.
- Organize and oversee the technical working groups.

3.4 Technical Working Groups

- Roles and responsibilities: comprised primarily of agency staff, specialists and stakeholders who have the expertise or interest to be involved.
- Planning team members participating on the technical working groups will:

- ensure the working group understands the concerns and intentions of the planning table
- assist in explaining the products of the working group to the planning table

- Review existing data, recommend additional information requirements, analyse data, and present management options to the planning table.
- Complete technical planning requirements under the CCLUP and FPC.
- Report to the planning table.

3.5 Designated decision makers under the Forest Practices Code

Roles and responsibilities:

- FPC officials will be kept informed by agency representatives on the planning team and by the IAMC.
- Authority of designated officials under the FPC cannot be legally constrained or fettered by policy or direction outside of the FPC.
- Link to landscape unit planning identified by the Forest Practices Code will be addressed through the regional landscape unit planning strategy which is to be developed by the district managers in the future.

4.0 PLANNING PROCESS

4.1 Planning Process Structure

The IAMC/RRB Sub-Regional Planning Strategy will provide direction with respect to reporting relationships, input from local communities, decision making and dispute resolution.

4.2 Consensus Process

A consensus approach will be used throughout the planning process. A consensus approach provides an opportunity for participants to work together as equals to realize acceptable actions or outcomes without imposing the views or authority of one group over another. Participants may not agree with all aspects of the agreement, but consensus can be reached if the participants are willing to live with the "total package". Where consensus is not reached all viewpoints will be expressed in the final report. The following definition of consensus is from the Commission on Resources and Environment, Strategic Land Use Planning Source Book, March 1996:

General agreement on a package of provisions to the extent that, although parties to the agreement may not agree to every aspect of the package, they do not disagree enough to warrant their opposition to the overall package. Consensus outcomes reflect agreements that each participant in the negotiations can support without sacrificing their principle. Planning processes based on 'transactive planning theory,' 'interest-based negotiation,' or 'shared decision-making' principles that involve face-to-face discussions among stakeholder representatives accept consensus as the planning process goal.

- Consensus means that general agreement has been reached and that there is evident group solidarity in either substance or sentiment.

- Reaching a consensus decision requires flexibility, listening, co-operation, trust and contribution to the process.

- Should only one or a very few participant be in the position of preventing a consensus being reached, they shall have the responsibility to either show why they are differentially impacted by a situation or that the matter is one of such principle that they must prevent consensus. If they are unable to demonstrate one of these conditions, they will be expected to abstain from opposing or support a consensus.

4.3 Dispute Resolution

The planning table must make all efforts to reach agreement on issues that arise. A major benefit of the SRP is the opportunity to incorporate local information. It is preferable that issues be resolved at the planning table with members buy in rather than seeking higher level direction to resolve issues.

If a dispute cannot be resolved through in-depth analysis, affected interests should pursue consensus on:

- the precise nature of the disagreements; and
- how the disagreements should be resolved.

Several avenue are available to resolve disagreements and they should be pursued in the following order:

- Sub-committee; refer the issue to a sub-committee for review and recommendations; recommendations may or may not be binding.
- Third Party Facilitator engage an independent third party to facilitate a resolution to the dispute.
- Referral for Decision: refer the dispute to RRB and IAMC for arbitration.

4.4 Planning Table Meetings and Workshops

- Meetings to be held as required to meet targets set in overall planning schedule.

- Agendas will describe the matter for discussion, the purpose of the discussion and provide such information as is necessary to support informed discussion.

- Discussions at meetings will be recorded in meeting notes and summaries. These are not intended to be a transcript but will summarize general topics discussed, recommendations and justification, agenda items, tasks to be accomplished prior to next session and assignment of tasks responsibility. These will be distributed to participatory and consultative study team members.

- The planning team will work towards deadlines set up in a timetable, and will monitor their progress in meeting time targets.

- Each criticism of proposal or process is encouraged to be accompanied by a suggestion for improvement.

4.5 Planning Team

4.5.1 Participatory Team Members

- Participatory members form the planning team. they will make very possible effort to attend meetings.

- Planning team members are accountable to their constituents. They accept the responsibility to keep their constituencies informed of the progress of the discussions and to seek advice and comments. They will also keep their alternates fully briefed.

- Members may designate an alternate to attend where designate cannot.

- Team members will enter into a dialogue that includes listening carefully, asking questions, educating each other regarding needs and interests. The atmosphere will be focused on problem solving, rather than stating positions.

4.5.2 Consultative Team Members

- Consultative team members are those persons who have a direct stake or interest in the area of study but are unable to participate in all study sessions.

- Consultative members attend meetings as they are available and/or at the specific request of the participatory team to address a specific topic. They are welcomed to join in the question and answer sessions in the general information portion of meetings.

- In the issue discussion and resolution portion of meetings, they will be invited to participate only in the discussion which pertains to their specific interest.

- Planning team members are accountable to their constituents. They accept the responsibility to keep their constituencies informed of the progress of the discussions and to seek advice and comments. They will also keep their alternatives fully briefed.

- They will receive minutes and copies of information from all sessions, and will have until the next meeting to respond to the meeting manager.

- They may participate in the public meeting portions of the process representing the planning team at the specific request of the participatory team.

- Consultants, experts and other resource persons do not fall into this category and are invited at the explicit invitation of the participatory group through the meeting manager.

4.5.3 Working Groups/Sub-Committees

- Sub-committees may be formed by the team to address particular issues or perform specific tasks.

- Sub-committees will bring findings and recommendations back to the planning team.

4.5.4 General Public

- Meetings are open to the general public.

- The public are encouraged to bring forward their interests by contacting a team member of the meeting manager, or by writing to the table.

- Members of the public should check to determine if their interests are already being brought forward by one of the interest groups at the table.

- The table will use a variety of methods to communicate with the public and to seek input. Examples would be inviting members of the public to make presentations to the table, or organizing public open house information sessions to review the draft plan.

- Notices for upcoming meetings will be posted in local communities.

4.5.5 Meeting Manager

The meeting manager will:

a. conduct orderly meetings including:
   - a timely start
   - ensuring speakers can present ideas without interruption
   - control discussion by having members address comments to the manager.
b. enforce ground rules
c. reaffirm the interests of study team members

4.5.6 Facilitator

An independent facilitator may be retained, if deemed necessary by the planning table. The facilitator would lead the planning table through issue discussions, help the table find resolutions of issues and reach consensus on the application of the CCLUP targets and strategies.

5.0 CODE OF CONDUCT

- communicate openly and honestly with one another
- respect each other's viewpoint
- seek to understand the facts before casting judgement
- depend on each other for help
- focus on solutions, not problems and personalities
- accentuate the positive among ourselves and with others.

6.0 DEALING WITH MEDIA

1. Planning team members agree not to negotiate with the media.

2. Comments to the media will be brought forth in the spirit of the process and will not be detrimental to the process.

3. Planning team members will not characterize the planning team or other members' position in the media or other public meetings.

4. Formal press releases and newsletters which represent the process and the team will be discussed and approved by the planning team.

5. A joint statement suitable for discussion with media will be developed by the planning team when appropriate. Members will discuss the process and substance of planning team deliberations in the spirit of such joint statements.

6. Members, sending out information sheets that could be used for distribution in magazines or other media format, will present the article to the meeting manager first. The meeting manager will decide if the article is in the spirit of the planning process. If it is, it is the responsibility of the planning member to ensure that the article is not edited to distort the initial intent. If the meeting manager feels that certain members would feel uncomfortable with a particular article, the meeting manager will fax a copy to the affected parties to discuss the article.

7. The meeting manager or his designate will be the official spokesperson for the planning team and its process.

8. If a member appears to have contravened 1, 2, 3, 4, 5, 6, or 7, the planning team will review the nature of the contravention and discuss a course of action.

7.0 PLANNING TEAM SUPPORT

- All planning team members are expected to actively provide support to the planning
- process in whatever capacity they are able to.
- Costs of participation in the planning process, such as travel expenses, will be borne by the participants.
- Planning support, secretarial services, mapping, advertising, printing, professional services and other related services will be funded by the government agencies within existing resource and budgetary limits.

8.0 EXPECTED DELIVERABLES

The following list of deliverables is a preliminary list which may be refined based on the results of the CCLUP strategy integration exercise. Appendix 2 contains a detailed list of the tasks which have already been completed, and the tasks which are still remaining in order to fully address the CCLUP targets and objectives, and the Forest Practices Code requirements.

8.1 Access Planning

- main extraction routes in undeveloped areas
- deactivation plans for specific roads
- map of areas within the CCLUP subunits which will have restrictions on permanent access
- road use restrictions and traffic control devices
- guidelines on existing non-status roads and trails - deactivate, main or leave as is
- guidelines on methods to limit disturbance to alpine, grasslands and wetlands from motor vehicles
- guidelines on ATV and snowmobile use

8.2 Recreation and Tourism

- map of area designated as backcountry, and management objectives and guidelines
- map of recreation and tourism corridors and key areas, and management guidelines
- recommendations on potential areas for recreation site development or trail development or upgrading
- review of visual inventory and recommended VQOs
- lake classification
- direction for future tourism development
- review of commercial backcountry recreation applications

8.3 Timber Targets

- map of timber target zones; conventional, modified and no-harvest
- management objectives for each area identified as modified harvest
- recommendations of the most appropriate type of modified harvesting in each area

8.4 Wildlife Habitat, Biodiversity

- identification of critical wildlife habitat areas and management strategies
- map of Forest Ecosystem Networks

8.5 Goal 2 Protected Areas

- recommendations for protection of Goal 2 study areas

8.6 Cultural Heritage Values

- strategy for management of cultural heritage values

9.0 TIMEFRAME

The target completion date for Phase 1 of the South Chilcotin SRP process is the beginning of June 1997. Phases 2 and 3 will be completed subsequent to this. RRB and IAMC recognize that local circumstances may result in variances from this timeframe. The planning team will report to RRB and IAMC on a regular basis and will notify these bodies if extensions are required.

10.0 MONITORING AND PLAN REVIEW

Upon completion of the South Chilcotin Sub-Regional Plan, the table will establish a monitoring scheme. This scheme will be based on the objectives specified in the plan, and will specify what needs to be reviewed, by whom, and how often.

TERMS OF REFERENCE - APPENDIX 1

South Chilcotin Sub-Regional Plan Map
(see maps 1 and 2, Appendix III)

TERMS OF REFERENCE - APPENDIX II

South Chilcotin SRDZ Sub-Regional Plan - Tasks Completed and Tasks Remaining

Phase 1 - CCLUP Targets and Objectives for the South Chilcotin SRDZ

Tasks Completed

1. Have identified and ranked candidate "no harvest" areas through several joint Churn LRUP and Hungry Valley LRUP meetings. Mapping and area summaries have been completed. Preliminary management objectives have been prepared for the no harvest areas.

2. "Modified harvest" areas have been mapped and area summaries have been completed.

3. Recreation corridors have been mapped and area summaries have been completed.

4. Draft forest ecosystem networks have been mapped.

Tasks Remaining to Fully Address CCLUP Targets and Objectives

1. Define the management objectives for each area identified as modified harvest. Provide recommendations on the most appropriate types of modified harvesting in each area.

2. Identify the modified harvest areas which will have an extended rotation (70/30 formula).

3. Identify backcountry area (30 percent) within the SRDZ. Define management objectives and guidelines for the backcountry area.

4. Incorporate final forest ecosystem networks and old growth management areas into the zoning of the "no harvest" and "modified harvest" areas. Adjust the priority ranking of the "no harvest" areas to include FENS.

5. Once the results of the CCLUP Integrations Strategy are available, review the zoning of the SRDZ to ensure that it is consistent with any direction that is provided.

6. Churn Protected Area Master Plan - timeline for initiation is uncertain, not identified as one of Parks first priorities. May require reconvening the same sub-regional planning group at a later date.

7. Confirm whether certain areas require formal designation under the FPC as Wildlife Management Areas or as Sensitive Areas.

8. Goal 2 Protected Areas - stakeholders may recommend an area for Protected Area status as part of the quarter percent of the CCLUP areas available for small protected areas.

9. Address issues of existing and potential commercial backcountry recreation opportunities.

10. Address the management of cultural heritage values.

Phase 2 - Churn Creek LRUP Portion of the South Chilcotin Sub-Regional Plan

Tasks Completed

1. Recreation and visual inventories analysis.

2. Fish Survey - fish bearing streams, fish species, barriers, some stream widths.

3. Bighorn Sheep Study - ongoing 3-year radio collar study to confirm migration routes and corridor, and timing of migration.

4. Draft forest ecosystem networks have been mapped.

5. Access management strategy is partially completed - Red Mountain FSR closure dates and methods, and restriction to industrial use from May 1 to December 1.

6. Level 1 watershed assessments completed for Fairless-Borin watershed and East Churn watershed.

7. Winter limnological surveys completed for lakes >5 hectares.

Tasks to be Completed Before the Churn Creek Portion Can Be Written Up

1. LRUP planning group must approve or revise the recommended VQOs and forward to the district manager to formally establish the VQOs and to designate “scenic areas”.

2. Recreation corridors and special recreation features must be confirmed by the planning group and management objectives must be established.

3. Biodiversity Technical Tasks - finish the review of biophysical mapping (covers the western half of LRUP) to determine rare habitats and plant communities, and representative habitats; assess potential “no harvest” areas to determine which representative and rare ecosystems are not protected; field check potential old growth management areas; assess draft FENs to determine if all old growth ecosystems are represented at the minimum level specified in the seral stage tables for the biodiversity emphasis option, rare ecosystems are over-represented, forest interior

condition requirements are met; connectivity needs are met; describe the list of features captured in each FEN (i.e. migration corridor, old growth with interior habitat, rare ecosystems).
Note - assessment of seral stage targets cannot be completed until landscape unit boundaries and biodiversity emphasis are established, or interim direction is given.

4. Main extraction route must be decided by the planning group or by the decision makers; access control points and methods must be finalized.

5. Fairless-Borin Watershed assessment must be redone once the main access route is decided; may require a level 2 assessment.

6. Complete a preliminary lake classification for Koster Lake and Roaster Lakes, and map the lakeshore management areas.

NOTE - the CCLUP targets and objectives must also be fully addressed before the Churn Creek portion of the sub-regional plan can be written up.

Phase 3 - Hungry Valley LRUP Portion of the South Chilcotin Sub-Regional Plan

Tasks Remaining

1. Review recreation and visual inventories and analysis. Confirm recreation corridors and special recreation features and establish management objectives. Review recommended VQOs and forward to district manager for approval.

2. Classify lakes >5 hectares. Winter limnological surveys have been completed.

3. Licensee must carry out watershed assessments for those watersheds where the district manager and a designated environment official determine that an assessment is necessary.

4. Update the Hungry Valley Co-ordinated Access Management Plan regarding road locations, specific deactivation methods and timing, and road use restrictions.

APPENDIX II

PLAN PARTICIPANTS

* Denotes having attended at least one meeting of the Churn LRUP and/or South Chilcotin Sub-Regional Plan process.

CHIEF, ALKALI LAKE INDIAN BAND, ALKALI LAKE
* CHRIS HAMILTON, BC PARKS, WILLIAMS LAKE
BRUCE MACK, CARIBOO TRIBAL COUNCIL, WILLIAMS LAKE
* BRENDA HARTLEY, MINISTRY OF SMALL BUSINESS, TOURISM AND CULTURE, WILLIAMS LAKE
* BRUCE MCDONALD RP BIO, HEAD HABITAT MANAGEMENT UNIT, DFO, PRINCE GEORGE
* TROY HROMADNIK, WEST FRASER MILLS LTD, WILLIAMS LAKE
* STEPHEN VISZLAI, RIVERSIDE FOREST PRODUCTS LIMITED, WILLIAMS LAKE
* DAVE BEDFORD, DWB FORESTRY (LIGNUM), LAC LA HACHE
* IAN HAMILTON, AINSWORTH LUMBER CO LTD, 100 MILE HOUSE
* RON CABLE, LOCAL RESIDENT, EMPIRE VALLEY
* CHIEF CANOE CREEK BAND, CANOE CREEK
DENNIS PERRY, SOUTH CHILCOTIN MOUNTAIN WILDERNESS SOCIETY, TORONTO
* BILL DERBYSHIRE, IWA, WILLIAMS LAKE
* CHARYL FLINTON, SHARE CARIBOO CHILCOTIN RESOURCES, WILLIAMS LAKE
* CHIEF STONE INDIAN BAND, HANCEVILLE
* PETER FOFONOFF, MINISTRY OF AGRICULTURE, WILLIAMS LAKE
* DON LAWRENCE, CANADA DEPARTMENT OF FISHERIES AND OCEANS
* 4 WHEEL DRIVE ASSOCIATION, VANCOUVER
DIANE WALTERS, CARIBOO FOREST CONTRACTORS, WILLIAMS LAKE
* RAY HANCE, TSILHQOT'IN NATION, WILLIAMS LAKE
* BILL HENWOOD, CANADIAN PARKS SERVICE, VANCOUVER
TED HANCOCK, HAY MEADOW HONEY FARM, CANOE CREEK
* VIC HOPE, RECREATION, SURREY
* MAUREEN SCOTT, LILLOOET FOREST DISTRICT, LILLOOET
* CHILCO CHOATE, TOURISM OPERATOR, GASPARD LAKE
* ERIC MIKKELSON, GUIDE/OUTFITTER, COURTENAY
* GLEN KUENZL, BC WILDLIFE FEDERATION, , WILLIAMS LAKE
* JOHN THOMAS, GERRY OLIVER, WILLIAMS LAKE SPORTSMAN ASSOCIATION, WILLIAMS LAKE
* GARFIELD LAMB, SAVE OUR JOBS COMMITTEE, IWA, WILLIAMS LAKE
* RUDI DURFELD, BC/YUKON CHAMBER OF MINES, WILLIAMS LAKE
* JOHN GOODING, LIGNUM LIMITED, WILLIAMS LAKE
* RIDER CHEYNE, RIVERSIDE FOREST PRODUCTS LTD., WILLIAMS LAKE
* LARRY RAMSTAD, GANG RANCH
* CHIEF TOOSEY INDIAN BAND, RISKE CREEK
* JAMES BRITTON, MINISTRY OF ENERGY AND MINES, KAMLOOPS
RAY COLDWELL, GUIDE/OUTFITTER, BIG BAR
BILL PASTOREK, WILDSHEEP SOCIETY OF BC, COQUITLAM
MARTIN FAUCHER, LILLOOET
JOHN BRETT, YALAKOM COMMUNITY COUNCIL, LILLOOET
FRED MCMECHAN, WILLIAMS LAKE FIELD NATURALISTS, WILLIAMS LAKE
* DAVID HALL, BCWF REGIONAL PRESIDENT, BELLA COOLA
BILL SANGSTER, RECREATION COUNCIL, WILLIAMS LAKE
* MARY THOMSON, BIG CREEK
* PHILIP PARR, BELLA COOLA ROD & GUN CLUB, BELLA COOLA
DENISE AND BILLY JOE DAVIDSON, 108 MILE HOUSE

* JO HARRIS, RICHARD SOMERVILLE, CLAIMSTAKER RESOURCES (BLACKDOME), VANCOUVER
JOHN H. PATTERSON, DFO HABITAT AND ENCHANCEMENT, LAND USE PLANNING, VANCOUVER
ROBERT W HOYER, COQUITLAM
* GERALD ELKINS, TRAPPER, RISKE CREEK
SHELLEY NELSON, DARYL BUCHHOLTZ, GUIDE/TRAPPER, WILLIAMS LAKE
* RANDY AND GAY SAUGSTAD, BIG CREEK
BARRY MENHINICK, TOURSIM OPERATOR, GOLD BRIDGE
BRUCE AMBLER, BIGHORN COUNTRY GUIDING, LILLOOET
KEVIN BRACEWELL, CHILCOTIN HOLIDAYS, LILLOOET
GUS ABEL, TYAX MOUNTAIN LAKE RESORT, LILLOOET
* MIKE ELVIN, TOURISM OPERATOR, SECHELT
* MICHAEL KENNEDY, TOURSIM OPERATOR, LILLOOET
* MARK BROWN, RECREATION, KAMLOOPS
* PETER MARSHALL, RECREATION, SURREY
CHRIS SIMPSON, ALL TERRAIN ADVENTURES, BURNABY
* BRUCE VANDALE, RECREATION, AGASSIZ
WADE FISHER, CHAIR, REGIONAL RESOURCE BOARD, WILLIAMS LAKE
* ERIC BREBNER, TSUNIAH LAKE LODGE, WILLIAMS LAKE
* IVOR LARSON, BC WILDLIFE, CHILLIWACK
* BRUCE BERGMAN, RECREATION, ROSEDALE
PATRICK A RABBITT, MINER, VERNON
RICCI CHARLES ORSETTI, MINER, SMITHERS
DUANE R WOOD, MINER, SURREY
* LISA MACKENZIE, POWDER KINGS SNOWMOBILE, WILLIAMS LAKE
MR. AND MRS. VERMEER, FLETCHER LAKE
DL DEANS, TASEKO MINES LTD, WILLIAMS LAKE
NORTH CARIBOO SHARE OUR, RESOURCES SOCIETY, QUESNEL
* KEVIN SYTSMA, LIGNUM LIMITED, WILLIAMS LAKE
* BRIGITTE HANSEN, LIGNUM LIMITED, WILLIAMS LAKE
JIM SUTHERLAND, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* SEAN DONAHUE, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* MIKE GATENBY, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* JOHN BRADLEY, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* ANNE SMITH, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* TOM YACHYSEN, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* KEN BRAHNIUK, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* BRIAN FOOTE, MINISTRY OF FORESTS, WILLIAMS LAKE FOREST DISTRICT
* HEATHER KNEZEVICH, MINISTRY OF FORESTS, CARIBOO FOREST REGION, WILLIAMS LAKE
* FRED KNEZEVICH, MINISTRY OF FORESTS, CARIBOO FOREST REGION, WILLIAMS LAKE
* RODGER STEWART, BC ENVIRONMENT, CARIBOO REGION
* ROBIN HOFFOS, BC ENVIRONMENT, CARIBOO REGION
* TOM WILKINSON, BC ENVIRONMENT, CARIBOO REGION
* JOHN YOUDS, BC ENVIRONMENT, CARIBOO REGION
* ROMAN NAVRATIL, BC ENVIRONMENT, CARIBOO REGION
* CHRIS SWAN, BC ENVIRONMENT, CARIBOO REGION
* JULIE STECIW, BC ENVIRONMENT, CARIBOO REGION
* DARCY PEEL, BC ENVIRONMENT, CARIBOO REGION
* ROB GORDON, MINISTRY OF FORESTS, CARIBOO FOREST REGION, WILLIAMS LAKE - CHAIR

APPENDIX III

MAPS

APPENDIX IV

File: 12438-03/SOUTH CHILCOTIN

February 25, 1999

CONSENSUS AGREEMENT

The attached document is the draft South Chilcotin Sub-Regional Plan and is submitted to IAMC and RRB for review. The undersigned have been involved through the development and analysis of this draft plan, and believe that it represents a planning option that meets the higher level plan targets and objectives of the Cariboo-Chilcotin Land Use Plan. It is our belief that given the following:

- **our Terms of Reference;**
- **instruction and direction from the Inter-Agency Management Committee and the Regional Resource Board;**
- **current inventory information;**
- **public and government agency input;**
- **the assumptions used in the analysis of scenarios;**
- **the plan area and location; and**
- **deadlines and timeframes.**

this plan fulfils the intent of the Terms of Reference, for the South Chilcotin Sub-Regional Plan, dated February 4, 1997.

Name (please print)	Affiliation	Signature

Name (please print)	Affiliation	Signature

APPENDIX V

TARGET ANALYSIS

Analysis Scenarios

The South Chilcotin Sub-Regional Plan (SCSRP) Table was to develop management objectives to guide development activities within the plan area. Targets were established by the Cariboo-Chilcotin Land-Use Plan (CCLUP) for the area covered by the SCSRP. The key targets used for comparison purposes were the no harvest percentages. The no harvest target for the South Chilcotin Special Resource Development Zone (SRDZ) portion of the SCSRP area is 16% and 14% for the Gaspard Enhanced Resource Development Zone (ERDZ) portion. The no harvest target for the Gaspard portion is an estimate as only a small piece of the Gaspard ERDZ falls within the boundaries of the SCSRP area (~ 3%). The no harvest target for the South Chilcotin SRDZ is the one established by the CCLUP because it falls completely within the SCSRP area. The cumulative No Harvest impact of any combination of management objectives and strategies proposed by the SCSRP Table were to meet these targets.

A variety of analysis scenarios were developed by the Technical Analysis Committee to model how closely a specific combination of management objectives and strategies proposed by the SCSRP Table came to meeting the established targets. Analysis assumptions were developed for each scenario. These analysis assumptions were used as the input criteria for the model, which then tested the impacts of the individual management objectives and strategies on achieving the targets. The analysis approach adopted by the Technical Analysis Committee is similar to the methodology used to develop the Cariboo-Chilcotin Land-Use Plan Integration Report (April 6, 1998).

To allow the Technical Analysis Committee to keep track the information collected by the SCSRP process and detail the changes made for each analysis scenario, a Data Book was compiled. For each identified issue or piece of information, the Data Book contains the following information:

- a description of the item;
- the detailed analysis assumptions used for each scenario (if any);
- an area summary detailing the number of hectares;
- a description of the digital information available and a log of changes made to the digital information (the metadata); and
- a map showing the location and size of the specific item.

Management objectives were developed for some items, which were not mappable at the scale used for the SCSRP. These *non-spatial* items are included in the Data Book, but do not have an area summary, a metadata or a map.

To ensure the analysis had a consistent base for comparison purposes, the SCSRP Table agreed that information used for the analysis was cut-off as of September 30, 1998. This allows for valid comparisons between the results of the various scenarios. New

information, whether spatial or non-spatial, introduced after this date is recognized by the SCSRP process, but was not incorporated into the analysis.

Five analysis scenarios, 4a, 4b, 4c, 5a and 5b, were run as "Information" scenarios. The purpose of these runs was to test the sensitivity of the no harvest percentage result obtained by Scenario 4 and Scenario 5. This was done by altering only one or two key assumptions. The results of these "Information" scenarios were reviewed and, depending on the validity of the assumptions used, the Technical Analysis Committee decided whether or not to recommend the particular approach to the SCSRP Table for consideration.

One of the key modeling assumptions borrowed from the CCLUP Integration process was that various constraints can "overlap". This allows any one specific hectare of land to fulfil several purposes. For example, if an Old Growth Management Area and an area of critical Moose Habitat were mapped as overlapping, then the area within the Old Growth Management Area would contribute to management of the Moose Habitat area. This is because the Old Growth Management Area is managed as 100% no harvest and the Moose Habitat area is managed on a 160 year extended rotation. Thus the more restrictive strategy will overlap with a value with a less restrictive strategy.

Another key feature borrowed from the Integration process was the Equivalent Excluded Area (EEA) calculation. This calculation allows the no harvest impact of a management assumption, which results in an extended rotation, to be assessed. The EEA formula used is:

EEA = 1-(normal rotation/strategy rotation)

Where <u>normal rotation</u> is 80 years for lodgepole pine (Pl)
and 120 years for all other species (Douglas fir, spruce, balsam, cedar and hemlock) and

<u>strategy rotation</u> is a the rotation age, in excess of the normal rotation age, which results from the constraints due to managing for a specific objective.

For areas, which were modeled with a recommended Visual Quality Objective (VQO), the following assumptions were used to derive the EEA's and thus calculate the no harvest impact. For polygons with a recommended mix of VQO's (i.e. 50% R, 50% PR) a proportional EEA was calculated.

Unless otherwise noted, the following distribution of tree species for a particular area are assumed to be as follows:

Lodgepole pine (Pl):	90%
Douglas fir/Other (Fd/Other):	10%

For modeling purposes, the maximum allowable percentage alteration of a viewshed area when viewed from above (i.e. planimetric view) for each recommended Visual Quality Objective (VQO) was assumed to be as follows:

Retention (R)	5%	
Partial Retention (PR)	15%	
Modification (M)	25%	(non-constraining over the normal rotation)

For modeling purposes, visually effective green-up was assumed to occur in 20 years.

Scenario - "Base Case"

The "Base Case" scenario was developed as the baseline to which all the other analyses could be compared. The "Base Case" scenario was run using all information collected up to the September 30th cut-off date. This scenario would provide a mechanism to assess progress towards achievement of the targets established by the Cariboo-Chilcotin Land-Use Plan for the South Chilcotin Sub-Regional Plan area.

The "Base Case" analysis assumptions were designed to include the most constraining interpretation of the various management objectives. Each issue was dealt with on an individual basis, with only the naturally occurring overlaps being captured in this analysis. This approach was described at the SCSRP Table as the "full bucket" approach.

The following items where included in the "Base Case" analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
Little Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
Lakeshore Management Zone – Class 'A' Lakes	100%	One Class 'A' lake – Roaster Lake proposed by the Williams Lake Forest District Lakes Classification process
Lakeshore Management Zone – Class 'B' Lakes	EEA= 0.60 for Pl = 0.40 for Fd/Others	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process: 10 percent removal, 20 year green-up
Moose Habitat	100%	
Mule Deer Winter Ranges	EEA= 0.52 for Fd	Manage Fd on a 250 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted
Old Growth Management Areas	100%	
Sheep Corridor	100%	Natural overlaps with Big, East and Little Basins and Mule Deer Winter Range
Riparian Reserve Zones	100%	For streams, wetlands and lakes
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995
Big Creek Trail Viewshed	EEA= 0.80 for Pl = 0.70 for Fd/Others	Manage foreground view from the trail to a VQO of Retention.
Lake Viewsheds	EEA (R)= 0.80 for Pl = 0.70 for Fd/Others EEA(PR)= 0.40 for Pl = 0.10 for Fd/Others	Lakes with recommended VQO's Koster, Roaster and Swartz Lakes
Recreation Corridor Viewsheds	EEA= 0.40 for Pl = 0.10 for Others	Manage Recreation Corridor Viewsheds based on a recommended VQO of PR
Wildlife Tree Patches	2.94%	Used 7% requirement for all landscape units. 50% overlap with Riparian Reserve Zones. Modeled as 100% No Harvest.
Bull Trout Habitat	1.00%	Based on direction contained in the "Cariboo-Chilcotin Land-Use Plan, 90-Day Implementation Process, Final Report – Feb. 1995"

The "Base Case" scenario results were:

Zone	**Target %**	**Scenario %**	**Difference**
South Chilcotin SRDZ	16.00	29.21	+ 13.21
Gaspard ERDZ	14.00	23.33	+ 9.33
South Chilcotin SRP	15.82	28.69	+ 12.87

Analysis of the "Base Case" scenario indicted that more work was required to achieve the targets for the SCSRP area.

Scenario - 1

Scenario 1 was developed as a refinement to the "Base Case" scenario. This scenario utilized some of the recommendations from the CCLUP Integration Report to begin to maximize the potential for "overlaps".

The Scenario 1 analysis assumptions were designed to carry over some of the most constraining interpretations of the key issues and to begin to utilize some of the management direction from the CCLUP Integration report. Items for which changes occurred from the previous scenario are highlighted as **bold**.

The following is included in the Scenario 1 analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	**0%**	**Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management**
Little Basin	**0%**	**Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management**
Lakeshore Management Zone – Class 'A' Lakes	**100%**	**Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.**
Lakeshore Management Zone – Class 'B' Lakes	***EEA= 0.50 for Pl*** **= 0.25 for Fd/Others**	**Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years**
Moose Habitat	**EEA= 0.38 for all species**	**Moose Habitat areas revised. Harvesting permitted based on a 160 year rotation. No Harvest impact calculated based on assuming a equal distribution of tree species.**
Mule Deer Winter Ranges	**EEA= 0.33 for Fd**	**Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted**
Old Growth Management Areas	100%	
Sheep Corridor North	***EEA= 0.33 for all species***	**Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.**
Sheep Corridor South	**100%**	**Sheep Corridor split into North and South.**

Riparian Reserve Zones	100%	For streams, wetlands and lakes
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995
Big Creek Trail Viewshed	**0%**	**Manage foreground view from the trail using partial cutting, single tree selection and small patch cutting systems.**
Lake Viewsheds	**EEA (R)= 0.80 for Pl** **= 0.70 for Fd/Others** **EEA(PR)= 0.40 for Pl** **= 0.10 for Fd/Others**	**Lakes with recommended VQO's Koster, Roaster and Swartz Lakes. Swartz Lake viewshed increase in size based of recommendations made by Ministry of Forests Recreation staff.**
Recreation Corridor Viewsheds	**EEA= 0.40 for Pl** **= 0.10 for Others**	**Recreation Corridor Viewshed shapes revised to reflect work completed by Fritz Mueller, J.S. Hart and Associates Ltd. Manage Recreation Corridor Viewsheds based on a recommended VQO of Partial Retention (PR).**
Wildlife Tree Patches	2.94%	Used 7% requirement for all landscape units. 50% overlap with Riparian Reserve Zones. Modeled as 100% No Harvest.
Bull Trout Habitat	1.00%	Based on direction contained in the "Cariboo-Chilcotin Land-Use Plan, 90-Day Implementation Process, Final Report – Feb. 1995"

The Scenario 1 results were:

Zone	Target %	Scenario %	Difference from Targets	Difference from "Base Case"
South Chilcotin SRDZ	16.00	25.67	+ 9.67	- 3.54
Gaspard ERDZ	14.00	21.25	+ 7.25	- 2.08
South Chilcotin SRP	15.82	25.28	+ 9.46	- 3.41

Analysis of the Scenario 1 results indicated that significantly more work was required to achieve the targets for the SCSRP area.

Scenario - 2

Scenario 2 was developed as a further refinement to Scenario 1. This scenario utilised more of the recommendations from the CCLUP Integration Report. Additional potentials for overlapping issues were investigated.

The Scenario 2 analysis assumptions were designed to pursue the potential for overlapping of issues. To achieve this some of the management objectives and strategies were reviewed and revised. Specifically, the management objectives and strategies for the Recreation Corridor Viewshed polygons were reviewed and revised to reflect the priority assigned to each polygon. Items for which changes occurred from the previous scenario are highlighted as **bold**.

The following items where included in the Scenario 2 analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Little Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Lakeshore Management Zone – Class 'A' Lakes	100%	Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.
Lakeshore Management Zone – Class 'B' Lakes	**EEA= 0.50 for Pl** **= 0.25 for Fd/Others**	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years.
Moose Habitat	**EEA= 0.50 for Pl** **= 0.25 for Fd/Others**	**Moose Habitat areas revised. Harvesting permitted based on a 160 year rotation. No Harvest impact calculated based on the actual distribution of tree species.**
Mule Deer Winter Ranges	EEA= 0.33 for Fd	Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted.
Old Growth Management Areas	100%	
Sheep Corridor North	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Sheep Corridor South	**EEA= 0.33**	**Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.**
Riparian Reserve Zones	100%	For streams, wetlands and lakes
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995
Big Creek Trail Viewshed	0%	Manage foreground view from the trail using partial cutting, single tree selection and small patch cutting systems.
Lake Viewsheds	**EEA(PR)= 0.40 for Pl** **= 0.10 for Fd/Others**	**Lakes with recommended VQO's Koster, Roaster and Swartz Lakes. Swartz Lake viewshed increase in size based of recommendations made by Ministry of Forests Recreation staff.**
Recreation Corridor Viewshed Polygon 1-A	**EEA= 0.58 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.**

Recreation Corridor Viewshed Polygon 1-B	**EEA= 0.38 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 25% R, 50% PR and 25% M.**
Recreation Corridor Viewshed Polygon 1-C	**EEA= 0.38 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C based on a recommended VQO of 20% R, 60% PR and 20% M.**
Recreation Corridor Viewshed Polygon 1-D	**EEA= 0.28 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-D based on a recommended VQO of 15% R, 45% PR and 40% M.**
Recreation Corridor Viewshed Polygon 1-E	**EEA= 0.37 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E based on a recommended VQO of 100% PR.**
Recreation Corridor Viewshed Polygon 2-F	**EEA= 0.09 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.**
Recreation Corridor Viewshed Polygon 2-G	**EEA= 0.18 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G based on a recommended VQO of 50% PR and 50% M.**
Recreation Corridor Viewshed Polygon 2-H	**0%**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H based on a recommended VQO of 100% M.**
Wildlife Tree Patches	**1.33%**	**Used 7% requirement for all landscape units. 50% overlap with Riparian Reserve Zones. Access to Wildlife Tree Patches is modeled based on a double rotation.**
Bull Trout Habitat	**0.50%**	**Assume that there is a 50% overlap with Wildlife Tree Patch requirements. Based on direction contained in the "Cariboo-Chilcotin Land-Use Plan, 90-Day Implementation Process, Final Report – Feb. 1995"**

The Scenario 2 results were:

Zone	Target %	Scenario %	Difference from Targets	Difference from "Base Case"
South Chilcotin SRDZ	16.00	20.94	+ 4.94	- 8.27
Gaspard ERDZ	14.00	18.45	+ 4.45	- 4.88
South Chilcotin SRP	15.82	20.72	+ 4.90	- 7.97

Review of the Scenario 2 results indicated that the possibilities for maximizing overlaps required further investigation, focusing on Bull Trout and Visuals, Wildlife Tree Patches and Visuals, and Wildlife Tree Patches and the Old Growth Management Area (OBMAs) requirements overlaps was to be investigated. The Technical Analysis Committee thought that this would allow the next scenario to come much closer to achieving the targets for the SCSRP area.

Scenario - 3

Scenario 3 was developed as a further refinement to Scenario 2. It was to maximize the potential for overlaps and test the impacts of the added Recreation Corridor Segments and the revised Recreation Corridor Viewshed polygons.

The Scenario 3 analysis assumptions were designed to maximise the potential for overlaps with OGMA's, Wildlife Tree Patches and Bull Trout. Items with changes from the previous scenario are highlighted as **bold**.

The following were used in the Scenario 3 analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Little Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Lakeshore Management Zone – Class 'A' Lakes	100%	Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.
Lakeshore Management Zone – Class 'B' Lakes	EEA= 0.50 for Pl = 0.25 for Fd/Others	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years.
Moose Habitat	EEA= 0.50 for Pl = 0.25 for Fd/Others	Moose Habitat areas revised. Harvesting permitted based on a 160 year rotation. No Harvest impact calculated based on the actual distribution of tree species.

Mule Deer Winter Ranges	EEA= 0.33 for Fd	Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted.
Old Growth Management Areas	**100%**	**Old Growth Management Areas revised to capture requirements and maximise overlaps.**
Sheep Corridor North	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Sheep Corridor South	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Riparian Reserve Zones	100%	For streams, wetlands and lakes
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995
Big Creek Trail Viewshed	0%	Manage foreground view from the trail using partial cutting, single tree selection and small patch cutting systems.
Lake Viewsheds	EEA(PR)= 0.40 for Pl = 0.10 for Fd/Others	Lakes with recommended VQO's Koster, Roaster and Swartz Lakes. Swartz Lake viewshed increase in size based of recommendations made by Ministry of Forests Recreation staff.
Recreation Corridor Segments	**EEA= 0.80 for Pl** **= 0.70 for Fd/Others**	**The Recreation Committee added the Recreation Corridor Segments on December 18, 1998. Manage based on a recommended VQO of R.**
Recreation Corridor Viewshed Polygon 1-A	EEA= 0.58 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.
Recreation Corridor Viewshed Polygon 1-B	EEA= 0.38 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 25% R, 50% PR and 25% M.
Recreation Corridor Viewshed Polygon 1-C	EEA= 0.38 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C based on a recommended VQO of 20% R, 60% PR and 20% M.
Recreation Corridor Viewshed Polygon 1-D	EEA= 0.28 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-D based on a recommended VQO of 15% R, 45% PR and 40% M.
Recreation Corridor Viewshed Polygon 1-E	EEA= 0.37 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E based on a recommended VQO of 100% PR.

Recreation Corridor Viewshed Polygon 2-F	EEA= 0.09 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.
Recreation Corridor Viewshed Polygon 2-G	EEA= 0.18 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G based on a recommended VQO of 50% PR and 50% M.
Recreation Corridor Viewshed Polygon 2-H	0%	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H based on a recommended VQO of 100% M.
Wildlife Tree Patches	1.33%	Used 7% requirement for all landscape units. 50% overlap with Riparian Reserve Zones. Access to Wildlife Tree Patches is modeled based on a double rotation.
Bull Trout Habitat	0.50%	Assume that there is a 50% overlap with Wildlife Tree Patch requirements. Based on direction contained in the "Cariboo-Chilcotin Land-Use Plan, 90-Day Implementation Process, Final Report – Feb. 1995"

The Scenario 3 results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	21.16	+ 5.16	- 8.05
Gaspard ERDZ	14.00	20.60	+ 6.60	- 2.73
South Chilcotin SRP	15.82	21.11	+ 5.29	- 7.58

Review of the Scenario 3 results held some surprises for the Technical Analysis Committee. It was generally anticipated that Scenario 3 would result in an additional ~2% reduction in the No Harvest numbers derived from Scenario 2. Instead the No Harvest numbers increased by 0.22% for the South Chilcotin SRDZ and 2.15% for the Gaspard ERDZ for an overall increase of 0.39%. This result indicated to the Technical Analysis Committee that the overlap model being used contained many complex interactions, which makes it difficult to predict the results of any one scenario.

A portion of the upwards pressure on the No Harvest percentage resulted from additional Old Growth Management Areas being added to Landscape Units which did not yet met the Biodiversity Guidebook requirements.

Scenario - 4

Scenario 4 revises the assumptions that went into Scenario 3 to get the No Harvest percentage closer to the targets. This scenario was to further maximize the potential for overlaps and to review and revise management objectives and strategies for the Recreation Corridor Viewshed polygons.

The Scenario 4 analysis assumptions were designed to fine-tune and continue to maximise the potential for overlaps with OGMA's, Wildlife Tree Patches and Bull Trout. The management objectives and strategies for the Recreation Corridor Viewsheds polygons were revised to reflect the priority assigned to each polygon. Items for which changes occurred from the previous scenario are highlighted as **bold**.

The following items where included in the Scenario 4 analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Little Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Lakeshore Management Zone – Class 'A' Lakes	100%	Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.
Lakeshore Management Zone – Class 'B' Lakes	EEA= 0.50 for Pl = 0.25 for Fd/Others	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years.
Moose Habitat	EEA= 0.50 for Pl = 0.25 for Fd/Others	Moose Habitat areas revised. Harvesting permitted based on a 160 year rotation. No Harvest impact calculated based on the actual distribution of tree species.
Mule Deer Winter Ranges	EEA= 0.33 for Fd	Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted.
Old Growth Management Areas	**100%**	**Old Growth Management Areas revised to capture requirements and maximise overlaps. Requirement for Old Growth Management Areas revised to reflect assumption that 50% of the area in Wildlife Tree Patches contribute towards the Old targets.**
Sheep Corridor North	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Sheep Corridor South	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.

Riparian Reserve Zones	**100%**	**The amount of wetlands mapped on the 1:20,000 Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring reserve zone was reduced by 92%, except for Hungry Valley where it was reduced by 65%. Streams and lakes remained the same.**
Riparian Management Zones	**100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS**	**No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995. The amount of wetlands mapped on the 1:20,000 scale Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring management zones was reduced by 80%.**
Big Creek Trail Viewshed	0%	Manage foreground view from the trail using partial cutting, single tree selection and small patch cutting systems.
Lake Viewsheds	**EEA(PR)= 0.40 for Pl = 0.10 for Fd/Others**	**Lakes with recommended VQO's Koster, Roaster and Swartz Lakes. Swartz Lake viewshed increase in size based of recommendations made by Ministry of Forests Recreation staff. Corrections were made to the map tp reflect the actual recommended VQO's.**
Recreation Corridor Segments	EEA= 0.80 for Pl = 0.70 for Fd/Others	The Recreation Committee added the Recreation Corridor Segments on December 18, 1998. Manage based on a recommended VQO of R.
Recreation Corridor Viewshed Polygon 1-A	**EEA= 0.60 for Pl = 0.40 for Fd/Others**	**No Harvest impact calculated based on actual species distribution with in the polygon. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.**
Recreation Corridor Viewshed Polygon 1-B	EEA= 0.38 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 25% R, 50% PR and 25% M.
Recreation Corridor Viewshed Polygon 1-C	EEA= 0.38 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C based on a recommended VQO of 20% R, 60% PR and 20% M.
Recreation Corridor Viewshed Polygon 1-D	EEA= 0.28 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-D based on a recommended VQO of 15% R, 45% PR and 40% M.

Recreation Corridor Viewshed Polygon 1-E	EEA= 0.37 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E based on a recommended VQO of 100% PR.
Recreation Corridor Viewshed Polygon 2-F	EEA= 0.09 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.
Recreation Corridor Viewshed Polygon 2-G	EEA= 0.18 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G based on a recommended VQO of 50% PR and 50% M.
Recreation Corridor Viewshed Polygon 2-H	0%	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H based on a recommended VQO of 100% M.
Wildlife Tree Patches	**1.76%**	**Based on Table 20a of the Biodiversity Guidebook** **50% overlap with Riparian Reserve Zones** **Access to the Wildlife Tree Patches is modeled based on a double rotation for Landscape Unit with no Old requirement and No Harvest for Landscape Units with an Old requirement..**
Bull Trout Habitat	**0%**	**Assume that Bull Trout Habitat requirements will be addressed by the FPC**

The Scenario 4 results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	18.28	+ 2.28	- 10.93
Gaspard ERDZ	14.00	17.51	+ 3.51	- 5.81
South Chilcotin SRP	15.82	18.21	+ 2.39	- 10.48

The results for Scenario 4 were further revised to capture the following estimated changes.

<u>Wetlands Adjustment:</u>
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone, an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTP's contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMA's and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration Report (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• Wetland Adjustment	+ 0.43	+ 0.67	+ 0.44
• Visuals/WTP Overlap	- 0.13	- 0.11	- 0.13
• 10% Salvage of OGMA	- 0.50	- 0.57	- 0.50
Total	- 0.20	- 0.02	- 0.19

Thus the revised results for Scenario 4 are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	18.08	+ 2.08	- 11.13
Gaspard ERDZ	14.00	17.50	+ 3.50	- 5.83
South Chilcotin SRP	15.82	18.03	+ 2.21	- 10.66

Review of the revised Scenario 4 indicated that further work was still required to achieve the targets. Issues discussed included adjusting the moose habitat rotation ages to remove the No Harvest impact, increasing the percentage contribution of WTP's to Old targets, combining the Old requirements in the Upper Big Creek and Dash Landscape Units and revising the recommended management direction for the Recreation Corridor Viewsheds.

To assess the impacts of these various assumptions on the results of Scenario 4 the Technical Analysis Committee agreed to run three "Information" scenarios.

Scenario 4a would test the impact of increasing the contribution of WTP's to Old targets from 50% to 75%.

Scenario 4b would test the impact of combining the Upper Big Creek and Dash Landscape Units to meet the Old requirements.

Scenario 4c would test the impacts of revisions proposed by the Licensee participants to the management objectives and strategies for the Recreation Corridor Viewshed polygons.

Scenario - 4a - Information

Scenario 4a was developed to test the impact on the results of scenario 4 of increasing the contribution of WTP's to Old targets from 50% to 75%. This would result in a decrease in the requirement for Old Growth Management Areas.

The scenario 4 analysis assumptions were used as the base for the analysis. The key analysis assumption changes made are indicated below:

ITEM	NO HARVEST	COMMENTS
Old Growth Management Areas	100%	Requirement for Old Growth Management Areas revised to reflect assumption that 75% of the area in Wildlife Tree Patches contribute towards the Old targets.
Wildlife Tree Patches	1.76%	Based on Table 20a of the Biodiversity Guidebook 50% overlap with Riparian Reserve Zones Access to the Wildlife Tree Patches is modeled based on a double rotation for Landscape Unit with no Old requirement and No Harvest for Landscape Units with an Old requirement.

The Scenario 4a results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from Scenario 4**
South Chilcotin SRDZ	16.00	17.67	+ 1.67	- 0.61
Gaspard ERDZ	14.00	14.88	+ 0.88	- 2.64
South Chilcotin SRP	15.82	17.42	+ 1.60	- 0.79

The results for Scenario 4a were further revised to capture the following changes:

Wetlands Adjustment:
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:

To capture the assumption that WTPs contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTPs are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMAs and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• Wetland Adjustment	+ 0.43	+ 0.67	+ 0.44
• Visuals/WTP Overlap	- 0.14	- 0.12	- 0.14
• 10% Salvage of OGMA	- 0.43	- 0.28	- 0.41
Total	- 0.14	+ 0.27	- 0.11

Thus the revised results for Scenario 4a are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from Scenario 4**
South Chilcotin SRDZ	16.00	17.53	+ 1.53	- 0.75
Gaspard ERDZ	14.00	15.15	+ 1.15	- 2.37
South Chilcotin SRP	15.82	17.42	+ 1.50	- 0.89

A review of the revised Scenario 4a results by the Technical Analysis Committee resulted in agreement that the analysis assumptions used were supported by all. The Technical Analysis Committee forwarded a recommendation to the SCSRP Table that the Scenario 4a results are adopted as the base of comparison for future analysis runs since the targets were not yet achieved.

Scenario - 4b - Information

Scenario 4b was developed to test the impact on the results of scenario 4 of combining the Upper Big Creek and Dash Landscape Units to meet the Old requirements. This will result in a reduction in the hectares of Old Growth Management Areas required in these Landscape Units. This is due to the excess of Old credits contributed by the Big Creek Park to the Upper Big Creek Landscape Unit.

The Scenario 4 analysis assumptions were used as the base for the analysis. The key analysis assumption changes made are indicated below:

ITEM	NO HARVEST	COMMENTS
Old Growth Management Areas	100%	Requirement for Old Growth Management Areas reduced to reflect the assumption that the Old requirements for the Upper Big Creek and Dash Landscape Units are to be met over the combined area of the Landscape Units.

The Scenario 4b results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from Scenario 4**
South Chilcotin SRDZ	16.00	17.58	+ 1.58	- 0.70
Gaspard ERDZ	14.00	12.50	- 1.50	- 5.02
South Chilcotin SRP	15.82	17.13	+ 1.31	- 1.08

The results for Scenario 4b were further revised to capture the following changes:

Wetlands Adjustment:
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTP's contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMA's and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration Report (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• wetland adjustment	+ 0.43	+ 0.67	+ 0.45
• visuals/WTP overlap	- 0.14	- 0.04	- 0.12
• 10% salvage of OGMA	- 0.41	0.00	- 0.37
Total	- 0.12	- 0.63	- 0.04

Thus the revised results for Scenario 4b are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from Scenario 4**
South Chilcotin SRDZ	16.00	17.46	+ 1.46	- 0.82
Gaspard ERDZ	14.00	13.13	- 0.87	- 4.39
South Chilcotin SRP	15.82	17.08	+ 1.25	- 1.14

A review of the revised Scenario 4b results by the Technical Analysis Committee and based on feedback from the IAMC, it was recommended that this approach be set aside at this time. Adjusting Landscape Unit targets could have regional impacts and implications. The Technical Analysis Committee forwarded a recommendation to the SCSRP Table that the Scenario 4b results be set aside and this approach be viewed as one of the "options of last resort" to achieving the targets.

Scenario - 4c - Information

Scenario 4c was developed to test the impact on the results of Scenario 4 of revisions proposed by the Licensee participants to the management objectives and strategies for the Recreation Corridor Viewshed polygons. Licensees propose to manage key visual areas through completion of visual landscape designs. The designs will be based on achieving the management objectives for each unique polygon. The completed designs would be submitted to the District Manager for review and approval and would provide the template for all development activities in the area.

The Scenario 4 analysis assumptions were used as the base for the analysis. The key analysis assumption changes made are indicated below:

ITEM	NO HARVEST	COMMENTS
Recreation Corridor Viewshed Polygon 1-A	EEA= 0.60 for Pl = 0.40 for Fd/Others	No Harvest impact calculated based on actual species distribution with in the polygon. Recreation Corridor Viewshed management objectives have been revised. To aid in achieving the objectives manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.
Recreation Corridor Viewshed Polygon 1-B	EEA= 0.20 for Pl	Recreation Corridor Viewshed management objectives have been revised. Managing to the revised objectives will constrain harvest access to Pl only.
Recreation Corridor Viewshed Polygon 1-C-a	EEA= 0.00	Recreation Corridor Viewshed shape split and relabelled to capture a unique area. Recreation Corridor Viewshed management objectives have been revised. Visual values will largely be meet through overlaps with Moose Habitat areas and OGMA's.
Recreation Corridor Viewshed Polygon 1-C-b	EEA= 0.15 for Pl	Recreation Corridor Viewshed shape split and relabelled to capture a unique area. Recreation Corridor Viewshed management objectives have been revised. Managing to the revised objectives will constrain harvest access to Pl only.
Recreation Corridor Viewshed Polygon 1-D	EEA= 0.00	Recreation Corridor Viewshed management objectives have been revised. Managing to the revised objectives will not constrain harvest access to timber.
Recreation Corridor Viewshed Polygon 1-E-a	EEA= 0.00	Recreation Corridor Viewshed management objectives have been revised. Managing to the revised objectives will not constrain harvest access to timber.
Recreation Corridor Viewshed Polygon 1-E-b	EEA= 0.15 for Pl	Recreation Corridor Viewshed shape split and relabelled to capture a unique area. Recreation Corridor Viewshed management objectives have been revised. Managing to the revised objectives will constrain harvest access to Pl only.

The Scenario 4c results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from Scenario 4**
South Chilcotin SRDZ	16.00	14.73	- 1.27	- 3.55
Gaspard ERDZ	14.00	17.53	+ 3.53	+ 0.01
South Chilcotin SRP	15.82	14.98	- 0.85	- 3.24

These results were not further adjusted.

Licensee participants and Ministry of Environment staff proposed that the results of Scenario 4c be closely reviewed. Both parties propose that the over achievement on the No Harvest target could be used to review and revise adjustments made to wildlife and habitat management objectives and strategies. The impacts on the core Backcountry Area polygons would also require further review. No agreement was reached by the Technical

Analysis Committee as to recommendations to be made to the SCSRP Table relating to Scenario 4c.

Scenario - 5

Scenario 5 was developed to be the final full scenario run by the Technical Analysis Committee. It captured all the gains made by Scenarios 4 and 4a and would reflect further changes made to the objectives and strategies for the Recreation Corridor Viewshed polygons. The purpose of these revisions was to "fine-tune" the assumptions and achieve a No Harvest impact result as close as possible to the targets.

The Scenario 5 analysis assumptions were based on a combination of the assumptions used for Scenarios 4 and 4a. Additional changes were made to reflect the revisions made to the management objectives and strategies for the Recreation Corridor Viewsheds polygons and Moose Habitat areas. The Recreation Corridor Viewshed polygon shapes and labels are the same as for Scenario 4c. Additionally, the recommended VQOs for Koster and Swartz Lake have been revised. Items for which changes occurred compared to Scenario 4 and 4a are highlighted as **bold**.

The following items where included in the Scenario 5 analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Little Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Lakeshore Management Zone – Class 'A' Lakes	100%	Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.
Lakeshore Management Zone – Class 'B' Lakes	EEA= 0.50 for Pl = 0.25 for Fd/Others	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years.
Moose Habitat	**EEA= 0.50 for Pl** **= 0.25 for Fd/Others**	**Moose Habitat areas revised to reflect overlaps with Recreation Corridor Viewshed polygons 1-A and 1-C-a. Harvesting permitted in the un-overlapped portion of the Moose Habitat area based on a 160 year rotation. No Harvest impact calculated based on the actual distribution of tree species.**
Mule Deer Winter Ranges	EEA= 0.33 for Fd	Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted

Old Growth Management Areas	100%	Requirement for Old Growth Management Areas revised to reflect assumption that 75% of the area in Wildlife Tree Patches contribute towards the Old targets.
Sheep Corridor North	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Sheep Corridor South	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Riparian Reserve Zones	100%	The amount of wetlands mapped on the 1:20,000 Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring reserve zones was reduced by 92%, except for Hungry Valley where it was reduced by 65%. Streams and lakes remained the same.
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995. The amount of wetlands mapped on the 1:20,000 scale Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring management zones was reduced by 80%.
Big Creek Trail Viewshed	0%	Manage foreground view from the trail using partial cutting, single tree selection and small patch cutting systems.
Lake Viewsheds	**EEA (R)= 0.80 for Pl** **= 0.70 for Fd/Others** **EEA(PR)= 0.40 for Pl** **= 0.10 for Fd/Others**	**The viewshed for Swartz Lake has been removed from the Lake Viewshed coverage and is now called "Swartz Lake Viewshed"(Jan. 20, 1999). Lakes with recommended VQO's are now Koster and Roaster Lakes. All R VQO polygons around Koster Lake have been changed to PR.**
Swartz Lake Viewshed	***EEA= 0.54 for all species***	**Manage the viewshed for Swartz Lake based on a recommended VQO of 40% R and 60% PR.**
Recreation Corridor Segments	EEA= 0.80 for Pl = 0.70 for Fd/Others	The Recreation Committee added the Recreation Corridor Segments on December 18, 1998. Manage based on a recommended VQO of R.
Recreation Corridor Viewshed Polygon 1-A	*EEA= 0.60 for Pl* = 0.40 for Fd/Others	No Harvest impact calculated based on actual species distribution with in the polygon. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.
Recreation Corridor Viewshed Polygon 1-B	**EEA= 0.19 for all species**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 15% R, 20% PR and 65% M.**

Recreation Corridor Viewshed Polygon 1-C-a	***EEA= 0.38 for all species***	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C-a based on a recommended VQO of 20% R, 60% PR and 20% M.**
Recreation Corridor Viewshed Polygon 1-C-b	**EEA= 0.38 for all species**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C-b based on a recommended VQO of 20% R, 60% PR and 20% M.**
Recreation Corridor Viewshed Polygon 1-D	**EEA= 0.08 for all species**	**Manage Polygon 1-D based on a recommended VQO of 10% R and 90% M.**
Recreation Corridor Viewshed Polygon 1-E-a	***EEA= 0.37 for all species***	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-a based on a recommended VQO of 100% PR.**
Recreation Corridor Viewshed Polygon 1-E-b	**EEA= 0.00**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-b based on a recommended VQO of 100% M.**
Recreation Corridor Viewshed Polygon 2-F	EEA= 0.09 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.
Recreation Corridor Viewshed Polygon 2-G-a	***EEA= 0.07 for all species***	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-a based on a recommended VQO of 20% PR and 80% M.**
Recreation Corridor Viewshed Polygon 2-G-b	**EEA= 0.37 for all species**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage the portion of Polygon 2-G-b south of the trail based on a recommended VQO of 100% PR.**
Recreation Corridor Viewshed Polygon 2-G-c	**EEA= 0.00**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-c based on a recommended VQO of 100% M.**
Recreation Corridor Viewshed Polygon 2-G-d	**EEA= 0.00**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-d based on a recommended VQO of 100% M.**

Recreation Corridor Viewshed Polygon 2-G-e	**EEA= 0.00**	**Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-e based on a recommended VQO of 100% M.**
Recreation Corridor Viewshed Polygon 2-H	EEA= 0.00	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H based on a recommended VQO of 100% M.
Recreation Corridor Viewshed Polygon 2-I	**EEA= 0.00**	**Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-I based on a recommended VQO of 100% M.**

Wildlife Tree Patches	1.77% SRDZ 2.28 % ERDZ	Based on Table 20a of the Biodiversity Guidebook 50% overlap with Riparian Reserve Zones Access to the Wildlife Tree Patches is modeled based on a double rotation for Landscape Unit with no Old requirement and No Harvest for Landscape Units with an Old requirement.
Bull Trout Habitat	0%	Assume that Bull Trout Habitat requirements will be addressed by the FPC

The Scenario 5 results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.44	+ 0.44	- 12.77
Gaspard ERDZ	14.00	11.96	- 2.05	- 11.37
South Chilcotin SRP	15.82	16.04	+ 0.22	- 12.65

The results for Scenario 5 were further revised to capture the following changes:

Wetlands Adjustment:

For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTP's contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMA's and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• Wetland Adjustment	+ 0.43	+ 0.67	+ 0.45
• Visuals/WTP Overlap	- 0.15	- 0.04	- 0.13
• 10% Salvage of OGMA	- 0.43	- 0.28	- 0.42
Total	- 0.15	+ 0.35	- 0.10

Thus the revised results for Scenario 5 are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.29	+ 0.29	- 12.92
Gaspard ERDZ	14.00	12.31	- 1.69	- 11.02
South Chilcotin SRP	15.82	15.94	+ 0.11	- 12.75

Review of the revised Scenario 5 results indicated to the Technical Analysis Committee that this analysis was very close to the targets for the South Chilcotin Sub-Regional Plan area. The Technical Analysis Committee agreed that the results of scenario 5 should be taken forward to the Table with the recommendation that this scenario be adopted as the final scenario.

Scenario - 5a - Information

Scenario 5a was developed as a contingency scenario to be closely reviewed if scenario 5 did not come close to meeting the targets

The Scenario 5a analysis assumptions were based on Scenario 5 with the only adjustment being that the maximum allowable disturbance, measured in the planimetric view, for a Partial Retention VQO is increased to 20% from 15%. The key analysis assumption changes are indicated below:

ITEM	NO HARVEST	COMMENTS
Lake Viewsheds	EEA (R)= 0.80 for Pl = 0.70 for Fd/Others EEA(PR)= 0.20 for Pl = 0.00 for Fd/Others	The viewshed for Swartz Lake has been removed from the Lake Viewshed coverage and is now called "Swartz Lake Viewshed"(Jan. 20, 1999). Lakes with recommended VQO's are now Koster and Roaster Lakes. All R VQO polygons around Koster Lake have been changed to PR.
Swartz Lake Viewshed	EEA= 0.42 for all species	Manage the viewshed for Swartz Lake based on a recommended VQO of 40% R and 60% PR.
Recreation Corridor Viewshed Polygon 1-A	EEA= 0.50 for Pl = 0.35 for Fd/Others	No Harvest impact calculated based on actual species distribution with in the polygon. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR.
Recreation Corridor Viewshed Polygon 1-B	EEA= 0.15 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 15% R, 20% PR and 65% M.
Recreation Corridor Viewshed Polygon 1-C-a	EEA= 0.27 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C-a based on a recommended VQO of 20% R, 60% PR and 20% M.
Recreation Corridor Viewshed Polygon 1-C-b	EEA= 0.27 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C-b based on a recommended VQO of 20% R, 60% PR and 20% M.
Recreation Corridor Viewshed Polygon 1-D	EEA= 0.08 for all species	Manage Polygon 1-D based on a recommended VQO of 10% R and 90% M.
Recreation Corridor Viewshed Polygon 1-E-a	EEA= 0.18 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-a based on a recommended VQO of 100% PR.
Recreation Corridor Viewshed Polygon 1-E-b	EEA= 0.00	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-b based on a recommended VQO of 100% M.
Recreation Corridor Viewshed Polygon 2-F	EEA= 0.09 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.

Recreation Corridor Viewshed Polygon 2-G-a	EEA= 0.04 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-a based on a recommended VQO of 20% PR and 80% M.
Recreation Corridor Viewshed Polygon 2-G-b	EEA= 0.18 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage the portion of Polygon 2-G-b south of the trail based on a recommended VQO of 100% PR.
Recreation Corridor Viewshed Polygon 2-H	EEA= 0.00	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H based on a recommended VQO of 100% M.

The Scenario 5a results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	14.12	- 1.88	- 15.09
Gaspard ERDZ	14.00	12.06	- 1.94	- 11.27
South Chilcotin SRP	15.82	13.94	- 1.89	- 14.75

The results for Scenario 5 were further revised to capture the following changes:

Wetlands Adjustment:
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTPs contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMAs and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration Report (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements.

This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• Wetland Adjustment	+ 0.43	+ 0.67	+ 0.45
• Visuals/WTP Overlap	- 0.14	- 0.04	- 0.12
• 10% Salvage of OGMA	- 0.43	- 0.28	- 0.42
Total	- 0.14	+ 0.35	- 0.09

Thus the revised results for Scenario 5a are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	13.98	- 2.02	- 15.23
Gaspard ERDZ	14.00	12.41	- 1.59	- 10.92
South Chilcotin SRP	15.82	13.84	- 1.98	- 14.85

A review of the revised Scenario 5a results indicated to the Technical Analysis Committee that the assumptions used in this analysis resulted in a significant over-achievement of the targets for the South Chilcotin Sub-Regional Plan area. The Technical Analysis Committee agreed that based on the results of scenario 5, these results should be set aside and treated as information only at this time

Scenario - 5b - Information

Scenario 5b was developed to address concerns expressed by Chris Hamilton – BC Parks about the management strategies for the foreground viewshed of the Big Creek Park Trail.

The Scenario 5b analysis assumptions were developed by Chris Hamilton – BC Parks and MOF Planning and Recreation staff based on the scenario 5 analysis assumptions. The Technical Analysis Committee members were presented with the scenario assumptions and results, after the scenario had been completed. The key analysis assumption changes are indicated below:

ITEM	NO HARVEST	COMMENTS
Recreation Corridor Viewshed Polygon 1-E-c	EEA= 0.22 for all species	Recreation Corridor Viewshed polygon 1-E-a further subdivided to reflect revised management strategies for the Big Creek Park Trail foreground viewshed. Manage Polygon 1-E-c based on a recommended VQO of 60% PR and 40% M.
Big Creek Viewshed Polygon A	EEA= 0.80 for Pl = 0.70 for Fd/Others	The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon A based on a recommended VQO of R.
Big Creek Viewshed Polygon B	EEA= 0.40 for Pl = 0.10 for Fd/Others	The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon B based on a recommended VQO of PR.
Big Creek Viewshed Polygon C	EEA= 0.00	The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon C based on a recommended VQO of PR. Use of partial cutting, single tree selection and small patch cutting systems will result in achieving a VQO of PR within a normal rotation.

The Scenario 5b results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.60	+ 0.60	- 12.61
Gaspard ERDZ	14.00	11.96	- 2.04	- 11.37
South Chilcotin SRP	15.82	16.19	+ 0.37	- 12.50

The results for Scenario 5b were further revised to capture the following changes:

Wetlands Adjustment:
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTP's contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMAs and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration Report (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• wetland adjustment	+ 0.43	+ 0.67	+ 0.45
• visuals/WTP overlap	- 0.14	- 0.04	- 0.12
• 10% salvage of OGMA	- 0.43	- 0.28	- 0.42
Total	- 0.14	+ 0.35	- 0.09

Thus the revised results for Scenario 5b are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.46	+ 0.46	- 12.75
Gaspard ERDZ	14.00	12.31	- 1.69	- 11.02
South Chilcotin SRP	15.82	16.09	+ 0.27	- 12.60

The Technical Analysis Committee reviewed the results of Scenario 5b and agreed that if the No Harvest impact of this scenario would be identical to Scenario 5, then it would recommend to the Table to adopt this approach for managing the foreground view visible from the Big Creek Park trail. Thus, further work was required to adjust the No Harvest impact of this scenario downwards.

Scenario - 5 - Final

Scenario 5 – Final was developed to confirm the results of Scenario 5.

The Scenario 5 –Final analysis assumptions were based on the assumptions used for Scenario 5. Minor changes were made to incorporate the revisions to the management strategies for the Big Creek Park Trail Viewshed. Items for which changes occurred compared to Scenario 5 are highlighted as **bold**.

The following items where included in the Scenario 5 - Final analysis:

ITEM	NO HARVEST	COMMENTS
Big Basin	100%	Natural overlaps with Mule Deer Winter Range, Sheep Corridor
East Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Little Basin	0%	Identified values will be met through overlaps with the Sheep Corridor, Mule Deer Winter Range and interior dry-belt Douglas fir management
Lakeshore Management Zone – Class 'A' Lakes	100%	Two Class 'A' lakes – Roaster Lake and Fish Lake proposed by the Williams Lake Forest District Lakes Classification process. Fish Lake classification added October 30, 1998.
Lakeshore Management Zone – Class 'B' Lakes	EEA= 0.50 for Pl = 0.25 for Fd/Others	Impact based on proposed Harvesting Guidelines from the Williams Lake Forest District Lakes Classification process assuming harvesting will be 100% partial cutting systems. Rotation age equals 160 years.
Moose Habitat	EEA= 0.50 for Pl = 0.25 for Fd/Others (for un-overlapped portion only)	Moose Habitat areas revised to reflect overlaps with Recreation Corridor Viewshed polygons 1-A and 1-C-a. Harvesting permitted in the un-overlapped portion of the Moose Habitat area based on a 160 year rotation. No Harvest impact calculated based on the actual distribution of tree species.
Mule Deer Winter Ranges	EEA= 0.33 for Fd	Manage Fd on a 180 year rotation Manage Pl & Other on normal rotation Target low crown closure stands deducted
Old Growth Management Areas	100%	Requirement for Old Growth Management Areas revised to reflect assumption that 75% of the area in Wildlife Tree Patches contribute towards the Old targets.
Sheep Corridor North	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Sheep Corridor South	EEA= 0.33	Sheep Corridor split into North and South. Harvesting permitted based on a 120 year rotation.
Riparian Reserve Zones	100%	The amount of wetlands mapped on the 1:20,000 Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring reserve zones was reduced by 92%, except for Hungry Valley where it was reduced by 65%. Streams and lakes remained the same.
Riparian Management Zones	100% for 50% of the area of S1-S3 100% for 25% of the area of S4-S5 100% for 40% of the area of wetlands in ESSF and MS	No Harvest impacts based on "Best Practices" for streams and wetlands in the Interior, from the Riparian Management Area Guidebook, Dec. 1995. The amount of wetlands mapped on the 1:20,000 scale Forest Cover maps for the area west of Churn Creek is overestimated. The amount of wetlands requiring management zones was reduced by 80%.
Big Creek Viewshed Polygon A	**EEA= 0.60 for Pl** **= 0.40 for Fd/Others**	**The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon A based on a recommended VQO of PR with a 200 year rotation.**

Big Creek Viewshed Polygon B	**EEA= 0.56 for Pl** **= 0.33 for Fd/Others**	**The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon B based on a recommended VQO of PR with a 180 year rotation.**
Big Creek Viewshed Polygon C	***EEA= 0.00***	**The Big Creek Viewshed (foreground view) has been subdivided to reflect revised management strategies. Manage polygon C based on a recommended VQO of PR. Use of partial cutting, single tree selection and small patch cutting systems will result in achieving a VQO of PR within a normal rotation.**
Lake Viewsheds	EEA (R)= 0.80 for Pl = 0.70 for Fd/Others EEA(PR)= 0.40 for Pl = 0.10 for Fd/Others	The viewshed for Swartz Lake has been removed from the Lake Viewshed coverage and is now called "Swartz Lake Viewshed"(Jan. 20, 1999). Lakes with recommended VQO's are now Koster and Roaster Lakes. All R VQO polygons around Koster Lake have been changed to PR.
Swartz Lake Viewshed	EEA= 0.54 for all species	Manage the viewshed for Swartz Lake based on a recommended VQO of 40% R and 60% PR.
Recreation Corridor Segments	EEA= 0.80 for Pl = 0.70 for Fd/Others	The Recreation Committee added the Recreation Corridor Segments on December 18, 1998. Manage based on a recommended VQO of R.
Recreation Corridor Viewshed Polygon 1-A	**EEA= 0.60 for Pl** **= 0.40 for Fd/Others**	**Overlaps with critical wildlife areas. No Harvest impact calculated based on actual species distribution within the polygon using a 200 year rotation with 10% planimetric disturbance on a 20 year re-entry period. For visuals manage Polygon 1-A based on a recommended VQO of 50% R and 50% PR. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee.**
Recreation Corridor Viewshed Polygon 1-B	EEA= 0.19 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-B based on a recommended VQO of 15% R, 20% PR and 65% M.
Recreation Corridor Viewshed Polygon 1-C-a	***EEA= 0.38 for all species***	**Overlaps with critical wildlife areas. No Harvest impact calculated based on a 135 year rotation with 15% planimetric disturbance on a 20 year re-entry period. Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-C-a based on a recommended VQO of 20% R, 60% PR and 20% M.**

Recreation Corridor Viewshed Polygon 1-C-b	**EEA= 0.38 for all species**	**Overlaps with critical wildlife areas. No Harvest impact calculated based on a 135 year rotation with 15% planimetric disturbance on a 20 year re-entry period. For visuals manage Polygon 1-C-b based on a recommended VQO of 20% R, 60% PR and 20% M. Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee.**
Recreation Corridor Viewshed Polygon 1-D-a	**EEA= 0.08 for all species**	**Polygon 1-D subdivided into specific areas for management purposes. Manage Polygon 1-D-a based on a recommended VQO of 10% R and 90% M.**
Recreation Corridor Viewshed Polygon 1-D-b	**EEA= 0.08 for all species**	**Polygon 1-D subdivided into specific areas for management purposes. Manage Polygon 1-D-b based on a recommended VQO of 10% R and 90% M.**
Recreation Corridor Viewshed Polygon 1-E-a	EEA= 0.37 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-a based on a recommended VQO of 100% PR.
Recreation Corridor Viewshed Polygon 1-E-b	EEA= 0.00	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 1-E-b based on a recommended VQO of 100% M.
Recreation Corridor Viewshed Polygon 1-E-c	***EEA= 0.20 for all species***	**Recreation Corridor Viewshed polygon 1-E-a further subdivided to reflect revised management strategies for the Big Creek Park Trail foreground viewshed. Manage Polygon 1-E-c based on a recommended VQO of 55% PR and 45% M.**
Recreation Corridor Viewshed Polygon 2-F	EEA= 0.09 for all species	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-F based on a recommended VQO of 25% PR and 75% M.
Recreation Corridor Viewshed Polygon 2-G-a	EEA= 0.07 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-a based on a recommended VQO of 20% PR and 80% M.
Recreation Corridor Viewshed Polygon 2-G-b	EEA= 0.37 for all species	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage the portion of Polygon 2-G-b south of the trail based on a recommended VQO of 100% PR.
Recreation Corridor Viewshed Polygon 2-G-c	EEA= 0.00	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-c based on a recommended VQO of 100% M.

Recreation Corridor Viewshed Polygon 2-G-d	EEA= 0.00	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-d based on a recommended VQO of 100% M.
Recreation Corridor Viewshed Polygon 2-G-e	EEA= 0.00	Recreation Corridor Viewshed shapes further revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-G-e based on a recommended VQO of 100% M.
Recreation Corridor Viewshed Polygon 2-H-a	***EEA= 0.00***	**Polygon 2-H subdivided into specific areas for management purposes. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H-a based on a recommended VQO of 100% M.**
Recreation Corridor Viewshed Polygon 2-H-b	***EEA= 0.00***	**Polygon 2-H subdivided into specific areas for management purposes. Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-H-b based on a recommended VQO of 100% M.**
Recreation Corridor Viewshed Polygon 2-I	EEA= 0.00	Recreation Corridor Viewshed shapes revised to reflect revisions to the work completed by Fritz Mueller, J.S. Hart and Associates Ltd. by the Recreation Committee. Manage Polygon 2-I based on a recommended VQO of 100% M.
Wildlife Tree Patches	1.77% SRDZ 2.28 % ERDZ	Based on Table 20a of the Biodiversity Guidebook 50% overlap with Riparian Reserve Zones Access to the Wildlife Tree Patches is modeled based on a double rotation for Landscape Unit with no Old requirement and No Harvest for Landscape Units with an Old requirement.
Bull Trout Habitat	0%	Assume that Bull Trout Habitat requirements will be addressed by the FPC

The Scenario 5 - Final results were:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.44	+ 0.44	- 12.77
Gaspard ERDZ	14.00	11.96	- 2.04	- 11.37
South Chilcotin SRP	15.82	16.04	+ 0.22	- 12.65

The results for Scenario 5 - Final were further revised to capture the following changes:

Wetlands Adjustment:
For wetlands located west of Churn Creek, which would require a riparian reserve zone and /or riparian management zone an adjustment is required. For the purposes of the overlap table, these wetland areas have been deleted from the analysis. Thus, to estimate the No Harvest impact of these areas an adjustment is required to the No Harvest percentage. This is an estimate of impact and is a non-spatial adjustment.

Visuals/Wildlife Tree Patch Overlap Adjustment:
To capture the assumption that WTP's contribute to managing for visuals, an adjustment to the No Harvest percentage is required. This is due to the assumption that for the purposes of this analysis, WTP's are non-spatial and the No Harvest impact is based on an arithmetic calculation. The adjustment is made based on the assumption that 50% of the WTP requirement for any one visual polygon contributes to managing for visuals. Thus the area of the visual polygon is reduced by this amount.

10% Salvage of Old Growth Management Area Adjustment:
To capture the assumption that 10% of the total old requirement within OGMA's and outside mule deer and riparian requirements will become available for harvest over the course of a rotation, an adjustment to the No Harvest percentages is required. This assumption is consistent with the recommendations of the CCLUP Integration Report (April 6, 1998). This availability is intended to capture salvage due to severe natural disturbance and/or development of innovative approaches to meeting old requirements. This is an estimate of impact and is a non-spatial adjustment.

	SRDZ	ERDZ	SCSRP
• Wetland Adjustment	+ 0.43	+ 0.67	+ 0.45
• Visuals/WTP Overlap	- 0.14	- 0.04	- 0.12
• 10% Salvage of OGMA	- 0.43	- 0.28	- 0.42
Total	- 0.14	+ 0.35	- 0.09

Thus the revised results for Scenario 5 - Final are:

Zone	**Target %**	**Scenario %**	**Difference from Targets**	**Difference from "Base Case"**
South Chilcotin SRDZ	16.00	16.30	+ 0.30	- 12.91
Gaspard ERDZ	14.00	12.31	- 1.69	- 11.02
South Chilcotin SRP	15.82	15.95	+ 0.12	- 12.74

A review of Scenario 5 – Final confirmed the results of Scenario 5. The Technical Analysis Committee recommends that the Table adopt Scenario 5 – Final.

APPENDIX V

South Chilcotin SRDZ - Comparison Between SRP Analysis (Scenario 5 -FINAL) and Integration Analysis

South Chilcotin Sub-Regional Plan				CCLUP Integration Report - Adjusted Strategy Results (Appendix XIV)				
Zone	Gross Forest Area (ha.)	Net Forest Area (ha.) Overlaps Deducted	Equivalent Excluded Area (%)	Zone	Gross Forest Area (ha.)	Net Forest Area (ha.)Overlaps deducted	Equivalent Excluded Area (%)	% Difference from Integration
Moose Habitat	4315	930	0.39	not considered		0		0.39
Big Basin	903	856	0.89	not considered		0		0.89
Residual OGMAs - Old 1 & Old 2	4224	3749	3.89	Old 1 (250 years)	2962	0	0	3.89
				Old 2 (140 years)	3884	1127	1.1	-1.1
LMZ Class A lake	94	91	0.09	not considered		0	0	0.09
Riparian reserves	971	1133	1.18	Riparian	5732	5732	6	-4.82
Riparian Mgmt. Zones	1601	847	0.88	included in riparian above				0.88
Mule Deer Winter Range	8862	3670	1.26	Mule Deer Winter	5015	4714	1.9	-0.64
Class B Lakeshore Mgmt. Zones	172	78	0.04	not considered			0	0.04
Sheep Corridor-modified Harvest	2210	1687	0.58	not considered				0.58
Wildlife Tree Patches	3890	1945	1.76	Wildlife Tree Patches	2866	0	0.3	1.46
Recreation Corridor and Lake Viewsheds								
Retention VQO	2695	2274		Retention	0	0	0	
Partial Retention VQO	9077	7922		Partial Retention	26955	25020	6.5	
Sub-total	**11772**	**10196**	**4.88**					
Modification VQO	12435	11667	0	Modification	0	0	0	
Total Recreation Corridor and Lake Viewsheds	**24207**	**21863**	**4.88**	Total Visuals	26955	25020	6.5	-1.62
Big Creek Viewshed	825	821	0.46					
TOTAL	52274	37670	16.30				**15.8**	**0.5**

Appendix VI

POTENTIAL GOAL 2 AREA

Goal 2 Protected Areas Investigated:

1. East Churn Creek - 43 hectares
- only IAMC approved area
- rarity is main value - 3 species: lodgpole pine, whitebark pine, ponderosa pine at 1500m
- deer habitat and sheep migration
- rated high for protection in region

2. Big Basin - approx. 485(A)/3110(B) hectares
- regional significance for recreation
- diversity of species (forest/cliff interface, grasslands)
- mix of conifer and deciduous
- winter habitat for ungulates
- several blue listed species in Chilcotin plateau/IDFdk4 ecosystem

3. Red Mountain - approx. 342 hectares
- recreation destination, high regional significance for recreation
- regionally significant summer range for bighorn sheep
- other species include grizzly and mule deer
- existing trail for horseback, hiking and wildlife viewing
- alpine and subalpine with small lakes

4. Fish Lake - approx. 782 hectares
- recreation destination, regional significance
- excellent fishery
- high scenic values
- recreation corridor to Big Creek Park (not high quality)
- moose winter range and wetland complex in Hungry Valley

5. Quartz Mountain - approx. 1430 hectares
- winter population of California Bighorn Sheep
- alpine meadows
- regional recreation significance
- high grizzly values

6. Wolf Rock - approx. 45 hectares
- possible wildlife habitat on the rock face (bats)
- diversity of forest cover
- scenic point and geological feature
- several blue-listed species associated with the CHP/IDFdk4 ecosystem

7. Roaster Lake - approx. 170 hectares

- existing UREP and Forest Service Recreation Site
- good fishery (?)
- excellent scenic values and recreation destination

8. anlos Basin - approx. 535 hectares
- water source for Beaver Valley cabin and meadows
- large spruce
- cultural values (old homestead - 2,500 sheep)
- hiking and scenic values
- Peter Marshall source of info

9. Upper Dash Meadows - approx. 760 hectares
- critical moose winter habitat
- wetland meadows
- backcountry recreation (hiking, wildlife viewing)
- linkage to Big Creek Park

10. Prentice Lake and Trail - approx. 412 hectares
- trails/trail intersection
- beaver dams and fishing lake
- small lake/wetland complex/grasslands

11. Bubble Hotspring (10 ha?)
- bubble hotspring deposit, not a hotspring
- geological - yellow siliceous encrustation, 10-30 meters deep forming terraced structure - 150 meters across
- seen from Porcupine Creek Road
- formation suggests Opalescent quartz or fire opals
- also occurs near perlite mine in Empire Valley
- regionally significant
- low mineral values (“dead”)
- attraction to rockhounds

Appendix VII

Range Users With South Chilcotin Plan Area

Saugstad Ranch
This ranch is owned and operated by Randy and Gay Saugstad. The actual range use within the plan area is minor. Between June 1 and June 15, the cattle are pushed from their spring range near Mons Lake to their summer range in Big Creek Park. The cattle are moved down the Sky Ranch road and then down the 2400 road (northwest corner of the plan area). During the fall, the cattle have a two week trail through permit. This allows the ranch to slowly move the cattle from summer range to home. The cattle primarily graze on the cutblocks located adjacent to the 2400 road.

Joan Fisher
The cattle use is almost identical to that of Saugstad's

Sky Ranch
This ranch is owned and operated by the 50 Ranch Ltd.; a family owned operation. Some of the ranch property on Cooper Creek is located within the plan area. The ranch grazes cattle within the plan area during the late spring and then again in the fall. The grazing area is all within the Wales Unit, which is west of Gaspard Lake. The cattle graze primarily on pinegrass within old cutblocks. There is very little wetland grazing. Summer use for Sky Ranch is within Big Creek Park.

Gang Ranch
The ranch is owned by Gang Ranch Ltd., who have hired a manager, Larry Ramstad, to look after the day to day operations of the ranch. The plan area dissects Gang Ranch's summer range. This is primarily high elevation range on mountainous terrain. The grazing consists of meadowed valley bottoms and forested slopes. Grazing occurs on some cutblocks and on the valley floors. Light and sporadic use occurs in most of the alpine areas within the Gang Ranch grazing tenure (area west of Churn Creek). Cowboys are hired to keep the cattle distributed both in the valleys and among the valleys. There are numerous trails throughout the plan area that have been created to move cattle and cowboys to and from the various valleys. These trails are now used extensively by recreationalists and hunters.

Logging within the area both creates forage and causes distribution problems. Pinegrass becomes abundant approximately two years after a block is harvested, but the blocks and roads create new access points for the cattle. New fences are built every year to act as substitute for the natural barriers that are removed.

Empire Valley Ranch
Empire Valley Ranch was purchased by the provincial government in 1997. It now falls under the jurisdiction of B.C. Parks and is within the Churn Creek Protected Area. Currently B.C. Parks and the Forest Service authorize John Holmes and Joyce Sapp to use the old ranch headquarters and to graze cattle on the permit area. All of the old private lands that were the Empire Valley Ranch are now included in the Range Act permit. The grazing season consists of the cattle moving from the hayfields and the grassland on the Fraser River in the spring to the west side of Blackdome Mountain for the summer. Empire Valley ranch has historically grazed alpine areas on Red Mountain, Buck Mountain and Blackdome Mountain. As the herd size is now half of the historic numbers and logging has now opened up considerable amounts of forage near Red Mountain Meadows, cattle will no longer have to be moved towards the Tyaughton River during the summer. The final grazing area, though, has yet to be determined. During the fall, the cattle are moved back to the ranch headquarters for sorting and weaning and then those cows that are able are moved to the Churn Creek grassland benches for winter grazing. Snow normally forces the cattle back to the ranch for the winter feed period.

As logging progresses around the north side of Blackdome Mountain, remedial fencing will be needed to replace the natural boundary that the forests offered. While the new logging opens up new grazing opportunities, it also allows the cattle to move freely throughout the grazing area.

APPENDIX VIII

WTP Requirement After Landscape Unit Objectives are Established
Scenario 5 Final

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Landscape Unit and Biodiversity Emphasis		Natural Disturbance Type	BEC Unit	Forest Area in LU (ha.)	Min. Old Seral Target (%)	Min. Old Seral Target for LU(ha) (E x F)	Forest Area in S. Chil. SRDZ	Forest Area in Gaspard ERDZ	Total Forest Area in SRP	Forest Area Minus F leading	Forest Area Available in 1 Rotat. K x 0.84	WTP % Rqmt. After LU Object.	WTP Area Rqmt. L x M	Contrib. to OGMA Rqmt. 75% x N
6	Churn - intermediate		2	ESSF	2,642	0.09	238	2,642	0	2,642	2642	2219	0.05	111	83
7			3	MS	5,919	0.14	829	5,495	383	5,878	5878	4938	0.05	247	185
8			3	SBPS	7,829	0.07	548	4,831	1,940	6,771	5863	4925	0.05	246	n/a
9			4	IDF (FG)	8,479	0.21	1781	3,345	308	3,653	1394	1171	0.05	59	n/a
10			4	IDF (PG)	1,177	0.11	129			0					
11			TOTAL		26,046		3525	16,313	2,631	18,944	15777	13253	0.05	663	268
12															
13	Koster-Lone Cabin - h		2	ESSF	4,131	0.13	537	4,131	0	4,131	4131	3470	0.03	104	78
14			3	MS	9,034	0.21	1897	9,034	0	9,034	8734	7337	0.03	220	165
15			4	IDF (FG)	12,865	0.32	4117	9,845	0	9,845	4292	3605	0.03	108	n/a
16			4	IDF (PG)	3,743	0.16	599		0	0		0			
17			TOTAL		29,773		7150	23,010	0	23,010	17157	14412	0.03	432	243
18															
19	Upper Churn - low		2	ESSF	10,501	0.09	945	10,501	0	10,501	10501	8821	0.07	617	463
20			3	MS	8,057	0.14	1128	8,057	0	8,057	8057	6768	0.07	474	355
21			3	SBPS	1,169	0.07	82	1,169	0	1,169	1139	957	0.07	67	n/a
22			TOTAL		19,727		2,155	19,727	0	19,727	19697	16545	0.07	1158	818
23										0					
24	Dash - low		2	ESSF	12,994	0.09	1169	11,482	1,502	12,984	12984	10907	0.07	763	573
25			3	MS	7,541	0.14	1056	2,942	4,599	7,541	7541	6334	0.07	443	333
26			3	SBPS	1,924	0.07	135	1,429	495	1,924	1818	1527	0.07	107	n/a
27			TOTAL		22,459		2360	15,853	6,596	22,449	22343	18768	0.07	1314	904
28										0					
29	Upper Big Creek - low		2	ESSF	10,521	0.09	947	4,246	37	4,283	4283	3598	0.01	36	n/a
30			3	MS	7,404	0.14	1037	5,240	68	5,308	5308	4459	0.01	45	n/a
31			3	SBPS	133	0.07	9	39	0	39	39	33	0.01	0	n/a
32			TOTAL		18,058		1993	9,525	105	9,630	9630	8089	0.01	81	
33										0					
34	Big Creek - low		2	ESSF	3,633	0.09	327	1,158	0	1,158	1158	973	0.07	68	n/a
35			3	MS	8,329	0.14	1166	3,346	0	3,346	3346	2811	0.07	197	148
36			3	SBPS	26,689	0.07	1868	4,313	0	4,313	4313	3623	0.07	254	n/a
37			4	IDF (FG)	10,153	0.21	2132	0	0	0	0	0	0	0	n/a
38			4	IDF (PG)	20,486	0.11	2253	0	0	0	0	0	0	0	n/a
39			TOTAL		69,290		7747	8,817	0	8,817	8817	7406	0.07	518	148
40										0					
41	Gaspard - intermediat		2	ESSF	3,680	0.09	331	1,196	0	1,196	1196	1005	0.09	90	n/a
42			3	MS	21,079	0.14	2951	1,466	0	1,466	1466	1231	0.09	111	83
43			3	SBPS	20,397	0.07	1428	0	0	0		0	0	0	n/a
44			4	IDF (FG)	15,923	0.21	3344	0	0	0		0	0	0	n/a
45			4	IDF (PG)	13,319	0.11	1465	0	0	0		0	0	0	n/a
46			TOTAL		74,398		9519	2,662	0	2,662	2662	2236	0.09	201	83
47															
48	Nadila - low		2	ESSF	13902	0.09	1251	0		0	0	0	0	0	n/a
49			3	MS	11899	0.14	1666	0		0	0	0	0	0	n/a
50			3	SBPS	5138	0.07	360	38		38	38	32	0	0	n/a
51			TOTAL		30939		3277	38		38	38	32	0	0	n/a
52															
53	GRAND TOTALS													4368	2464

APPENDIX IX

South Chilcotin Sub-Regional Plan Old Seral Targets for Scenario 5 Final

APPENDIX IX

South Chilcotin Sub-Regional Plan Old Seral Targets for Scenario 5 Final

Landscape Unit and Biodiversity Emphasis	Natural Disturbance Type	BEC Unit	Forest Area in LU (ha.)	Min. Old Seral Target (%)	Min. Old Seral Target for LU(ha) (E x F)	Forest Area in S. Chil. SRDZ	Forest Area in Gaspard ERDZ	Min. Old Seral Target (ha.) for SRDZ	Min. Old Seral Target(ha) for ERDZ	Total Min. Old Seral Target (ha) (J + K)	Forest Area in Park (ha)	Mature + Old Seral in Park (ha.)	Net Old after Park contrib. (ha) (L - M)	Forest Area in Riparian Reserves	Forest Area in No Harvest Zones	Residual OGMA Rqmt. ha (O-P-Q)
Churn	2	ESSF	2,642	0.09	238	2,642	0	238	0	238	0		238	5	0	233
- intermediate	3	MS	5,919	0.14	829	5,495	383	775	54	829	41	14	788	52	0	736
	3	SBPS	7,829	0.07	548	4,831	1,940	391	157	548	1058	421	0	55	267	0
	4	IDF (FG)	8,479	0.21	1781	3,345	308	1750	160	1910	5785	4363	0	154	1088	0
	4	IDF (PG)	1,177	0.11	129						219	17	0			0
	5	AT			n/a	8		n/a	n/a	n/a						
	TOTAL		26,046		3524	16,321	2,631	3154	371	3525	7103	4815	1026	266	1355	969
Koster-	2	ESSF	4,131	0.13	537	4,131	0	537	0	537	0		537	2	0	535
Lone Cabin	3	MS	9,034	0.21	1897	9,034	0	1897	0	1897	270	211	1627	44	25	1558
- high	4	IDF (FG)	12,865	0.32	4117	9,845	0	4177	0	4177	6463	4974	0	87	0	0
	4	IDF (PG)	3,743	0.16	599		0	599	0	599	300	163	0			0
	5	AT			n/a	3		n/a	n/a	n/a						
	TOTAL		29,773		7150	23,013	0	7210	0	7210	7033	5348	2164	133	25	2093
					0											
Upper Churn	2	ESSF	10,501	0.09	945	10,501	0	945	0	945	0		945	100	0	845
- low	3	MS	8,057	0.14	1128	8,057	0	1128	0	1128	0		1128	214	10	904
	3	SBPS	1,169	0.07	82	1,169	0	82	0	82	0		82	41	0	**0**
	5	AT			n/a	129		n/a	n/a	n/a						
	TOTAL		19,727		2,155	19,856	0	2155	0	2155	0	0	2155	355	10	1749
Dash - low	2	ESSF	12,994	0.09	1169	11,482	1,502	1034	135	1169	10	10	1159	101	0	1058
	3	MS	7,541	0.14	1056	2,942	4,599	412	644	1056	0		1056	47	0	1009
	3	SBPS	1,924	0.07	135	1,429	495	100	35	135	0		135	72	0	**0**
	5	AT			n/a	193	5	n/a	n/a	n/a						
	TOTAL		22,459		2360	16,046	6,601	1546	814	2360	10	10	2350	220	0	2067
					0											
Upper	2	ESSF	10,521	0.09	947	4,246	37	939	8	947	6238	4590	0	0	0	0
Big Creek	3	MS	7,404	0.14	1037	5,240	68	1024	13	1037	2096	1362	0	5	56	0
- low	3	SBPS	133	0.07	9	39	0	10	0	10	94	57	0	1	0	**0**
	5	AT			n/a	25		n/a	n/a	n/a						
	TOTAL		18,058		1993	9,550	105	1973	21	1994	8428	6009	0	6	56	0
Big Creek	2	ESSF	3,633	0.09	327	1,158	0	104	0	104	0		104	0	0	**0**
- low	3	MS	8,329	0.14	1166	3,346	0	468	0	468	213	23	255	0	0	255
	3	SBPS	26,689	0.07	1868	4,313	0	302	0	302	2193	1371	0	2	0	0
	4	IDF (FG)	10,153	0.21	2132	0	0	0	0	0	0		0		0	0
	4	IDF (PG)	20,486	0.11	2253	0	0	0	0	0	0		0		0	0
	TOTAL		69,290		7747	8,817	0	874	0	874	2406	1394	359	2	0	255
Gaspard	2	ESSF	3,680	0.09	331	1,196	0	108	0	108	0		108	0	0	**0**
- intermediate	3	MS	21,079	0.14	2951	1,466	2	205	0	205	44	14	205	0	0	205
	3	SBPS	20,397	0.07	1428	0	0	0	0	0	95	41				0
	4	IDF (FG)	15,923	0.21	3344	0	3	0	0	0	220	139				0
	4	IDF (PG)	13,319	0.11	1465	0	0	0	0	0	142	35				0
	TOTAL		74,398		9519	2,662	5	313	0	313	501	229	313	0	0	205
Nadila - low	2	ESSF	13,902	0.09	1251	0	0				10430	5445	0			0
	3	MS	11,899	0.14	1666	0	0				11055	7880	0			0
	3	SBPS	5,138	0.07	360	38	0				4095	3081	0	0	0	0
	TOTAL		30,939		3277	38	0				25580	16406	0	0	0	0
GRAND TOTALS			290,690			96,303	9,342	17,225	1,206	18,431	51,061	34,211	8,367	982	1,446	7,338

APPENDIX X

Detailed Trail Description

FISH LAKE - BIG CREEK TRAIL

A little used forested, but well defined and generally easy trail. An alternative recreation route was suggested as the "Fire Road" west from Fish Lake and then south along the Big Creek trail.
Length: 11 km , 8 hours hiking.
Current Use: Low. The northern portion is a little used cattle trail. The most used section is the short link to the Big Creek trail. Primary users are hunters and horse riders. The "Fire Road" west from Fish Lake and the Big Creek trail receives more use.. Fish Lake has a nice undeveloped campsite and good fishing.
Recreation Potential: Low, except for the southern link to the Big Creek trail. An alternative recreation route has been suggested (see above).
Visual Characteristics: Most of trail is enclosed in forest with high/moderate screening with little opportunity for extended views. Two viewpoints near the southwest end of the trail, one major, one minor.

UPPER DASH TRAIL

Contains one of the prime recreation destinations in the study area. A well defined trail is typically at the forest edge with broad views in most directions because of meadow networks. There are number of connecting side trails mostly to the south and west.
Length: 11¾ km, 7 hours hiking.
Current Use: Low. Heaviest use is near the east end by the range cabin and guide cabin. Primary users are ranchers, but also use by guides, hunters, recreation horse riders, and to a lesser extent, trailbikes.
Recreation Potential: Excellent. Can support a broad spectrum of activities. Many good potential campsites, good horse country with abundant grass and water, relatively easy access via 2800 Road, connections to other trails, easy well marked route, and varied and attractive views.
Visual Characteristics: One of the two most attractive areas of the trail system. Most of trail is quite open with extended views in all directions due to a network of meadows. High screening only at west end of trail. There are two significant major view segments, one for 1½ km at the east end of the trail by the cabins, and one for 3½ km along the western half of the trail.

DASH - WEST CHURN TRAIL

Traditional route from Hungry Valley to Dash Creek. Hungry Valley and Lost Valley range cabins are popular destination points. The trail passes next to Moose Lake and crosses two existing clearcut blocks. The 3200 Road crosses trail at two points.
Length: 17 km, 9 hours hiking.
Current Use: High. Highest use in study area. Used primarily by trailbikes, ATVs, and horses. The northern ¼ is passable by 4WD vehicle. The southern ½ shows signs of heavy use with some sections torn up by ATVs.

Recreation Potential: Good. This is an important connection to other trail systems, including access to the alpine by Hungry Mtn. and the Dash Creek valley. Diverse ecosystems and views. Fairly open forests along the trail give good campsite opportunities.
Visual Characteristics: The northern third of the trail has low screening, the longest continuous section in the study area (± 6 km); there are two primary major views, one is a segment at the northernmost 1 km, and the other at Moose Lake. The middle third has generally high screening; one minor viewpoint at the summit. The southern third has a number of brush filled openings with associated views to the north; there is one minor viewpoint identified.

DASH (LOST) - LONE (BEAVER) VALLEY TRAIL
The trail is moderately used and is an important link to various trails. It is part of a link from the newly built 2800 Road to the Dash/Lone Valley backcountry. It is part of the access to the Dash Valley range cabins at its west end, and an important viewpoint at its east end.
Length: 8¾ km, 4 hours hiking.
Current Use: Moderate. Most use is at both ends of the trail. Primary users are ranchers and recreational trail riders.
Recreation Potential: Moderate. The most important aspect is that it is a connecting link for the area's trail network. The ends of the trail provide the highest recreation potential.
Visual Characteristics: Most of the trail has high or moderate screening. In areas where vegetation is limited, topography limits any views. The eastern most ½ km is part of the two most important attractive areas of the trail system.

PRENTICE LAKE TRAIL
A relatively short and scenic trail. One of the southern entrances to the trail system via 4WD road in the Relay Creek / Spruce Lake in the Lillooet Forest District with its trail systems.
Length: 6 km, 2 hours hiking.
Current Use: Moderate. Ranchers, trailbikers, and horse riders are the primary users.
Recreation Potential: Good. Having vehicle access, being attractive, and being a link to different trail systems adds to its potential. Good opportunities for day and easy overnight trips. Prentice Lake is attractive and the surrounding hills have good recreation potential.
Visual Characteristics: The entire trail has good scenics. The northern third is part of the two primary view segments of the trail system. A major viewpoint is also at the southern end of the trail; the view point and the views are in the Lillooet Forest District.

LONE (BEAVER) VALLEY TRAIL
Provides one of the southern entrances to the Dash/Lone Valley backcountry via Swartz/Mud Lakes. The Lone Valley range cabin is located at about one third of the way from the west end at Panlos Creek. There is an interesting variety of habitats along the trail with the western third being part of one of the most scenic parts of the trail system.
Length: 10½ km, 5 hours hiking.

Current Use: High. Used by a broad range of users including horseback, ATVs, mountain bikes, hikers, and snowmobiles. The western section is used by ranchers to the range cabin.
Recreation Potential: High. Currently used by a large number of recreationists. A southern access to the trail network and containing interesting views and experiences. There are reported to be a number of minor trails that connect to this trail.
Visual Characteristics: The eastern third of the trail has high screening. The middle third has a number of small meadows with some extended views. The western third has one of the two primary major view segments of the trail system; ±3 km of prime views to the height of land.

RED MOUNTAIN TRAIL
This trail contains extensive spectacular views associated with the alpine. The southern ½ follows an alpine ridge, however, except for the southern trailhead, it is in the Lillooet Forest District. There is 4WD access from the southern end and the trail follows a rough road for the first 4 km. The northern end is in the forest and ends at a cabin ("Frosty Lodge").
Length: 13¾ km, 8 hours hiking.
Current Use: Moderate - Low. The southern ½ is used more than the northern ½ because of the 4WD access from the Lillooet area. Current uses include guiding, resident hunting, viewing, and exploring.
Recreation Potential: Moderate. The scenic alpine areas by Red and French Mountains are good attractions for hiking, viewing, photography, ski touring, snowmobiling, and perhaps some limited mountaineering; the southern most third is a popular 4WD destination. Horse use potential in the alpine may be limited because of water and grass. The forested areas of the northern ½ are good for horse riding, hiking, hunting, and exploring.
Visual Characteristics: The southern ½ of the trail is in the alpine with spectacular views in all directions. The northern ½ is enclosed in forest with high and moderate screening with few extended views. The southern ½ is classified as prime high elevation views. The northern ½ has one secondary major viewpoint and two minor viewpoints

SWAN LAKE TRAIL
A relatively short and scenic southern access to the Lone Cabin Creek trail system. It is unsure if there is 4WD access to the southern end via the Lillooet Forest District.
Length: 5 ½ km, 2 hours hiking.
Current Use: Low. Primary use is probably as a guide's trail.
Recreation Potential: Moderate. The trail is short and scenic and is tied into recreation activities in the Lone Cabin valley including horse riding, hiking, hunting, and exploring.
Visual Characteristics: Most the trail has high or moderate screening. There is a secondary major view segment in the northern third of the trail and a minor viewpoint at the northern trailhead.

LOWER LONE CABIN TRAIL
The eastern access to the trail system via the Empire Valley Ranch / Churn Creek Park. The relatively steep trail follows through an interesting forest transition from ponderosa

pine, old growth Douglas-fir, to lodgepole pine and via the Red Mountain Trail to spruce, subalpine fir and eventually alpine.
Length: 11 km, 8 hours hiking.
Current Use: Low. Uses include guiding, and mountain bikes. Little evidence of use by cattle was found.
Recreation Potential: Moderate. Contains sections with the steepest grades of the study area. Interesting forest vegetation changes.
Visual Characteristics: Most of the trail is enclosed in forests with high screening. The northern ½ of the trail is in widely spaced old growth Douglas-fir which provides opportunities to view further into the forest. There are 2 secondary major viewpoints, one at the northern head of the trail and one in the middle third. Minor viewpoints are in the northern third and at the southern end of the trail.

APPENDIX XI

Lake Management Goals

The lakes throughout a forest district contain many values and features that provide opportunities for various interests. The management goals provide for possible mixes or combinations of activities, settings, ecological attributes and probable experience opportunities. This approach is not unlike the Recreation Opportunity Spectrum approach (Ministry of Forests, Recreation Inventory) which is based on providing an established range of recreation experiences. The management goal for a lake or group of lakes is determined by considering three basic criteria: strategic objectives of higher-level plans, existing or potential uses (public and commercial) and ecological significance. This list of goals should be considered as a starting point.

1. **Wilderness lakes**
   The goal is to provide for lakes with natural features in undisturbed areas having non-motorized access:
   - hike, canoe, kayak, fly in only
   - Setting is primitive (pristine wilderness settings)
   - unmodified natural environment
   - limited or no commercial land development
   - special fishing regulations
   - management objective for angler density is 15 angler/days per hectare per season
   - guided fisheries use is restricted to 15% of total use

2. **Quality lakes**
   The goal is to provide for lakes with quality natural features where limited development and access may occur:
   - access may be limited
   - Recreation Opportunity Spectrum setting is semi-primitive non-motorized (SPMN) and semi-primitive motorized (SPM)
   - pristine surroundings and natural appearing environment
   - limited or no commercial development
   - special fishing regulations
   - management objective for angler density is 15 angler days per hectare per season
   - guided fisheries use is restricted to 15% of total use

3. **General lakes**
   The goal is to provide for lakes primarily used for public recreation in a predominantly rural and natural setting:
   - access is generally good two wheel drive
   - land development may vary from none to controlled

- Recreation Opportunity Spectrum setting is roaded resource land (RRL) — natural environment may be substantially modified
- fishing regulations are general
- management objectives for angler use is 25 angler/days per hectare per season
- guided fisheries use is restricted to 20% of total use

4. **Refugea lakes**

The goal is to provide for the protection of those lakes which may have significant ecological importance and should be maintained in their current state:

- access may vary
- rare or endangered species or habitats
- unique ecological or physiographic associations
- no land development
- no guided fishing quotas
- restricted fishing regulations (catch and release)
- management objective is 3 angler/days per hectare per season

The intent of management goal selection is to give clear direction of how the lake or group of lakes will be managed. All operational plan proposals must be consistent with the intent of the management goal. The guidelines within this guidebook are one set of tools that can be used to achieve the management goal for a given lake. Examples of other tools include access management guidelines, Visual Landscape Management Guidebook, Biodiversity Guidebook, recreation inventory, and fishing and hunting regulations.

Access Management Within Lakeshore Management Zones

MR-H	Management Road Highways	A road under the jurisdiction of the Ministry of Highways. Generally, the roads will remain open and are maintained by that Ministry.
MR	Management Road	A road required for long term resource management or other recognised values. The road will remain open and maintained, be subjected to traffic restrictions as weather and other constraints indicate and may be limited to only those activities necessary to permit travel or to avoid environmental damage.
MR-C	Management Road - Periodic or Seasonal Closure	A road required for long term resource management. The road will have periodic or seasonal closures to eliminate vehicular use. The entire roadbed will be kept intact for future use. Not intended for extended period of time.
TR	Temporary Road	A road required for multiple-pass timber extraction. During periods of non-use, the road will be hydrologically stabilised (water barred, culverts removed, cut bank grass seeded, and where appropriate, bridges pulled) and may be closed to vehicular use.
TR/RR	Temporary/Reclaimed Road	A road required for short term resource management. The road may remain open for a period of up to five years. After

		use, the road will be hydrologically stabilised, deep ripped and grass seeded. The main objective is to restore the road corridor to productive forest land.
NSR	Non-Status Road (not needed for resource management)	All are existing old roads within the forest land with no official status. If not needed for the management of any resource, the non-status road will be left for nature to reclaim unless an identified public safety hazard exists, at which time, the road will be closed. If it is decided that the road will be needed for resource management, it will be given another classification under the jurisdiction of a responsible agency. This category includes non-status roads which access private or leased land. These roads will continue to be user maintained.

Tabular Summary of Specific Management Requirements

	Class A	Class B	Class C	Class D	Class E
Objective	Protect all key lake attributes.	Maintain all key lake attributes	Maintain the integrity of key lake attributes	Maintain landscape biodiversity	Maintain ecosystem linkages
Visual Quality Objectives	Where there are visual concerns, should meet the Preservation VQO.	Where there are visual concerns, should meet the Retention VQO.	Where there are visual concerns, should meet the Partial Retention VQO.	Where there are visual concerns, should meet the Modification VQO.	Where there are visual concerns, should meet the Modification VQO.
Management Practices : General	No harvesting permitted.	Clearcutting is not permitted unless partial cutting is not feasible.	Collectively, partial cutting and clearcutting should not exceed 25% of the LMZ area per pass.	Collectively, partial cutting and clearcutting should not exceed 50% of the LMZ area per pass.	
Silvicultural Systems and Management Practices	No harvesting permitted in the Lakeshore Management Zone. This may be exempt for the management of windthrow, pests, disease, and fire, or as specified in approved lake management objectives.	*Partial Cutting:* > 50% of the original basal area should be retained 25% of the LMZ area per pass *Clearcut:* 10% removal of the LMZ area per pass. Clearcut block should be 5 hectares maximum Maximum lateral distance of an individual opening along the LMZ/RRZ interface is 300 metres.	*Partial Cutting:* > 50% of the original basal area should be retained. *Clearcut*: 25% removal of the LMZ area per pass Maximum lateral distance of an individual opening along the LMZ/RRZ interface is 400 metres	*Partial Cutting:* > 50% of the original basal area should be retained *Clearcut*: 30% removal of the LMZ area per pass Maximum lateral distance of an individual opening along the LMZ/RRZ interface is 500 metres	*Partial Cutting:* > 50% of the original basal area should be retained 100% of the LMZ per pass *Clearcut*: 50% removal of the LMZ area per pass Maximum lateral distance of an individual opening along the LMZ/RRZ interface is 500 metres
Roads, Landings and Skids Trails	No new roads, borrow pits or landings should be located in the Lakeshore Management Zone.	Haul roads outside Lakeshore Management Zone Spur roads and landings > 200 metres away from Riparian Reserve Zone Skid trails > 30 metres away from Riparian Reserve Zone Tail spar trails are not permitted without an approved rehabilitation plan. Skid roads with greater than 25 cm cuts are not permitted.	Haul roads outside the Lakeshore Management Zone Spur roads and landings > 100 metres away from Riparian Reserve Zone Skid trails > 30 metres away from Riparian Reserve Zone Tail spar trails are not permitted without an approved rehabilitation plan. Skid roads with greater than 25 cm cuts are not permitted.	Haul roads >75 metres away from RRZ Spur roads and landings > 40 metres away from Riparian Reserve Zone Skid trails > 30 metres away from Riparian Reserve Zone Tail spar trails are permitted.	Haul roads >30 metres away from RRZ Spur roads and landings > 30 metres away from Riparian Reserve Zone Skid trails > 30 metres away from Riparian Reserve Zone Tail spar trails are permitted.

LMZ = Lakeshore Management Zone RRZ = Riparian Reserve Zone

GUIDELINES FOR NON-FOREST DEVELOPMENT WITHIN LAKESHORE MANAGEMENT ZONES

LAKESHORE DEVELOPMENT CATEGORIES

Development, in this context, refers to all non-forest uses of Crown land that are administered by Environment and Lands. This includes, but is not limited to, commercial, industrial and residential uses. Access road construction authorized under the *Land Act* is discussed as a separate issue following the categories described below.

ND (no development)

Recommendations: Environment and Lands will not accept new applications to licence or lease Crown land for development purposes within the Lakeshore Management Zone.

Examples: Lakes where it is agreed that no new development should be permitted in order to preserve high value lake attributes.

ER (enhanced referral)

Recommendations: Environment and Lands will accept land applications within the Lakeshore Management Zone in compliance with its existing guidelines, policies and land management objectives. Applications will be referred to the Ministry of Forests, who will then ensure that the Lake Classification Team participants are provided with the information. The LCT may recommend that an application be approved, conditionally approved or disallowed.

Examples: Lakes with limited or no existing development and access, but which are agreed to have some potential for development.

DV (development permitted)

Recommendations: Environment and Lands will accept land applications within the Lakeshore Management Zone in compliance with its existing guidelines, policies and land management objectives. Existing agencies and organizations will receive referrals at the discretion of the land officer/land inspector dealing with the application. The Lake Classification Team will not normally receive a referral for lakes in this category.

Examples: Lakes with existing development and access, where the potential for future development exists.

APPENDIX XII

VIEWPOINT LOCATION AND DESCRIPTION

View-point No.	Viewpoint Location	Trail Name	Trail Priority	Located in Backcountry Area	Located along non-motorized portion of recreation corridor	Used by Tourism Operators	Identified as a Recreation Destination Area	Current Use	Potential	Viewpoint Class from Fritz Mueller's report	Digital Terrain Model Mapping Completed	Ranking of Viewpoints by Fritz Mueller (Priority 1, 2 or 3)	Final Priority Ranking of Viewpoints	Comments
1	Overlooking Big Creek	Fish Lake-Big Creek	1	yes	yes	no	no	low	mod	major	no	2		Most of the viewshed is within Big Creek Park
2	Southern end of Fish Lake to Big Creek trail	Fish Lake-Big Creek	1	yes	yes	no	no	low	mod.	minor	no	3		Views to the west are into Big Creek Park
3	Near Dash (Lost) Valley cabin	Upper Dash (Lost)	1	yes	no	yes	yes	mod.	good	major	yes	2	1	
4	Midway along Upper Dash trail	Upper Dash (Lost)	1	yes	yes	yes	no	low	excellent	minor	no	3	2	
5	Upper Dash Creek meadows	Upper Dash (Lost)	1	yes	yes	yes	yes	low	excellent	major	yes	1	1	
6	Junction of Lone Valley, Dash-Lone Valley & Prentice Lk trails	Dash-Lone Valley, Lone (Beaver) Valley, Prentice Lake	1	yes	no	yes	no	mod.	excellent	major	yes	1	1	
7	Hungry Valley trailhead of Dash-West Churn trail	Dash-West Churn	1	yes	no	no	yes	mod.	good	major	yes	1	2	
8	Moose Lake in West Churn Cr. Drainage	Dash-West Churn	1	yes	no	no	yes	mod.	good	major	yes	1	2	
9	Summit of Dash-West Churn trail	Dash-West Churn	1	no	no	no	no	mod.	mod.	minor	yes	3	3	
10	Near southern end of Dash-West Churn trail	Dash-West Churn	1	yes	no	no	no	mod.	mod.	minor	yes	3	3	
11	Overlooking Relay Creek	Prentice Lake	1							major	no		n/a	Viewpoint and view are in Lillooet District
12	Near Red Mountain trailhead	Red Mountain	1	yes						major	no		n/a	High elevation viewpoint
13	Near Red Mountain trailhead	Red Mountain	1							major	no		n/a	High elevation viewpoint in Lillooet District
14	North of pass between Red and French Mountains	Red Mountain	1	yes	yes	yes	no	low	good	major	yes	1	1	

View-point No.	Viewpoint Location	Trail Name	Trail Priority	Located in Backcountry Area	Located along non-motorized portion of recreation corridor	Used by Tourism Operators	Identified as a Recreation Destination Area	Curren t Use	Potential	Viewpoint Class from Fritz Mueller's report	Digital Terrain Model Mapping Completed	Ranking of Viewpoints by Fritz Mueller (Priority 1, 2 or 3)	Final Priority Ranking of Viewpoints	Comments
15	In center of upper Lone Cabin Creek Basin	Red Mountain	1	yes	yes	yes	no	low	good	minor	yes	3	2	
16	Upper Lone Cabin Creek	Red Mountain	1	yes	yes	yes	no	low	good	major	yes	2	1	
17	Junction of Red Mountain, Lower Lone Cabin, and Swan Lake trails	Red Mountain	1	yes	yes	yes	yes	low	good	minor	yes	3	1	
18	Lower Lone Cabin trailhead	Lower Lone Cabin	1	yes	yes	yes	no	low	mod.	major	yes	2	2	
19	Near Lower Lone Cabin trailhead	Lower Lone Cabin	1	yes	yes	yes	no	low	mod.	minor	yes	3	3	
20	Midway along Lower Lone Cabin trail	Lower Lone Cabin	1	yes	Yes	yes	no	low	mod.	major	yes	2	2	
21	On Swan Lk trail, overlooking Lone Cabin Creek	Swan Lake	1	yes	yes	yes	no	low	mod.	major	yes	2	2	
22	Prentice Lake north of Relay Creek	Prentice Lake	1	yes	no	yes?	Yes	mod.	good	n/a	sightlines	n/a	1	
23	Clear Lake adjacent to Churn Protected Area	Koster-Clear Lakes	2	no	no	no	yes	mod.	mod.	n/a	sightlines	n/a	3	
24	Panlos Creek cabin in Lone (Beaver) Valley	Lone (Beaver) Valley	1	yes	no	no	yes	mod.	good	n/a	sightlines	n/a	2	
25	Dash (Lost) Valley cabin	Dash-West Churn	1	yes	no	yes	yes	mod.	good	n/a		n/a	1	
26	Hungry Valley cabin?	Gaspard Lake-Hungry Valley	1	yes	no	no		mod.	mod.	n/a		n/a	2	vicinity of viewpoint 7
?	Tributary to Lone Valley Creek on the north side	n/a	n/a	yes	no	yes	no	low?	mod.?	n/a		n/a	3	Tourism destination identified by Chilco Choate, unable to determine exact location.
27	Vicinity Lone (Beaver) Valley trail and Lone Valley Creek junction.	Lone (Beaver) Valley	1	yes	no	yes	yes	high	high	n/a	no	n/a	1	Potential campsite identified by P. Marshall
28	Entrance to Hungry Valley on Gaspard 4x4 road.	n/a	n/a	yes	no	yes	yes	high	high	n/a	no	n/a	1	Previously used for block design

APPENDIX XIII

WETLANDS ASSESSMENT

January 12, 1999

To: Anne Smith
Williams Lake Forest District

From: Ordell Steen
Ecologist

Re: Proportion of wetlands within non-forested polygons in the South Chilcotin Sub-Regional Planning Area

As per your request, I have estimated the degree of coincidence between non-forested polygon type boundaries, as shown on forest inventory maps, and wetland boundaries, as interpreted from aerial photo interpretation, in Hungry Valley, West Churn Creek, Dash Creek, and Lone Valley. For this estimate, I assumed that wetlands are defined as in the Forest Practices Code (FPC) RMA Guidebook. The estimate is based primarily on aerial photo interpretations, aided only somewhat by limited visits prior to initiating the assessment. No on-site visits were included as part of the assessment. The non-forest polygon types included in the assessment are those shown on the Non-Forested and ESA map (November 3, 1996) for the South Chilcotin Sub-Regional Plan as Swamps and NPBR, Other NP Types, and ESAs. None of the Open Range shown on the maps was noted to include wetlands.

The approach to deriving the estimates included the following steps:

- Outline wetlands on 1:15,000 scale color aerial photos based on aerial photo interpretations of vegetation and ecological moisture regime;
- Identify wetlands which are larger than 5 ha (W1 wetlands) and those which are 1 - 5 ha (W3 wetlands);
- Identify segments of non-forest polygon boundaries with a forested polygon which are within 10 m of a W1 wetland, more than 10 m but within 50 m of a W1 wetland, and within 30 m of a W3 wetland;
- Estimate proportion of non-forest polygon (Swamp and NPBR, etc.) boundary with forest which is within 10 m of W1 wetland (i.e. wetland reserve zone extends into adjacent forest area);
- Estimate proportion of non-forest polygon boundary with forest which is more than 10 m but within 50 m of a W1 wetland or within 30 m of a W3 wetland (i.e. wetland RMA but not the reserve zone extends into adjacent forest).

Note that where a non-forest polygon type shared a boundary with another non-forest polygon type rather than with a forest, that polygon segment of the boundary was not included in the assessment. That is, the proportions estimated in the last two steps apply only to portions of the non-forest polygon type boundaries which are shared with a forest polygon. If, for example, an “Open Range” polygon occurred upslope of a “Swamp and NPBR” polygon, then that portion of the “Swamp and NPBR” polygon edge was not included in the assessment.

The estimated proportions of polygon type boundaries which are included within the RMA of Forest Practices Code wetlands are shown in the attached table. These proportions assume strict application of Forest Practices Code regulations regarding establishment of riparian reserve zones and management zones.

It must be emphasized that the values in the table are estimates, with little on-site verification and must be interpreted with caution. Although most types of wetlands can be identified with reasonable accuracy on 15,000 color photos, there are some sites where determination of whether the site is a wetland or not based on aerial photo interpretation is problematic. Especially difficult are shrub-carrs. Many non-wetland shrub-dominated ecosystems appear very similar, on aerial photos, to shrub-carrs, which are managed as

wetlands under the FPC. These non-wetland shrub types are very common in the South Chilcotin area where cold air accumulation discourages the development of a forest. I have used topography, observable drainage patterns, and other features to make a judgement on whether a shrub dominated site is a shrub-carr or not. For example, I interpreted most valley bottom shrub types to be shrub-carrs but generally considered shrub types on steeper side slopes not to be shrub-carrs. These judgements should be checked by on-site visit.

Estimated percentage of polygon type boundary, shared with forested polygon, which is within RMA of wetland.

Polygon Type	Estimated Percent of Polygon Type Edge	
	Within 10 m of W1 wetland (adjacent forest within reserve zone and management zone)	Within 10 - 50 m of W1 or 30 m of W3 wetland (adjacent forest within management zone but not reserve zone)
Hungry Valley and Tributaries		
Other NP Types	35	20
ESA's	0	0
West Churn Creek and Tributaries		
Other NP Types	7	20
Lone Valley and Tributaries		
Swamps and NPBR	7	15
Other NP Types	0	5
ESA's	0	0
Dash Creek and tributaries above bridge		
Swamps and NPBR	10	23
Other NP types	5	15
ESA's	0	0

The Hungry Valley area contains several large wetlands, especially in the area between the two lakes at the west end of the valley. Values for Hungry Valley are higher that for other areas due primarily to the extensive wetlands in the area of these lakes.
In Dash Creek, wetlands within the “Other NP Types” occur primarily in upper Dash Creek where this type is mapped in headwater valley bottoms. Further downstream, where “Swamps and NPBR” are mapped in the valley bottom, virtually no wetlands occur within the “Other NP Types”.
Please contact me if you have any questions regarding this assessment.

Ordell Steen
Ecologist

GLOSSARY

"Access"

Physical entry into an area by appropriate means to accomplish a given task.

The means can include: foot; horseback; non-motorized vehicle; motorized vehicle (motorcycle; ATV; quad; car; 4X4; pickup truck; dump truck; flatbed truck; lowbed truck - trucks typically have a maximum payload less than 60 tonnes; snowmobile; snow cat); excavator; bulldozer; drill rig (on wheels, tracks or skids); boat (unpowered or powered); or aircraft (helicopter or fixed wing plane with wheels, skis or floats).

The tasks can include: reconnaissance exploration, claim staking, property exploration (non-mechanized and mechanized), property development, bulk sampling, mine development, environmental baseline studies, engineering studies, mine operation, care and maintenance, closure, reclamation, environmental monitoring, etc.

Mining access requirements vary. Much depends on the stage of exploration or development and the nature of work being done. Exploration is typically iterative over a span of years to decades. It may be seasonal or episodic to year round or continuous. Mine operation can be continuous or discontinuous for years to decades. Reclamation activities can be sustained or intermittent for years to decades.

The degree of disturbance ranges from negligible to intense. The intensity is inversely related to the area disturbed (i.e., low intensity over large areas; high intensity over small areas). Examples include: flagged lines; blazed or brushed lines; foot paths; skid trails; bladed trails; tote roads; light industrial roads; heavy industrial roads; fords; docks; bridges; camp sites; excavated trenches; drill sites; helicopter landing sites; mill and plant buildings; ore stockpiles; waste dumps; tailings ponds; water treatment ponds; fuel storage facilities; power lines; pipelines; electrical transmission facilities; etc.)

Exploration can persist for years with no visible or lasting sign. Large mining operations (e.g., large open pit mines) can make permanent changes at least in a local area. Reclamation is required of all mining operations. Its goal is to leave the land in a physically and environmentally stable condition productive of future use.

"Mineral Industry"

Individuals, consultants, and companies involved in any aspect of mining. This includes, for example, Free Miners and their agents, prospectors, geologists, geophysicists, geochemists, surveyors, engineers, labourers, tradespeople, contractors.

"Mineral Land Base"

The geographic area, including land and water, that is legally open for exploration and development of geological resources.

"Mineral Resources" (also sometimes referred to as "Geological Resources" or "Subsurface Resources")

All geological materials on or below the surface, including, but not limited to: earth, soil, marl, ash, clay, sand, gravel, riprap, rock, stone, talus, aggregate, limestone, marble, gypsum, slate, fossils, gemstones, placer minerals, metallic minerals, non-metallic minerals, precious metals (e.g., gold, silver, platinum), base metals (e.g., copper, molybdenum, lead, zinc), peat, coal, coal bed methane, petroleum, oil, oil shale, bitumen, natural gas, and geothermal resources, but excluding groundwater.

NB: According to the *Mineral Tenure Act*, "mineral means an ore of metal, or a natural substance that can be mined, that is in the place or position in which it was originally formed or deposited or is in talus rock, and includes (a) rock and other materials from mine tailings, dumps and previously mined deposits of minerals, (b) dimension stone, and (c) rock or a natural substance prescribed under section 2 (1), but does not include (d) coal, petroleum, natural gas, marl, earth, soil, peat, sand or gravel, (e) rock or natural substance that is used for a construction purpose on land that is not within a mineral title or group of mineral titles from which the rock or natural substance is mined; (f) rock or natural substance on private land that is used for construction purpose, or (g) rock or a natural substance prescribed under section 2 (2)."

The definition suggested here is broader and includes substances defined by other laws: e.g., *Petroleum and Natural Gas Act*, *Land Act*, *Geothermal Resources Act*.

"Mining" (... is what miners do!)

Mining includes all activities involved in the process of finding and producing geological resources, including but not limited to: tenure acquisition; financing; reconnaissance and mineral property exploration; drilling; trenching; property development; bulk sampling; mine development; environmental baseline studies; engineering studies; construction; processing; transportation; infrastructure development (e.g., power lines, pipelines, water works, roads, buildings); mine operation; care and maintenance; closure; reclamation; abandonment; environmental monitoring and management; etc.

It thus includes exploration work as well as underground mines, open pit mines, quarries, gravel pits, and placer workings, seasonal and year-round operations.

NB: According to the *Mines Act* a "mine" is (among other things) "a place where mechanical disturbance of the ground or any excavation is made to explore for or to produce" a variety of listed substances. The definition suggested here is broader.

Percent alteration: the scale of human alteration to the landscape, including cutblocks, expressed as a percentage of a landscape unit or total scene.

Viewing Distances:

1. Foreground: 1-1.0 km from the viewer; maximum discernment of detail texture and contrast
2. Midground: 1.0 to 8.0 from the viewer; emergence of overall shapes and patterns, with some texture and colour still evident.
3. Background: more than 8.0 km from the viewer; outlines of general shapes and patterns, with little discernible texture and colour, and strong sense of overall perspective.

Visual quality: the character, condition, and quality of a scenic landscape or other visual resource and how it is perceived, preferred, or otherwise valued by the public.

Visual Quality Objectives (VQO): a resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area.
The specific VQO classes are defined as follows:

Preservation: No visible alterations
Retention: Human caused alterations are visible but not evident.
Partial retention: Human caused alterations are evident but subordinate and not dominant.
Modification: Human-caused alterations are dominant but have natural appearing characteristics.
Maximum Modification: Human-caused alterations are dominant and out of scale.

VQO	% denudation range in perspective views
Preservation	0
Retention	0-1.5
Partial Retention	1.6-7.0
Modification	7.1-18.0
Maximum Modification	18.1-30.0

percent alteration in perspective view values were derived from the MOF *Clearcutting to meet VQOs* study completed March 1996. Table extracted from MOF *Procedures for Managing Visual Resources to Mitigate Impacts on Timber Supply* (May 1998).

Visual Landscape Unit (VLU): a component of the Visual Landscape Inventory that rates the sensitivity of the landscape based on biophysical characteristics and viewing and viewer related factors.

Not Visually Sensitive Area (NVSA): an area that is not considered to be sufficiently sensitive to visual alteration to warrant special consideration over and above normal Forest Practices Code Requirements because of its visual sensitivity. However, visual landscape design should still beapplied where possible.

APPENDIX XIV GLOSSARY

Access	Physical entry into an area by appropriate means to accomplish a given task. The means can include: foot; horseback; non-motorized vehicle; motorized vehicle (motorcycle; ATV; quad; car; 4X4; pickup truck; dump truck; flatbed truck; lowbed truck - trucks typically have a maximum payload less than 60 tonnes; snowmobile; snow cat); excavator; bulldozer; drill rig (on wheels, tracks or skids); boat (unpowered or powered); or aircraft (helicopter or fixed wing plane with wheels, skis or floats).
Backcountry Units	Areas defined as having a combination of semi-primitive motorized, semi-primitive non-motorized and primitive recreational experiences. They are focused on relatively undisturbed viewscapes, watercourses, lakes and recreational features. Government clarification confirms logging will occur overtime in these areas.
Biodiversity	The diversity of plants, animals and other living organisms in all their forms and levels of organizations and includes the diversity of genes, species, and ecosystems as well as the evolutionary and functional processes that link them.
Biogeoclimatic Zones	A geographic area having similar patterns of energy flow, vegetation and soils and a result of a broadly homogenous macro-climate. British Columbia has 14 biogeoclimatic zones.
Co-ordinated Access Management Plans (CAMPS)	Plans developed by government agencies and organized road users. The plan addresses the development, closure and management of forest roads based on the diverse uses of the forests and geography.
Ecosystem	A functional unit consisting of all living organisms in a given area and all the non-living physical and chemical factors if their environment, linked together through energy flow. An ecosystem can be any size- a log pond, field forest or the earth's biosphere, but it always functions as a unit. Ecosystems are commonly described according to the major type of vegetation; fir example forest ecosystem.
Equivalent Clearcut Areas (ECA)	A measurement used when calculating watershed impacts. The conversion of what percentage a reforested block has when it is prorated as a clearcut.
Equivalent Excluded Area (EEA)	Represents the equivalent excluded area from the timber land base. It is derived by combining the modified extended impact to a no harvest impact.
Forest Ecosystem Networks (FENS)	A planned landscape zone that serves to maintain or restore the natural connectivity within a landscape unit.

Goal 2 Protected Areas	Protected Areas established during the subregional planning process.
Higher Level Plan	Defined in the Forest Practices Code as an objective for: • Resource Management Zone • Landscape Unit or Sensitive Area • Recreation site, Recreation trail or Interpretive forest site
Interagency Management Committee (IMAC)	The interagency committee of senior land and resource management officials. The committee is responsible for integrating all resource planning and protected area work in the region and for setting regional planning priorities.
Integration Report (IR)	A report developed to provide strategic direction to the sub regional planning tables.
Inter Agency Planning Team (IPT)	A team of representatives from different government agencies formed to develop the sub regional plan.
Interior Watershed Assessment Procedure (IWAP)	A tool to help forest managers understand the type and extent of current water related problems that exist in watershed and to recognize the possible hydrologic implications of proposed forest-related development in the watershed.
Lakeshore Management Zone (LMZ)	A management zone surrounding a lakeshore reserve. The objective of a management zone is to protect the integrity of the reserve zone and to maintain important wildlife values where no reserve is required.
Landscape Unit	An area of land used for long term planning of resource management activities.
Mineral Industry	Individuals, consultants, and companies involved in any aspect of mining. This includes, for example, Free Miners and their agents, prospectors, geologists, geophysicists, geochemists, surveyors, engineers, labourers, tradespeople, contractors
Mineral Land Base	The geographic area, including land and water, that is legally open for exploration and development of geological resources.
Mineral Resources Geological Resources Subsurface Resources	All geological materials on or below the surface, including, but not limited to: earth, soil, marl, ash, clay, sand, gravel, riprap, rock, stone, talus, aggregate, limestone, marble, gypsum, slate, fossils, gemstones, placer minerals, metallic minerals, non-metallic (e.g., gold, silver, platinum), base metals (e.g., copper, molybdenum, lead, zinc), peat, coal, coal bed methane, petroleum, oil, oil shale, bitumen, natural gas, and geothermal resources, but excluding groundwater
Mining	Mining includes all activities involved in the process of finding and producing geological resources, including but not limited to: tenure acquisition; financing; reconnaissance and mineral property exploration; drilling; trenching; property development; bulk

	sampling; mine development; environmental baseline studies; engineering studies; construction; processing; transportation; infrastructure development (e.g., power lines, pipelines, water works, roads, buildings); mine operation; care and maintenance; closure; reclamation; abandonment; environmental monitoring and management; etc.
Mule Deer Winter Range (MDWR)	A defined area managed for winter Mule Deer habitat. Usually in Douglas fir timber types with a closed canopy.
Natural Disturbance Type (NDT)	An area that is characterised by a natural disturbance regime.
Old Growth Management Areas (OGMA)	An area established under a higher level plan, which contains or is managed to replace structural old growth attributes.
Percent alteration	The scale of human alteration to the landscape, including cutblocks, expressed as a percentage of a landscape unit or total scene
Riparian Management Area (RMA)	Areas that are established to minimize or prevent impacts if forest and range uses on stream channel dynamics, aquatic ecosystems and water quality of all streams, lakes and wetlands.
Recreation Opportunity Spectrum (ROS)	A conceptual management setting for probable experience opportunities arranged along a spectrum or continuum. Management setting range from primitive to rural.
Potential Natural Community (PNC)	A plant community that would be established if succession were allowed to be completed without further human interference.
Protected Area	A designation of land and water set aside to protect natural heritage, cultural heritage or recreational values (may include national park, provincial park or ecological reserve designations)
Resource Management Zone (RMZ)	A geographic area within a larger planning area that is distinct from other geographic areas with respect to biophysical characteristics, resource values or resource management direction. RMZ's are normally delineated and corresponding resource management objectives and strategies defined as a consequence of a regional or sub-regional planning process.
Statutory Decision Makers	A person designated to make decisions in regards to specified legal statues.
Silvicultural Systems	a planned cycle of activities by which a forest stand, or group of trees, is harvested, regenerated, and tended over time. Silvicultural systems used in British Columbia include clearcutting, seed tree, shelterwood, and selection. Each name reflects the type of stand structure created by harvesting.
Viewing Distances	Foreground: 1-1.0 km from the viewer; maximum discernment of detail texture and contrast

	Midground: 1.0 to 8.0 from the viewer; emergence of overall shapes and patterns, with some texture and colour still evident. Background: more than 8.0 km from the viewer; outlines of general shapes and patterns, with little discernible texture and colour, and strong sense of overall perspective.
Visual Landscape Unit (VLU)	A component of the Visual Landscape Inventory that rates the sensitivity of the landscape based on biophysical characteristics and viewing and viewer related factors.
Visual quality	The character, condition, and quality of a scenic landscape or other visual resource and how it is perceived, preferred, or otherwise valued by the public.
Visual Quality Objectives (VQO	A resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area.
Visually Sensitive Areas	A component of the visual landscape inventory that is sensitive on the landscape based on biophysical and viewing factors
Not Visually Sensitive Area (NVSA	An area that is not considered to be sufficiently sensitive to visual alteration to warrant special consideration over and above normal Forest Practices Code Requirements because of its visual sensitivity. However, visual landscape design should still be applied where possible
Wildlife Tree (WT)	A standing live or dead tree with species characteristics that provide valuable habitat for the conservation or enhancement of wildlife.
Wildlife Tree Patch (WTP)	An area specifically identified for the retention and recruitment of suitable wildlife trees.